South Mountain Community College

Course Catalog Archive

2025-2026

This document is an archival record of the course catalog for the 2025-2026 academic year as of August 2025. It is a printable option of the online course catalog for accreditation organizations, agencies and college offices for data collection, evaluation purposes and referencing.

All courses are subject to change throughout the catalog year. Current course information, including descriptions, outlines, competencies, and credits can be found on the following website, which is the official repository for all MCCCD credit courses: Center for Curriculum and Transfer Articulation https://curriculum.maricopa.edu/course

The Maricopa County Community College District (MCCCD) is an EEO/AA institution and an equal opportunity employer of protected veterans and individuals with disabilities. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, age, or national origin. A lack of English language skills will not be a barrier to admission and participation in the career and technical education programs of the District. The Maricopa County Community College District does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities. For Title IX/504 concerns, call the following number to reach the appointed coordinator: (480) 731-8499. For additional information, as well as a listing of all coordinators within the Maricopa College system, visit http://www.maricopa.edu/non-discrimination.

Maricopa Community Colleges' Course Subjects

Subject	Subject Description
AAA	Advancing Academic Achievement
ABA	Arizona Builders Alliance
ABC	Associated Builders and Contractors
ABS	Applied Biological Sciences
ACC	Accounting
ACT	Aircraft Construction Technologies
ACU	Accounting Upper-Division
AEN	Alternative Energy
AES	Aerospace Studies
AET	Aeronautics
AFR	African American Studies
AGB	Agribusiness
AGL	Agricultural Landscape
AGS	Agricultural Science
AHU	Arabic Humanities
AIM	Artificial Intelligence and Machine Learning
AIR	Airline Operations
AIS	American Indian Studies
AIT	Automated Industrial Technology
AJS	Administration of Justice Studies
ALT	Academic Literacy
AMS	Automated Manufacturing Systems
AMT	Aircraft Maintenance Technology
APT	Automotive Performance Technology
ARB	Arabic
ARC	Architecture
ARH	Art Humanities
ART	Art
ASB	Anthropology
ASD	Addictions and Substance Use Disorders
ASE	Automotive Service
ASL	American Sign Language
ASM	Anthropology
AST	Astronomy

Subject	Subject Description
ATC	Air Traffic Controllers
ATP	Automation Technology
AUT	Automotive Technology
AVC	Art and Visual Communication
AVT	Avionics Technology
BAM	Baccalaureate Artificial Intelligence Machine Learning
BAW	Beauty and Wellness
BHS	Behavioral Health Services Technology
BIO	Biology
BLT	Building Safety and Construction Technology
BME	Biomedical Equipment Technology
BPC	Business-Personal Computers
BUS	Business Upper-Division
CAD	Computer-Aided Drafting
CAN	Cannabis Business
CAP	Counseling and Applied Psychology
CCS	Chicana and Chicano Studies
CET	Civil Engineering Technology
CFS	Child/Family Studies
CHA	Community Health Advocate
CHI	Chinese
CHM	Chemistry
CIS	Computer Information Systems
CLD	Cloud Computing
CNS	Construction
CNT	Cisco Network Technology
COM	Communication
CON	Construction
COV	Covey
CPD	Counseling and Personal Development
CRC	Clinical Research Coordinating
CRE	Critical Reading
CRP	Carpentry: Apprenticeship
CRW	Creative Writing

Maricopa Community Colleges' Course Subjects

Subject	Subject Description
CSC	Computer Science
CSI	Credit Services Industry
CSM	Customer Service Management
CSR	Customer Service Representative
CTE	Career and Technical Education
CTR	Court Reporting
CTT	Caterpillar Technician Training
CUL	Culinary Arts
CWE	Career Work Experience
DAE	Dental Assisting Education
DAH	Dance Humanities
DAN	Dance
DFT	Drafting Technology
DHE	Dental Hygiene Education
DIE	Diesel/Heavy Equipment Technology
DMI	Diagnostic Medical Imaging
DMS	Diagnostic Medical Sonography
ECE	Engineering Science
ECH	Early Childhood Education
ECN	Economics
EDA	Education of Adult Learners
EDT	Endoscopy
EDU	Education
EEC	Endorsement for Early Childhood
EED	Early Education
EEE	Electrical Engineering
EEG	Electroneurodiagnostic Technology
EEP	Early Education Professions
EFE	Education Field Experiences
ELA	Electrician: Apprenticeship
ELC	Electricity
ELE	Electronic
ELN	eLearning
ELT	Electronics Technology
EMT	Emergency Medical Technology
ENG	English
ENH	English Humanities
ENV	Environmental Sciences
EPD	Education Professional Development
EPS	Entrepreneurial Studies
EQS	Equine Science
ESL	English as a Second Language
ETH	Ethnic Studies
ETL	Excellence/Teaching/Learning
EUT	Electric Utility Technology
EXS	Exercise Science
FAC	Facilities Management
FCS	Family and Consumer Science
FLA	Foreign Language Acquisition
FMP	Film and Media Production
FMT	Film, Media, and Theatre
FON	Food and Nutrition
FOR	Forensic Science
FRE	French
FSC	Fire Science Technology
FST	Food Science and Technology
FYE	First Year Experience
GBS	General Business
GCU	Cultural Geography
GER	German
GIS	Geographic Information Science
GLG	Geology
GPH	Physical Geography
GRK	Greek
GST	Game Studies
GTC	General Technology
HBR	Hebrew
HCC	Health Core Curriculum

Maricopa Community Colleges' Course Subjects

Subject	Subject Description
HCR	Health Care Related
HCS	Hospital Central Service
HES	Health Science
HFA	Heat and Frost Technology
HIM	Health Information Management
HIS	History
HON	Honors
HRC	Healthcare Regulatory Compliance
HRM	Hotel Restaurant Management
HSE	Health Sciences Education
HSM	Health Service Management
HST	Histologic Technology
HTM	Healthcare Technology Management
HUM	Humanities
HVA	Heating, Ventilating and Air Conditioning
HWC	Health and Wellness Coaching
IBS	International Business
ICE	Imaging Continuing Education
IEC	Independent Electrical Contractors
IFS	Information Studies
IGS	Integrated Studies
IMC	Interstate Mechanical Contractors
IND	Industry
INS	Insurance Studies
INT	Interior Design
IPH	Integrated Public Health
IPP	Interpreter Preparation Program
IRW	Ironworking: Apprenticeship
ITA	Italian
ITD	Infant/Toddler Development
ITH	Italian Humanities
ITS	Information Technology Security
JPH	Japanese Humanities
JPN	Japanese
JRN	Journalism
LAS	Paralegal Studies
LAT	Latin
LBA	Laboratory Assisting
LDR	Leadership
LET	Law Enforcement Technology
MAS	Medical Assisting
MAT	Mathematics
MCO	Mass Communications
MDL	Medical Laboratory Science
MEC	Mechanical Apprenticeship
MGT	Management
MHL	Music: History/Literature
MIS	Military Science
MIT	Manufacturing Industrial Technology
MKT	Marketing
MNG	Management Upper-Division
MNT	Micro and Nano Technology
MPT	Manufacturing Production Technology
MRT	Medical Radiography/Radiologic Technology
MSP	Mortuary Science Program
MST	Microsoft Technology
MTC	Music: Theory/Composition
MUC	Music: Commercial/Business
MUE	Music: Education
MUP	Music: Performance
MWR	Millwright: Apprenticeship
NAV	Navajo
NCE	Nursing: Continuing Education
NDT	Neurodiagnostic Testing
NET	Networking Technology
NMS	New Media Studies
NUC	Nuclear Medicine Technology
NUR	Nursing Science: Basic

Maricopa Community Colleges' Course Subjects

Subject	Subject Description
NVH	Navajo Humanities
OAS	Office Automation Systems
OPT	Optical Systems
OSH	Occupational Safety and Health
OTA	Occupational Therapy Assistant
PAD	Public Administration
PAR	Paralegal Studies
PED	Physical Education
PHI	Philosophy
PHS	Physical Science
PHT	Pharmacy Technology
PHY	Physics
PIM	Pima
PLB	Phlebotomy
PME	Paramedicine
PNT	Painting/Decorating: Apprenticeship
PON	PeriOperative Nursing
POR	Portuguese
POS	Political Science
PPT	Power Plant Technology
PSA	Public Safety Administration
PSG	Polysomnographic Technology
PSY	Psychology
PTA	Physical Therapy Assisting
QCT	Quality Control Technology
QST	Queer Studies
RAD	Radiologic Technology
RBT	Robotics Technology
RDG	Reading
REA	Real Estate
REC	Recreation
REL	Religious Studies
RES	Respiratory Care
RPM	Recreation Program Management
RUS	Russian
RVT	Recreational Vehicle Technology
SBS	Small Business Management
SBU	Society and Business
SCT	Sustainability Career and Technical
SEA	Ocean Futures
SEM	Secondary Basic Emergency Medical Technology
SFS	Secondary Fire Science Technology
SGT	Surgical Technology
SLC	Studies in Language and Culture
SLP	Speech Language Pathology
SOC	Sociology
SOS	Sustainability
SPA	Spanish
SPE	Special Education
SPH	Spanish Humanities
SPT	Sports
SSH	Sustainability/Social Sciences and Humanities
STO	Storytelling
SUN	SundtCorp
SUS	Sustainability/Natural Sciences
SWU	Social Work
TDR	Trade Related
TEC	Textiles and Clothing
THE	Theatre
THF	Theatre and Film
THO	Theatre Occupational
THP	Theatre Performance/Production
TLT	Telecommunications Technology
TOO	Tohono O'odham
TQM	Total Quality Management
TRS	Translation and Interpretation
UAS	Unmanned Aircraft Systems
UCS	Utilities Customer Service

Maricopa Community Colleges' Course Subjects

Subject	Subject Description
UTP	Utilities Technology Partnerships
VET	Veterinary Technology
VGP	Video Game Production
WAC	Writing Across Curriculum
WED	Wellness Education
WFR	Workforce Re-Entry
WKO	Work Orientation
WLD	Welding Technology
WRT	Water Resource Technology
WST	Women's Studies
YAQ	Yaqui Indian History and Culture
YOG	Yoga

Subject	Subject Description

Special Course Types

Cooperative Education Courses

Cooperative Education courses combine classroom theory with supervised work experience. Students have the opportunity to earn college credit or planned growth in a job that is related to their career goals. A joint agreement is set up among the employer, the college and the student to facilitate the process. At Scottsdale Community College, Cooperative Education is available to students in nearly every discipline and is required in certain occupational programs. Students meet with the program director meets with students to determine their eligibility and assists students to locate suitable positions which relate to their field of study. A student's present job may also qualify. Each student is assigned to a faculty-coordinator who monitors the student's progress by making on-site visits to the place of employment.

Qualifications for participation include:

1. Completion of at least 12 college credits.
2. At least a 2.6 Grade Point Average (GPA)
3. Current enrollment in at least one class related to the student's major field of study.
4. Obtain a position that directly relates to the student's academic and career goals if current job does not meet this requirement.
5. Must have authorization to work in the U.S.

Determination of College Credit

1. Completion of a minimum of 80 hours of work per semester for each credit to be earned, with a maximum of four (4) credit hours per semester. A student may accumulate a total of six (6) credit hours. However, the number of credits which can be applied toward a degree may be limited by individual departmental requirements.
2. Successful achievement of one learning objective for each credit to be earned.
3. Completion of Final Report, Employer Evaluation of Student Performance and documentation of completed learning objectives.
4. Students receive a letter grade for the Cooperative Education experience. The grade is based on specific criteria and is awarded by the faculty-coordinator to whom the student is assigned.

Application Process

For information on the application process, students must contact the SMCC Academic Divisions of the course prefix/subject in which they wish to receive credit. The prefix for the credits for which the student registers is determined by the academic department (see example below):

XXX296WC	**Cooperative Education**	**1 Credit**	**5 Periods**
XXX296WC	**Cooperative Education**	**2 Credits**	**10 Periods**
XXX296WC	**Cooperative Education**	**3 Credits**	**15 Periods**

Tuition for the Cooperative Education credits is the same as for other academic credits.

Veterans and Financial Aid Benefits

Veterans and financial aid recipients must also have written departmental approval for any courses not listed as electives or core courses within a specific program. Failure to do so may result in a pro rata reduction in financial assistance.

Internship Courses

An approved organization for SMCC students will host an intern working to complete the agreed upon learning objectives. A Faculty Advisor will assist the student, ensuring a quality paid experience and partner with the site to complete purposeful learning and working objectives. The experience should be approved by an SMCC Faculty Advisor, intentional and serve to enhance a student's academic, career, and personal development through mentoring. SMCC students will register for the internship course at the beginning of the semester (80 hours = 1 credit, 160 hours = 2 credits, 240 hours= 3 credits).

Special Project Courses

Special projects are available in a variety of disciplines and provides opportunities for individualized learning experiences for students. The prefix for the credits for which the student registers is determined by the academic department (see example below):

XXX298AA	**Special Projects**	**1 Credit**	**1 Period**
XXX298AB	**Special Projects**	**2 Credits**	**2 Periods**
XXX298AC	**Special Projects**	**3 Credits**	**3 Periods**

Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.

Special Topics Courses

These courses provide a flexible option for a discipline to offer classes on a variety of different contemporary and/or special interest topics that are beyond the scope of current offerings. Special Topics courses may provide continuing education/professional development opportunities for students and professionals in the field. The different credit variants allow faculty to select a course with contact hours appropriate to the breadth and depth of the selected topic. The prefix for the credits for which the student registers is determined by the academic department (see example below):

XXX294AA	**Special Topics**	**1 Credit**	**1 Period**
XXX294AB	**Special Topics**	**2 Credits**	**2 Periods**
XXX294AC	**Special Topics**	**3 Credits**	**3 Periods**

Volunteerism: Service Learning Courses

Service-learning courses afford opportunities for students to apply classroom learning to real life situations while addressing needs of local agencies in a volunteer capacity. These experiences create context and relevance for students' programs of study as well as fostering problem-solving skills and effective teamwork. They provide opportunities for civic engagement, character evolution and increased awareness of their community. The prefix for the credits for which the student registers is determined by the academic department (see example below):

XXX282AA	**Volunteerism: Service Learning**	**1 Credit**	**1 Period**
XXX282AB	**Volunteerism: Service Learning**	**2 Credit**	**2 Periods**
XXX282AC	**Volunteerism: Service Learning**	**3 Credit**	**3 Periods**

Learning Modalities

South Mountain Community College offers a wide variety of classes in many subjects and also provides a choice of different levels, formats, and types of classes to fit your schedule and learning style. eLearning options available for SMCC students include: online, hybrid and web-enhanced face-to-face classes.

In-Person

Face-to-face course instruction is provided at a specific location on a specific day and time. Class may also be web-enhanced in which learning outside of class uses Canvas, Maricopa Open Educational Resource Learning System (MOER), or other online tools

Hybrid

Course content is delivered at a specific location on a specific day and time (as with in-person classes), and part of the course is also completed online without a set time to attend. This mixed format offers a combination of face-to-face classroom meetings and the opportunity to work independently.

Live Online

Course content is delivered at a specific location on a specific day and time (as with in-person classes), and part of the course is also completed online. (**Synchronous - At scheduled times)**

Online

Course content is delivered entirely online and is accessed through a learning management system without a set time to attend. Students should have independent access to the Internet. In-person testing may be required. (**Asynchronous - Not at scheduled times)**

Field Based

Course content is delivered in person at a location relevant to the course content (e.g., hospital, hiking trail, etc.); student is physically present and typically receives hands-on instruction.

Private Instruction

Course content is delivered individually between instructor and student consisting of one-on-one meetings at set dates, times, and locations; normally, student is physically present and typically receives hands-on instruction (e.g. musical instrument instruction, voice instruction).

Maricopa Community Colleges Current Courses

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AAA105	Peak Performance in Activated Learning	Techniques which enable the individual to achieve levels of peak performance using the activated learning process. Includes methods for developing a high level of motivation and self-discipline to achieve peak performance in areas such as sports, public speaking, and job productivity	Prerequisites: None.	LEC 1.0 1.0 1.0
AAA115	Creating College Success	Strategies to create success in college. Methods for selecting and developing effective academic strategies, increasing self-awareness and developing self-management strategies. Elements of college resources and relationships with others explored in support of students' educational experience	Prerequisites: None.	LEC 1.0 1.0 1.0
AAA150	Strategies for College Success	Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning.	Prerequisites: None.	LEC 3.0 3.0 3.0
ABA101	Hand and Power Tools	Selection, use, maintenance and safety procedures for common hand and power tools used in the construction industry.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.0 1.0
ABA102	Electrical Fundamentals	Fundamentals of electricity including electrical hazards, Occupational Safety and Health Administration (OSHA) regulations, units of measurements and using Ohm's law. Circuit characteristics and the use of Kirchoff's voltage and current laws to calculate voltage drop, current and resistance. Operation and use of specific meters. Includes an introduction to the National Electrical Code (NEC)	Prerequisites: None.	LEC 1.0 1.0 1.0
ABA103	Hand Bending of Electrical Conduit	Conduit bending and installation. Techniques for using hand operated and step conduit benders. Cutting, reaming and threading conduit	Prerequisites: None.	LEC 0.5 0.5 0.5
ABA104	Raceways, Boxes, Fittings, Anchors/Supports	Types and applications of conduit, raceways, wireways and ducts. Types, applications and wiring techniques for conductors. Hardware and systems used to mount and support boxes, receptacles and other electrical components	Prerequisites: Registered Apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.5 1.5 1.5
ABA106	Introduction to Materials Handling	Introduction to materials handling equipment and appropriate use for common job-site tasks. Recognize hazards associated with materials handling and proper techniques and procedures.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 0.5 0.5 0.5
ABA112	Electrical I	Theories and concepts in electrical safety basics and OSHA 10 certification. Introductory concepts in construction math, hand and power tools, drawings, rigging, and materials handling. Emphasis on communication and employability skills.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ABA114	Electrical II	Fundamentals of the electrical trade, residential electrical services and test equipment. Emphasis on safety, electrical circuits, theory, National Electrical Code, device boxes. Use and selection of hand bending, raceways, fittings, conductors, cables. Interpretation of electrical drawings.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ABA120	Carpentry Fundamentals	Overview of the carpentry trade. Apprenticeship programs and responsibilities of the apprentice. Types and uses of nails, fasteners and adhesives. Types of wood, lumber and manufactured wood products	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
ABA121	Floor and Wall Systems	Framing systems, floor construction, center beam and post support systems. Construction of sills, joists and bridging. Subflooring, mechanical connectors and the use of prefabricated joists. Wall construction, stud walls, panelized walls, masonry walls, post and beam walls, use of metal studs and drywall construction.	Prerequisites: (Registered apprentice status and a grade of C or better in ABA120) or permission of the Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
ABA122	Electrical III	Theory and application of alternating current, lighting, conduit bending, pull and junction boxes.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ABA124	Electrical IV	Principles of conductor installations, cable trays, conductor terminations and splices. Emphasis on grounding, bonding, circuit breakers, and fuses. Fundamental concepts of control systems.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ABA130	Installation of Electric Services	Electric services for commercial and industrial installations. Blueprints, diagrams and electrical calculations. Grounding, connecting three phase services and the installation of panelboards, switches and load centers	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
ABA135	Cast-In-Place Stairs	Cast-In-Place and Precast stair installation techniques, forming, erecting and safety procedures. Review American Concrete Institute (ACI) Codes and standard specifications.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
ABA136	Communications in Construction	Communication in the construction industry. Positive direct communication, written communication, active listening, understanding, negotiation, and dealing with difficult people. Communication skills at all organizational levels, with groups, combining oral and written communication for maximum effectiveness.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ABA150	Advanced Calculations for Electricians	Advanced mathematical calculations in the electrical industry. Powers and roots in watts, voltage, current and resistance. Metric and engineering units. English and metric systems for length, area, volume and mass, and energy and temperature measurements. Ratios, proportions, formulas, symbols and representation. Trigonometry and the Pythagorean theory. Plane and rotating vectors. Basic functions of the scientific calculator for electricians	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.5 1.5 1.5
ABA179	Installing and Sizing Water Supply Piping	Connecting piping to a water main. Plumbing connections to buildings and air and hydrostatic testing of water supply piping. Operation and installation of water heaters. Types, operation and installation of water meters. Installation of water supply systems to given structures. Effects of valves, fittings and piping on water pressure. Calculations of pressure drop and sizing procedures for water supply piping. Principles of back siphonage and backflow prevention	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 3.0 3.0 3.0
ABA192	Plumbing Level I	History of plumbing, modern plumbing, safety, human relations, and construction career opportunities. Hand and power tool safety, use, and maintenance. Plumbing drawings, components, and symbols. Materials, schedules for plastic, copper, and cast-iron. Fittings, valves, hangers, and supports. Measuring, cutting, reaming, and joining pipe. Safety precautions for installation, operation and maintenance. Fixtures and faucets. Drain, waste, and vent systems. Water distribution systems.	Prerequisites: None.	L+L 3.0 3.0 3.0
ABA204	Contactors and Relays	Operating principals of contactors and relays. Function in an electrical system. Operation and installation of specific contactors and relays. Interpretation of wiring diagrams. Connect and test a simple control circuit	Prerequisites: None.	LEC 1.0 1.0 1.0
ABA207	Construction Trades: Green Environment	Daily activities at work and at home that affect green environment. Leadership in Energy and Environmental Design (LEED) rating process. Carbon footprint and ways to reduce it. Construction of buildings that affect green environment. Application of principles of green building rating system.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
ABA222	Introduction to Welding, Brazing and Cutting	Arc welding theory and safety hazards. AC, DC and AC-DC welding machines. Use of electrodes and safety requirements for arc-welding. Basic welding techniques and gas metal-arc and gas tungsten-arc welding processes. Brazing and cutting using an oxyacetylene torch.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ABA232	Electrical V	The course content includes Load Calculations - Branch and Feeder Circuits, Conductor Selection and Calculations, Overcurrent Protection, Raceways/Wiring/Devices and Boxes, Voice/Data and Video.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ABA234	Electrical VI	Theories and concepts in distribution equipment, transformers, and commercial electrical services. Emphasis on motor calculations and voice/data and video. Operation of motor controls.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ABA242	Electrical VII	Principles of course load calculations, feeder and services and specialty transformers. Selection of standby and emergency systems. Emphasis on basic electronic theory, fire alarm systems and health care facilities.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ABA244	Electrical VIII	Principles of heating, ventilation, and air conditioning (HVAC) controls and heat tracing. Use and control of freeze protection. Basics in motor operation and maintenance. Focus on medium-voltage terminations/splices and special locations. Fundamentals of Crew Leadership.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ABA251	High Voltage Termination and Splicing	Terminations and splices in high voltage systems (600+ volts). Identifying and splicing specific types of cables and making terminations. Includes using splicing kits and following manufacturer's specifications. Testing techniques and calculations	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
ABA255	Commercial, Industrial and Special Lighting	Operating characteristics of incandescent, fluorescent and high intensity discharge lamps. Lighting controls and fixture installations. Blueprint reading exercise for commercial and industrial installations. Lighting requirement calculations. National Electrical Code (NEC) requirements for specialty lighting fixtures	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 0.5 0.5 0.5
ABA298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ABA298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ABA298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ABC118	OSHA Standards and Regulations	Provisions of and implementation of Occupational Safety and Health Administration (OSHA) Act in the work place. Rights and responsibilities under the OSHA Act. Appeals process, record keeping, and voluntary protection programs. OSHA's construction and general industry standards. Overview of the requirements of the more frequently referenced standards.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 1.5 1.5 1.5
ABC119	Basic Safety	Overview of safety rules and procedures for working on construction job sites	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
ABC120	Basic Calculations for Construction	Addition, subtraction, multiplication and division of whole, decimal, fraction and metric numbers. Percentage and fraction conversions. Metric units of length, weight, volume and temperature. Metric system as it relates to the construction trade. Basic algebra and geometry operations and equations. Area and volume calculations of shapes.	Prerequisites: None.	L+L 1.5 1.5 1.5
ABC121	Introduction to Hand and Power Tools	Overview of the use, maintenance and safety procedures for common hand and power tools.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
ABC122	Rigging Safety and Equipment	Rigging safety, equipment and inspection. Includes crane hand signals, common rope knots, types of derricks and cranes and safety procedures for rigging and moving materials and equipment.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
ABC123	Introduction to Construction Drawings	Basic concepts of construction drawings, including terms and symbols. Drawing interpretation, use of drawing dimensions and recognition of drawing classifications.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 0.5 0.5 0.5
ABC124	Conduit Bending	Types of conduit benders and bends. Conduit bending procedures and use of bends in conduit systems	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
ABC126	Electrical Test Equipment	Selection, inspection, use and maintenance of common electrical test equipment	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ABC130	Conductor Installation/Termination	Transportation, storage and setup of cable reels, methods of rigging and procedures for installing conductors using cable pulls in raceways and cable trays. Also methods of terminating and splicing conductors	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 1.0 1.0 1.0
ABC131	Cable Tray Installation	National Electrical Manufacturer's Association (NEMA) and National Electrical Code (NEC) requirements for cable tray modified installation and cable installation procedures.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 0.5 0.5 0.5
ABC132	Circuit Breakers and Fuses	National Electrical Code (NEC) requirements, Ground Fault Circuit Interrupters (GFCI), overcurrents, fuse sizing, safety techniques and short-circuit calculations.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.0 1.0
ABC133	Basic Lighting	Principles of illumination and specific light sources. Includes practical applications for residential, commercial and industrial installations	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.0 1.0
ABC135	Fundamentals of Concrete	Materials used to make concrete, including specific types of cement, aggregate, admixtures and reinforcing materials. Handling procedures for concrete, conveying and placing concrete and finishing techniques for concrete slab. Construction of foundations and formwork	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
ABC136	Roof Systems	Defining roof terminology. Identifying and understanding specific roof systems. Using the framing square and essex scale to calculate and measure specific types of rafters. Transcribing and transferring measurements onto rafters. Using "speed square" to determine measurements for specific types of rafters. Defining unequal roof pitch. Identifying specific types of plank and beam roofs and roof trusses used in the industry today.	Prerequisites: (Registered apprentice status and a grade of C or better in ABC/MEC/PNT120) or permission of the Apprenticeship Coordinator. Xref: ABC120 MEC120	LEC 1.0 1.0 1.0
ABC142	Alternating Current	Production of electricity, including; current, voltage, induction, mutual inductance and capacitance. Calculations using Ohms Law. Operation of a three phase system.	Prerequisites: (Registered apprentice status and a grade of C or better in ABC/MEC/PED120) or permission of the Apprenticeship Director. Xref: ABC120 MEC120	LEC 1.0 1.0 1.0
ABC143	Motors: Theory and Application	Overview of electric motors including types, operation, and applications. Assembly and disassembly. Mounting and connections according to National Electrical Code (NEC). Also troubleshooting, installation and handling	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ABC144	Grounding	Types of grounding and proper installation of grounds and grounding. OSHA and National Electrical Code (NEC) requirements specific to grounding. Purpose and operation of Ground Fault Circuit Interrupters (GFCI). Effects of soils and environment. Selection of grounds and grounding material for specific situations. Testing grounds with a "megger"	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
ABC221	Motors and Motor Controls	Electrical symbols, line diagrams and logic. Contactors and starters, control devices, reversing circuits and power distribution systems. Electronic control devices, programmable controllers, reduced voltage starters, accelerating and decelerating methods and circuits. Preventive maintenance and trouble shooting	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
ABC222	Hazardous Locations-Electrical	Hazardous location classifications. Equipment approved for use in specific hazardous locations. Wiring methods	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
ABC226	Raceways, Wiring Devices, Boxes and Fittings	Sizing, selecting, and installing raceways, junction boxes, outlet boxes and wiring devices. Calculating fill requirements according to National Electrical Code (NEC) regulations. Calculating bending radii in boxes and cabinets. Types and purpose of wiring devices and calculating maximum loads on such devices	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.5 1.5 1.5
ABC230	Stair Construction	Stair parts, materials and types. Stair dimensions and practical techniques for stair layout. Rough forming methods.	Prerequisites: (Registered apprentice status and a grade of C or better in ABC/MEC/PNT120) or permission of the Apprenticeship Coordinator. Xref: ABC120	LEC 1.0 1.0 1.0
ABC231	Exterior Wall Finishes	Exterior wall finish work; placement and hanging of windows, siding and flashing for walls. Installation of floors, chimneys and insulation included	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 3.0 3.0 3.0
ABC256	Basic Plumbing	Plumbing fixtures, drainage fixture unit ratings, and installation procedures. Includes procedures for installing fixtures, water heaters, shower and bath units, and dishwashers. Safety stressed.	Prerequisites: None.	L+L 4.0 4.0 4.0
ABC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ABC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ABC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ABO103	Introduction to Auto Body Repair	An introduction to basic auto body repair skills in dent removal. This course includes body filler application and sanding, plastic repair, metal repair, welding, plasma cutting, collision estimating, and air conditioning refrigerant recovery.	Prerequisites: None.	156
ABO104	Introduction to Automotive Refinishing	An introduction to basic refinishing skills with dual and single stage paints. This course includes spray equipment setup, panel prep and tape, paint correction with cut and buffing, scratch repair and proper blending techniques, basic knowledge of toners and paint mixing.	Prerequisites: None.	156
ABO203	Advanced Automotive Body Repair	An advanced course in non-structural auto body repair. This course includes disassembly of a vehicle, development of a collision repair plan, and repair. Includes body filler application and sanding, plastic repair, metal repair, and welding.	Prerequisites: None.	156
ABO204	Advanced Refinishing Fundamentals	An advanced course in vehicle refinishing and reassembly. This course includes spray equipment setup, vehicle prep and tape, paint correction with cut and buffing, scratch repair and proper blending techniques, knowledge of toners and paint mixing.	Prerequisites: None.	156
ABS171	Introduction to Good Manufacturing Practices (GMP)-Regulated Manufacturing	Course is designed to provide individuals with an overview of Good Manufacturing Practices (GMP), their application in a variety of industries and the opportunities for in such fields.	Prerequisites: None.	LEC 3.0 3.0 3.0
ABS173	Basic Instrumentation and Lab Math	Introductory course covering basic equipment, measurements, and calculations used in biotechnology laboratories.	Prerequisites: None. BIO156 or BIO181 recommended.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ABS174	BioSafety	General laboratory safety, hazardous chemical use and disposal, biohazardous material use and disposal, biosafety procedures, and radiation safety.	Prerequisites: None.	LEC 1.0 1.0 1.0
ABS175	Design and Analysis of Multivariable Biological Experiments	Fundamentals of planning and conducting biological experiments examining the effects of multiple simultaneous independent variables and their interactions on a single measured outcome using a structured Design of Experiments (DOE) statistical approach. Emphasis will also be given to maintaining written documentation of methodology, data and analysis as well as the reporting of findings in a variety of formats.	Prerequisites: None. BIO156++ or BIO181++ recommended.	L+L 1.0 2.0 2.0
ABS194AA	Special Topics in Applied Biological Sciences	Exploration of the foundation and application of a current topic in biosciences.	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0
ABS194AB	Special Topics in Applied Biological Sciences	Exploration of the foundation and application of a current topic in biosciences.	Prerequisites: Permission of Instructor.	LEC 2.0 2.0 2.0
ABS194AC	Special Topics in Applied Biological Sciences	Exploration of the foundation and application of a current topic in biosciences.	Prerequisites: Permission of Instructor.	LEC 3.0 3.0 3.0
ABS283	Bioinformatics and Scientific Computing	Introduction to bioinformatics, including history, concepts, major genetic databases, access tools and programming software. Methodologies to extract meaning from biological sequences using sequence analysis, data visualization and statistics.	Prerequisites: A grade of C or better in [(BIO156 or BIO181) and (MAT114 or MAT115 or MAT12+ OR an appropriate district placement for MAT15+ or higher)] or permission of Instructor or Department/Division Chair. Concurrent enrollment in, or previous completion of, BIO208 is strongly suggested but not required.	L+L 3.0 4.0 4.0
ABS294AA	Special Topics in Applied Biological Sciences-Advanced	Exploration of a current topic in the biosciences and its advanced applications.	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0
ABS294AB	Special Topics in Applied Biological Sciences-Advanced	Exploration of a current topic in the biosciences and its advanced applications.	Prerequisites: Permission of Instructor.	LEC 2.0 2.0 2.0
ABS294AC	Special Topics in Applied Biological Sciences-Advanced	Exploration of a current topic in the biosciences and its advanced applications.	Prerequisites: Permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ABS295AA	Independent Research in Applied Biology	Original scientific investigation of biological phenomenon with potential commercial applications.	Prerequisites: A grade of C or better in (BIO156++ or BIO181++ or BIO195++) and permission of Instructor.	LAB 1.0 1.0 0.0
ABS295AB	Independent Research in Applied Biology	Original scientific investigation of biological phenomenon with potential commercial applications.	Prerequisites: A grade of C or better in (BIO156 or BIO181) and permission of Instructor.	LAB 2.0 2.0 0.0
ACC105	Payroll, Sales and Property Taxes	Tax reporting for payroll, sales, and personal property	Prerequisites: None.	LEC 3.0 3.0 3.0
ACC107	Bookkeeping Theory and Practice	Fundamental accounting practices; application to retail stores, professional firms, and personal service operations.	Prerequisites: None.	L+L 4.0 5.0 5.0
ACC109	Accounting Concepts	Introduction to accounting with emphasis on analysis and applications of financial information.	Prerequisites: None. GBS151 and reading ability equivalent to RDG100 or RDG100LL suggested but not required.	LEC 3.0 3.0 3.0
ACC110	Understanding and Using Accounting Systems	Develops basic comprehension of the balance sheet, income statement, and equity and cash flow statements. Explores usage of specialized journals and subsidiary ledgers in a computerized system. Studies the impact of various transactions on an enterprise, including payroll, receivables, payables, inventory, cash and credit card receipts	Prerequisites: None.	L+L 3.0 3.0 3.0
ACC111	Accounting Principles I	Fundamental theory of accounting principles and procedures	Prerequisites: None.	LEC 3.0 3.0 3.0
ACC112	Accounting Principles II	Continuation of the fundamental theory of accounting principles and procedures, including interpretation of general purpose financial statements.	Prerequisites: A grade of C or better in ACC111 or permission of Department or Division.	LEC 3.0 3.0 3.0
ACC115	Computerized Accounting	Understanding of fundamental accounting principles and mastery of an accounting information systems including the general ledger, accounts receivable, accounts payable and payroll.	Prerequisites: None.	L+L 3.0 3.0 3.0
ACC121	Individual Tax Preparation	Theory and practice of accounting for individual taxation.	Prerequisites: None.	L+L 3.0 3.0 3.0
ACC211	Financial Accounting	Introduction to theory and practice in the preparation and interpretation of general purpose financial statements.	Prerequisites: None.	LEC 3.0 3.0 3.0
ACC212	Managerial Accounting	Development and analysis of accounting information for managerial planning and control	Prerequisites: A grade of C or better in (ACC111 and ACC112) or ACC211 and (CIS105 or permission of Department or Division).	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ACC215	Governmental and Not-For-Profit Accounting	Theories and procedures of accounting for governmental and not-for-profit organizations.	Prerequisites: A grade of C or better in ACC112 or ACC211, or permission of Department or Division.	LEC 3.0 3.0 3.0
ACC216	Fraud Examination	Fundamental theory of fraud examination methodology to detect and prevent accounting fraud.	Prerequisites: A grade of C or better in (ACC230 or ACC112 or ACC211) or permission of Department or Division.	LEC 3.0 3.0 3.0
ACC219	Intermediate Accounting I	Continuation of the theory and practice of financial accounting, applicable to assets, liabilities, equity related problems of income determination and financial reporting.	Prerequisites: A grade of C or better in ACC212 or ACC240 or permission of Department or Division.	LEC 3.0 3.0 3.0
ACC220	Intermediate Accounting II	Continuation of the theory and practice of financial accounting, applicable to assets, liabilities, equity determination of asset values, liabilities, and related problems of income determination, special topics and financial reporting.	Prerequisites: A grade of C or better in ACC219 or permission of Department or Division.	LEC 3.0 3.0 3.0
ACC221	Tax Accounting	Theory and practice of accounting for personal, corporate, and non-corporate taxation.	Prerequisites: A grade of C or better in ACC111 or ACC211 or permission of Department or Division.	LEC 3.0 3.0 3.0
ACC222	Payroll Accounting	Payroll records for businesses required by federal and state laws	Prerequisites: A grade of C or better in ACC111 or ACC211 or permission of Department or Division.	LEC 3.0 3.0 3.0
ACC224	Tax Practice Administration and Business Entity Analysis	Federal income tax representation, practices, and procedures, including trust and estate income tax, exempt organizations, and retirement plans.	Prerequisites: A grade of C or better in ACC121 or ACC221.	LEC 3.0 3.0 3.0
ACC230	Uses of Accounting Information I	Introduction to the uses of accounting information for internal and external purposes with emphasis on financial statement analysis.	Prerequisites: A grade of C or better in ACC111 or ACC211 or (ENG101 and MAT151 and CRE101) or appropriate test scores on the District English, Reading and Math placement exams.	LEC 3.0 3.0 3.0
ACC240	Uses of Accounting Information II	Introduction to the uses of accounting information for internal and external purposes with emphasis on analysis for use by management.	Prerequisites: A grade of C or better in ACC230.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ACC250	Introductory Accounting Lab	Procedural details of accounting for the accumulation of information and generation of reports for internal and external users.	Prerequisites: None.	LAB 1.0 3.0 3.0
ACC260	Certified Bookkeeper (CB) Preparation	Fundamental accounting practices including accrual and deferral adjustments, correcting common transaction recording errors, bank reconciliations and adjusting entries. Includes payroll accounting and related Federal and State payroll law requirements. Accounting for depreciation for financial and tax accounting purposes covered. Inventory valuation methods. Includes calculating, recording, and reporting under generally accepted accounting principles (GAAP). Preventive internal control procedures to detect organizational fraud, theft, and embezzlement covered.	Prerequisites: A grade of C or better in ACC111 or ACC211 or (bookkeeping experience and permission of Instructor).	LEC 3.0 3.0 3.0
ACC270AA	Accounting Internship	Accounting work experience in a business or industry. Eighty hours of designated work per credit per semester.	Prerequisites: Permission of Department or Division.	LAB 1.0 1.0 0.0
ACC270AB	Accounting Internship	Accounting work experience in a business or industry. Eighty hours of designated work per credit totaling 160 hours per semester.	Prerequisites: Permission of Department or Division.	LAB 2.0 2.0 0.0
ACC270AC	Accounting Internship	Accounting work experience in a business or industry. Eighty hours of designated work per credit totaling 240 hours per semester.	Prerequisites: Permission of Department or Division.	LAB 3.0 3.0 0.0
ACC282AA	Volunteerism Accounting: Service Learning Experience	Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: A grade of C or better in ACC111 or (ACC230 and ACC250) and permission of Instructor.	LAB 1.0 1.0 0.0
ACC282AB	Volunteerism Accounting: Service Learning Experience	Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: A grade of C or better in ACC111 or (ACC230 and ACC250) and permission of Instructor.	LAB 2.0 2.0 0.0
ACC282AC	Volunteerism Accounting: Service Learning Experience	Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: A grade of C or better in ACC111 or (ACC230 and ACC250) and permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ACC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
ACC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 5.0 0.0
ACC296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ACC296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
ACC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ACC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ACC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ACU305	Accounting Information Systems	Fundamentals of Accounting Information System concepts and applications as they relate to business processes, data analytics, technologies, and controls.	Prerequisites: A grade of C or better in ACC219, or permission of Program Director.	LEC 3.0 3.0 3.0
ACU315	Cost Accounting	In-depth analysis of accounting information for managerial planning and control with a focus on cost accounting.	Prerequisites: A grade of C or better in ACC212, or permission of Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ACU321	Tax Accounting II	A continuation of theory and practice of accounting for personal, corporate, and non-corporate taxation, with an introduction to state and local tax issues.	Prerequisites: A grade of C or better in ACC221, or permission of Program Director.	LEC 3.0 3.0 3.0
ACU325	Forensic Accounting	Fundamentals of forensic accounting and fraud investigation. Focus on ethics, integrity, and legal considerations.	Prerequisites: A grade of C or better in ACC219, or permission of Program Director.	LEC 3.0 3.0 3.0
ACU405	Auditing	Fundamentals of auditing and assurance concepts and applications as they relate to business processes and audit risks. Focus on ethics and legal considerations and auditing processes, including planning, obtaining evidence, and reporting.	Prerequisites: A grade of C or better in ACU305, or permission of Program Director.	LEC 3.0 3.0 3.0
ACU410	Advanced Accounting I	Advanced analysis of accounting theory and practice. Focus on applying standards relevant to complex business structures, business combinations, consolidations and mergers, investments, segment and interim reporting, and foreign currency transactions.	Prerequisites: A grade of C or better in ACC220, or permission of Program Director.	LEC 3.0 3.0 3.0
ACU411	Advanced Accounting II	Continued advanced analysis of accounting theory and practice. Focus on applying standards relevant to reorganizations and liquidations, partnerships, not-for-profit entities, state and local governments, and estates and trusts.	Prerequisites: A grade of C or better in ACU410, or permission of Program Director.	LEC 3.0 3.0 3.0
ACU490	Accounting Capstone	Completion of a comprehensive project incorporating major concepts and related topics within the field of accounting. Students will demonstrate the steps for project identification, related research, analysis, and presentation of information. Project topics will follow an instructor approval process.	Prerequisites: Permission of Program Director or Department/Division Chair.	L+L 3.0 3.0 3.0
AEN102	Fundamentals of Facility Energy Management	Process of evaluation of types of energy use. Evaluation of the structure, energy transfer, lighting, heating, and cooling systems. Introduction to basic thermal process, including thermal capacity, heat transfer modes, psychometric charts, fan and pump laws, energy storage, and other factors related to HVAC and occupant comfort in commercial facilities. Includes an introduction to energy generation, construction and equipment, and the impact of these factors on cost and economic justification.	Prerequisites: None.	LEC 4.0 4.0 4.0
AEN103	Hand Tools and Basic Maintenance for Building Energy Technicians	Basic tools and equipment for the building energy technician. Includes an overview of electrical theory and procedures for measurement and evaluation of common electric circuits, specific heating, ventilation, and air conditioning (HVAC) mechanical hardware devices, analysis of building environmental conditions, and safe procedures for starting and stopping equipment and systems. Also addresses basic repair and replacement of electric outlets, fuses, breakers, filters, and necessary diagnostics on related electrical and mechanical items.	Prerequisites: None.	L+L 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AEN142	Introduction to Energy Management	Introduction to building energy management concepts and procedures. Includes the carbon cycle, building envelope and materials of construction in their relation to energy management, occupant comfort, and indoor air quality. Major emphasis on identification of building system components, relations, interactions and basic operation, evaluation and reporting of energy trending and consumption, and efficiency.	Prerequisites: A grade of C or better in AEN102, AEN103 and CNS182.	L+L 3.0 3.0 3.0
AEN190	Device Interface and Selection	Overview of building management systems, components, and controls. Includes energy consumption basics and measurement in addition to building systems evaluation. Also covers the process for evaluation and documentation of systems as well as recommendations for potential energy conservation.	Prerequisites: A grade of C or better in AEN142 and (MAT112 or MAT122).	L+L 3.0 5.0 5.0
AES101	Heritage and Values I	Survey course designed to introduce students and cadets to the Department of the Air Force (DAF) and the Air Force Reserve Officer Training Corps (AFROTC). The course allows students and cadets to examine general aspects of the DAF, leadership fundamentals, service benefits, and opportunities for officers. The course also lays the foundation for becoming an Airman or Guardian by outlining our heritage and values. As a foundational course, this course provides a historical perspective such as lessons on war and US military, DAF operations, principles of war, and airpower.	Prerequisites: None.	LEC 2.0 1.0 0.0 LAB 0.0 1.0 0.0
AES103	Heritage and Values II	Survey course designed to introduce students and cadets to the Department of the Air Force (DAF) and the Air Force Reserve Officer Training Corps (AFROTC). The course allows students and cadets to examine general aspects of the DAF, leadership fundamentals, service benefits, and opportunities for officers. The course also lays the foundation for becoming an Airman or Guardian by outlining our heritage and values. As a foundational course, this course provides a historical perspective such as lessons on war and US military, DAF operations, principles of war, and airpower.	Prerequisites: None.	LEC 2.0 1.0 0.0 LAB 0.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AES201	Team and Leadership Fundamentals I	A survey course designed to provide a fundamental understanding of both leadership and team building. Students and cadets will learn that there are many layers to leadership, including aspects that do not always come to mind. Such things include listening, understanding themselves, being a good follower, and problem solving efficiently. Students and cadets will apply these leadership perspectives when completing team building activities and discussing things like conflict management. Students and cadets should demonstrate basic verbal and written communication skills.	Prerequisites: None.	LEC 2.0 1.0 0.0 LAB 0.0 1.0 0.0
AES203	Team and Leadership Fundamentals II	A survey course designed to provide a fundamental understanding of both leadership and team building. Students and cadets will learn that there are many layers to leadership, including aspects that do not always come to mind. Such things include listening, understanding themselves, being a good follower, and problem solving efficiently. Students and cadets will apply these leadership perspectives when completing team building activities and discussing things like conflict management. Students and cadets should demonstrate basic verbal and written communication skills.	Prerequisites: None.	LEC 2.0 1.0 0.0 LAB 0.0 1.0 0.0
AES294	Air Force Physical Fitness	Physical training component of Air Force ROTC. Covers topics of immediate or special interest to a faculty member and students.	Prerequisites: None.	L+L 1.0 3.0 0.0
AES298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. COMMON COMPETENCY COURSE	Prerequisites: None.	LAB 1.0 1.0 0.0
AES298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. COMMON COMPETENCY COURSE	Prerequisites: None.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AES298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. COMMON COMPETENCY COURSE	Prerequisites: None.	LAB 3.0 3.0 0.0
AET107	Private Pilot Ground School	Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, airplane systems, airports, airspace, communications, Federal Air Regulations, navigation, airplane performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam.	Prerequisites: None. Corequisites: AET110 or AET112.	LEC 5.0 5.0 5.0
AET107HH	Private Pilot Ground School: Helicopter	Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, helicopter systems, airports, airspace, communications, Federal Air Regulations, navigation, helicopter performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam.	Prerequisites: None. Corequisites: AET110HH.	LEC 5.0 5.0 5.0
AET110	Private Pilot Flight	Flight course in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate practical examination. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, night flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Approximately 50 hours airplane flight experience at student`s expense required. Requires passing check ride similar to the FAA Private Pilot check ride.	Prerequisites: None. Corequisites: AET107.	LAB 1.0 5.0 5.0
AET110HH	Private Pilot Flight: Helicopter	Flight course in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate practical examination. Includes preflight preparation, preflight procedures, airport and heliport operations, hovering maneuvers, takeoffs, landings, and go-rounds, performance maneuvers, navigation, emergency operations, night operations, and post-flight procedures. Approximately 75-85 hours helicopter flight experience at student's expense required. Requires passing check ride similar to the FAA Private Pilot check ride.	Prerequisites: None. Corequisites: AET107HH.	LAB 2.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AET112	Private Pilot Flight - Test Course	Flight course in preparation for transition into continued AET course work. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Requires passing check ride similar to the Federal Aviation Administration Private Pilot check ride.	Prerequisites: FAA Private Pilot Airplane Single-Engine Land or advanced certification. Corequisites: AET107.	LAB 1.0 5.0 5.0
AET115	Aviation Meteorology	Meteorology for professional pilots. Includes atmosphere, air mass circulation, cloud type identification, weather hazards, and high altitude, Arctic, and tropical weather systems. Basic forecasting, use of Direct User Access Terminal (DUAT) systems and reading and interpreting weather charts	Prerequisites: None.	LEC 3.0 3.0 3.0
AET203	Basic Airplane Systems	Beginning commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examination. Discussions will include, but not be limited to reciprocating engines, engine systems, airplane systems, altitude systems, and commercial regulations.	Prerequisites: A grade of C or better in (AET207, AET217, and AET210) or permission of Instructor. Corequisites: AET222.	LEC 3.0 3.0 3.0
AET203HH	Basic Helicopter Systems	Beginning commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examination Discussions will include, but not be limited to reciprocating engines, engine systems, helicopter systems, altitude systems, and commercial regulations.	Prerequisites: A grade of C or better in AET207HH, AET217HH and AET210HH or permission of Instructor. Corequisites: AET220HH and AET213HH.	LEC 2.0 2.0 2.0
AET205	Aircraft Structures, Systems, and Maintenance	Survey of airframe structures, systems, and maintenance regulations for pilots. Includes aircraft and airfoil design and construction, and electrical, instrumentation, and automatic flight control systems. Maintenance privileges and limitations, and forms and records	Prerequisites: Private Pilot Certificate or permission of Instructor.	LEC 4.0 4.0 4.0
AET207	Attitude Instruments and Navigation	Beginning instrument pilot ground course in preparation for the Federal Aviation Administration (FAA) Instrument Pilot Rating and Instrument Rating written examinations. Includes preflight preparation, flight instruments, basic attitude instrument flying, radio navigation systems, and technically advanced aircraft systems.	Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET210, AET217 and AET220	LEC 3.0 3.0 3.0
AET207HH	Attitude Instruments and Navigation: Helicopter	Beginning instrument pilot ground course in preparation for the Federal Aviation Administration (FAA) Instrument Pilot Rating and Instrument rating written examinations. Includes preflight preparation, flight instruments, basic attitude instrument flying, radio navigation systems, and technically advanced helicopter systems.	Prerequisites: A grade of C or better in AET110HH or permission of Instructor. Corequisites: AET210HH and AET217HH.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AET208	Aviation Safety	Introduction to aviation safety, including aviation safety programs, risk management, pilot psychology, physiology, human factors, and accident review and investigation.	Prerequisites: A grade of C or better in AET107 or permission of Instructor.	LEC 3.0 3.0 3.0
AET210	Commercial Flight Lab I	Initial flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on instrument and technically advanced aircraft operations. Student must fly approximately 10 hours at own expense. Requires passing operational stage checks similar to the FAA check rides.	Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET217 and AET220.	LAB 1.0 5.0 5.0
AET210HH	Instrument Flight: Helicopter	Initial helicopter flight course in preparation for the Federal Aviation Administration (FAA) Instrument rating practical examination. Emphasis on helicopter instrument operations. Student must fly approximately 75 hours at own expense. Requires passing operational phase checks.	Prerequisites: A grade of C or better in AET110HH or permission of Instructor. Corequisites: AET207HH and AET217HH.	LAB 2.0 5.0 5.0
AET213	Aerodynamics and Performance	Advanced commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examinations. Includes discussion of aerodynamic factors including lift, weight, drag, and thrust. Discussions will include, but are not limited to aerodynamics, performance, safe and efficient airplane operations, airplane stability and control, stalls, and spins.	Prerequisites: A grade of C or better in AET207, AET217, and AET210. Corequisites: AET221.	LEC 3.0 3.0 3.0
AET213HH	Aerodynamics and Performance: Helicopter	Advance commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examinations. Includes discussion of aerodynamic factors including lift, weight, drag, and thrust. Discussions will include, but are not limited to aerodynamics, performance, and safe and efficient helicopter operations.	Prerequisites: A grade of C or better in AET207HH, AET217HH, and AET210HH. Corequisites: AET220HH and AET203HH.	LEC 2.0 2.0 2.0
AET215	Aircraft Powerplants	Survey of engines and engine systems for pilots. Includes theory and analysis of reciprocating and turbine aircraft engines. Lubrication, ignition, fuel control, cooling, exhaust, and propellers.	Prerequisites: A grade of C or better in AET205 or permission of Instructor.	LEC 4.0 4.0 4.0
AET217	Instrument Procedures	Advanced instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Includes Federal Aviation Regulations, instrument approach procedures, and instrument enroute considerations. Requires passing written exam similar to the Instrument pilot rating and Instrument rating written exams.	Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210 and AET220.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AET217HH	Instrument Procedures: Helicopter	Advance helicopter instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Includes Federal Aviation Regulations, instrument approach procedures, and instrument enroute considerations. Requires passing written exams similar to the Instrument pilot rating and Instrument rating written exams.	Prerequisites: A grade of C or better in AET110HH or permission of Instructor. Corequisites: AET210HH and AET207HH.	LEC 2.0 2.0 2.0
AET220	Instrument Flight Lab	Flight course in preparation for the Federal Aviation Administration (FAA) Instrument rating practical examination. Emphasis on instrument operations. Student must fly approximately 40 hours at own expense. Requires passing of stage checks similar to the FAA check ride.	Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210 and AET217.	LAB 1.0 5.0 5.0
AET220HH	Commercial Flight: Helicopter	Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial and high performance helicopter operations. Student must fly approximately 60 hours at own expense. Requires passing instrument rating and commercial pilot stage checks similar to the FAA check rides.	Prerequisites: A grade of C or better in AET210HH, AET207HH and AET217HH. Corequisites: AET203HH and AET213HH.	LAB 2.0 5.0 5.0
AET221	Commercial Flight Lab II	Intermediate flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial and solo cross-country flight operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures during dual instruction are designed to be performed with flight instructor guidance. Requires passing commercial pilot stage checks similar to the FAA check ride.	Prerequisites: A grade of C or better in AET207 and AET210 or by permission of Instructor. Corequisites: AET213.	LAB 1.0 5.0 5.0
AET222	Commercial Flight Lab III	Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures are designed to be performed with little flight instructor guidance. Requires commercial pilot stage checks similar to the FAA check ride.	Prerequisites: A grade of C or better in AET221 and AET213. Corequisites: AET203.	LAB 1.0 5.0 5.0
AET225	Advanced Aircraft Systems	Survey of advanced aircraft systems to include electrical, automatic flight control, pressurization, cabin atmosphere, ice control, rain control, fire detection and extinguishing. Includes theory and analysis of turbine aircraft engines. Introduction to turbine engine systems to include lubrication, ignition, fuel control, cooling, exhaust, and propellers. Includes overview of maintenance publications, forms and records.	Prerequisites: Private Pilot Certificate or permission of Instructor.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AET227	Certified Flight Instructor: Airplane, Single Engine Land Ground School	Ground school in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor and Fundamentals of Instruction written examinations. Includes fundamentals of instruction, aerodynamics, airplane performance, systems, operations, weight and balance, weather, federal regulations, navigation, maneuvers, pilot physiology, ethics, and aeronautical decision making. Requires passing written exams similar to the FAA Certified Flight Instructor: Airplane, and Fundamentals of Instruction written exams.	Prerequisites: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET230.	LEC 5.0 5.0 5.0
AET227HH	Certified Flight Instructor: Helicopter Ground School	Ground school in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor and Fundamentals of Instruction written examinations. Includes fundamentals of instruction, aerodynamics, helicopter performance, systems, operations, weight and balance, weather, federal regulations, navigation, maneuvers, pilot physiology, ethics, and aeronautical decision making. Requires passing written exams similar to the FAA Certified Flight Instructor: Helicopter, and Fundamentals of Instruction written exams.	Prerequisites: FAA Commercial Pilot Certificate. Corequisites: AET230HH.	LEC 4.0 4.0 4.0
AET229	Crew Resource Management	Crew communications, teamwork, leadership, "followership," decision-making, and situational awareness; also the benefits of diversity, and the role diversity plays in the modern aerospace industry. Emphasis on utilization of all available resources in order to conduct a safe and efficient flight.	Prerequisites: A grade of C or better in AET217 or permission of Instructor.	LEC 3.0 3.0 3.0
AET230	Certified Flight Instructor: Airplane, Single Engine Land Flight Lab	Flight course in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor: Airplane practical examination. Emphasis on demonstration and analysis of flight maneuvers. Includes preflight, ground operations, airport operations, takeoffs, climbs, flight fundamentals, stalls, spins, slow flight, basic instrument operations, performance maneuvers, ground reference maneuvers, emergency operations, approaches, landings, and post-flight procedures. Requires approximately 25 hours of flight that includes high performance operations at student's expense. Also requires passing check ride similar to the FAA Certified Flight Instructor check ride.	Prerequisites: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET227.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AET230HH	Certified Flight Instructor: Helicopter	Flight course in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor: Helicopter practical examination. Emphasis on demonstration and analysis of flight maneuvers. Includes preflight procedures, airport and heliport operations, hovering maneuvers, takeoffs,landings, and go-arounds, fundamentals of flight, performance maneuvers, emergency operations, special operations, and postflight procedures. Requires approximately 60 hours of flight at student's expense. Also requires passing check ride similar to the FAA Certified Flight Instructor check ride.	Prerequisites: FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET227HH.	LAB 1.0 3.0 3.0
AET237	Multiengine Airplane Pilot Ground School	Aeronautical knowledge necessary to meet requirements for a multiengine airplane rating including orientation, aerodynamics, airplane systems, airplane performance, flight planning, and emergency procedures.	Prerequisites: A grade of C or better in AET220 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET240.	LEC 2.0 2.0 2.0
AET239	Commercial Flight Lab IV	Final flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 20 hours at their own expense. Maneuvers and procedures are designed to be performed without flight instructor guidance. Requires passing commercial pilot stage check similar to the FAA check ride.	Prerequisites: A grade of C or better in (AET203 and AET222), or by permission of Instructor.	LAB 1.0 5.0 5.0
AET240	Multiengine Airplane Pilot Flight Lab	Flight course in preparation for the Federal Aviation Administration (FAA) Multi-engine Airplane practical examination. Approximately 18 hours of flight experience at the student`s expense and passing check ride similar to the FAA Multi-engine check ride are required.	Prerequisites: A grade of C or better in AET239 or FAA Commercial Pilot Certificate with Single Engine Land and Instrument rating. Corequisites: AET237.	LAB 1.0 1.5 1.5
AET257	Readings in Aviation	Critical inquiry of a particular aviation theme from a wide variety of sources. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. International data communication facilities and equipment made available for student use.	Prerequisites: A grade of C or better in ENG102 or ENG111 and permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AET258	Certified Flight Instructor: Instrument Airplane Ground School	Aeronautical knowledge and practical teaching ability necessary to obtain an Instrument Flight Instructor Certificate with an Airplane-Single-Engine rating and necessary to satisfactorily pass the Flight Instructor Instrument knowledge test.	Prerequisites: Valid FAA Commercial Pilot Certificate or Airline Transport Pilot Certificate with the appropriate category and class of airplane used in the course, instrument rating, and Flight Instructor Certificate-Airplane. Corequisites: AET270.	LEC 3.0 3.0 3.0
AET270	Certified Flight Instructor: Instrument Airplane Flight Lab	Flight experience in an airplane to meet flight proficiency and aeronautical experience requirements necessary to add an Instrument Airplane Rating to an existing Flight Instructor-Airplane certificate.	Prerequisites: Valid FAA Commercial Pilot Certificate or Airline Transport Pilot Certificate with the appropriate category and class of airplane used in the course, instrument rating, and Flight Instructor Certificate-Airplane. Corequisites: AET258.	LAB 1.0 3.0 3.0
AET296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
AET296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AET296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
AET296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
AET298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AET298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AET298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
AFR110	Introduction to African-American Studies	Introduction to the study of the African-American experience. Interdisciplinary approach includes historical underpinnings; population and cultural characteristics; social, economic, and political issues; and implications for the future	Prerequisites: None.	LEC 3.0 3.0 3.0
AFR200	Introduction to Africana Studies	Survey of the social, economic, political, environmental, and cultural developments of various African communities from the beginning of human civilization to the present, including the development of the African diaspora as well as the historical and cultural impacts of African interactions with other global communities.	Prerequisites: None.	LEC 3.0 3.0 3.0
AFR202	Ethnic Relations in the United States	Basic concepts and processes, including historic overview, of interethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to interethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world.	Prerequisites: None.	LEC 3.0 3.0 3.0
AFR203	African-American History to 1865	History and cultural heritage of African-Americans from ancestral origins in Ancient Africa through the experience of chattel slavery in the Americas to eventual emancipation and participation in the American Civil War.	Prerequisites: None.	LEC 3.0 3.0 3.0
AFR204	African-American History 1865 to Present	The multifaceted history and cultural heritage of African-American communities since the Civil War, presented within the broader context of U.S. history. This course explores the social, economic, political, and cultural history of African-American communities, including the historical and cultural impacts of slavery and discrimination, and the collective struggle for freedom, equality, and self-determination throughout U.S. history.	Prerequisites: None.	LEC 3.0 3.0 3.0
AFR207	Black Women	Analysis and discussion of critical issues for Black women in America today	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AFR210	Multicultural Representation in the History of STEM	Aims to fill a gap by exploring the perspectives, experiences, and contributions of individuals from various cultural backgrounds in the study of science, technology, engineering, and mathematics (STEM). Analyzes and synthesizes how different cultures have shaped scientific knowledge, examining the impact of diversity on innovation and problem-solving, and addressing barriers faced by underrepresented groups in STEM fields.	Prerequisites: None.	LEC 3.0 3.0 3.0
AGB130	Establishing and Running an Agribusiness	Basic principles used in establishing and running an Agribusiness. Emphasis on business requirements to maintain a business enterprise in Arizona	Prerequisites: None.	LEC 3.0 3.0 3.0
AGB132	Agribusiness and Management	Application of management principle skills in day-to-day operations for decision-making techniques base on collection, use and analysis of financial, employee, and customer data to determine and evaluate the daily operations of an agribusiness venture.	Prerequisites: None.	LEC 3.0 3.0 3.0
AGB139	Agribusiness Computer Operations	Agribusiness operations for solving, forecasting and projecting agribusiness problems, agribusiness communications, accounting systems and database use.	Prerequisites: None.	L+L 3.0 6.0 6.0
AGB140	Commercial Floral Design	Fundamentals of commercial floral design. Includes instruction and hands-on training in fresh, dried, and silk plants, flowers, and greens; materials; supplies; gift items; and industry conditions, standards, and trends. Covers design principles, identification, selection, care, maintenance, handling, and use of floral design material, ordering, pricing, recordkeeping, computer usage, and customer relations.	Prerequisites: None.	L+L 3.0 5.0 5.0
AGB142	Floriculture	Principles and species of floriculture. Includes instruction in cultural and production requirements of cut flowers and foliage. Covers general production information and basic plant physiology principles, propagation, production temperatures, plant nutrients, pest management, and greenhouse construction and operations.	Prerequisites: None.	L+L 3.0 5.0 5.0
AGB144	Agriculture Processing	Agricultural processing and the meat industry as a business enterprise. Carcass evaluation, grading, judging for cut ability and quality, cut identification, meat cutting, wrapping, freezing, and storing.	Prerequisites: None.	L+L 3.0 5.0 5.0
AGB229	Landscape Management and Leadership	Covers landscape and nursery management concepts and applications for business, industry, and government organizations	Prerequisites: None.	LEC 3.0 3.0 3.0
AGB231	Marketing of Agricultural Products	Principles of agricultural marketing including consumer demand, economic system fundamentals, functions and methods of marketing agricultural commodities, market planning, and promoting and selling in the agricultural domain.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGB260	Youth Leadership Development	Characteristics of effective Career and Technical Student Organization (CTSO) officers, leadership styles and strategies for the management and organization of youth groups in agriculture. Includes instruction and hands-on training in speech/workshop development, budget and activity planning and the use of parliamentary procedure.	Prerequisites: None.	L+L 4.0 6.0 6.0
AGB261	Advanced Youth Leadership Development	Characteristics of effective Career and Technical Student Organization (CTSO) officers, leadership styles and strategies for the management and organization of youth groups in agriculture. Includes instruction and hands-on training in speech/workshop development, budget and activity planning and the use of parliamentary procedure.	Prerequisites: None.	L+L 4.0 6.0 6.0
AGB290	Internship	Supervised field training for Agribusiness students with local industry businesses.	Prerequisites: Student shall be in final semester before graduation and permission of Department or Division.	LAB 3.0 6.0 0.0
AGB296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
AGB296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGB296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
AGB296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
AGB298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AGB298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGB298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
AGL181	Landscape Construction Techniques	The methods used in site preparation, installation of edgings, construction of walks, patios and decks, installation of sprinkler systems, rock scapes and the planting of trees, shrubs, ground covers, and lawns.	Prerequisites: None.	L+L 3.0 6.0 6.0
AGL184	Landscape Drafting and Design I	Basic principles of landscape design, including drafting and design techniques commonly used in the field of landscaping. Emphasis on simple working drawings and detailed views, symbols, lettering, and drafting standards.	Prerequisites: None.	L+L 2.0 4.0 4.0
AGL188	Arizona Landscape Design	Designed for residential homeowner and beginning professional. Emphasis on plant material groupings and basic design principles. History of landscape use, special features of hardscapes, irrigation systems, and lawn-to- desert planting conversion techniques.	Prerequisites: None.	L+L 2.0 3.0 3.0
AGL189	Landscape Design I	Introduction to landscape design with an emphasis on residential and small scale projects. Application of design processes from inventory and analysis through design and development including program, measured base, study diagrams, rendered and colored plans, and sectional elevations. Architectural communication developed through hand sketch and hand drafting techniques with practice in client interview and design presentation.	Prerequisites: None.	L+L 3.0 6.0 6.0
AGL190	Landscape Design II	Advanced study of the principles, processes, and practice of Landscape Design, with an emphasis on residential and small scale design. Design problem-solving, use of landscape elements such as paving, fencing, small structures, low voltage lighting, plants, water and fire features. Construction documents will be produced including plans, estimates, details, and specifications. Regulatory agencies and other affective influences will be explained. Development of personal design philosophy and career exploration.	Prerequisites: A grade of C or better in AGL189 or permission of Instructor.	L+L 3.0 6.0 6.0
AGL269	Computer Aided Landscape Design	Using AutoCAD to create landscape design drawings and wire frames in Sketchup for elevations, sections and perspective sketches.	Prerequisites: A grade of C or better in (AGB139 or CAD100 or CAD101) and AGL189 or permission of Instructor.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGL296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
AGL296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
AGL296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGL296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
AGL298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AGL298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
AGL298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
AGS100	Safety and Standard Operating Procedures for Sustainable Horticulture	Introduction to sustainable horticulture industry standards. Includes an overview of safety practices, workplace habits, tools, and equipment.	Prerequisites: None.	LEC 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGS160	Introduction to Landscape Design	Introduction to landscape design and documentation with an emphasis on sketching and Building Information Modeling (BIM). Application of design processes from inventory and analysis through design and development including program, measured base, study diagrams, rendered and colored plans, and sectional elevations. Architectural communication developed through hand sketching and BIM techniques with practice in client interview and design presentation.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
AGS164	Plant Growth and Development	Principles of growth in relation to seed germination, emergence, growth and reproduction processes of plants and the environmental influences on plant growth processes.	Prerequisites: None.	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0
AGS165AA	Fall Sustainable Crop Production	Study of the importance of Fall-planted crops for food, feed, and fiber. Cultural practices for raising the major crops in the State of Arizona, including planting, environmental modifications, harvesting, handling and quality control with an emphasis on sustainability.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AGS164 or permission of Instructor.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AGS165AB	Spring Sustainable Crop Production	Study of the importance of Spring-planted crops for food, feed, and fiber. Cultural practices for raising the major crops in the State of Arizona, including planting, environmental modifications, harvesting, handling and quality control with an emphasis on sustainability.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AGS164 or permission of Instructor.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AGS166	Aquaponics	Establishment, care, and selection of facilities for commercial production of animals and plants in a water-based closed system.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AGS168	Grounds Equipment Management	Selection, use and maintenance of grounds equipment, including both manual and power equipment.	Prerequisites: None.	L+L 3.0 5.0 5.0
AGS170	Pesticides	Chemistry and classification of pesticides. Interpret the use of pesticide labels	Prerequisites: None.	LEC 0.5 0.5 0.5
AGS171	Insect Identification	Concepts of insect identification	Prerequisites: None.	LEC 0.5 0.5 0.5
AGS172	Household Pests	Problems associated with household pests	Prerequisites: None.	LEC 0.5 0.5 0.5
AGS173	Wood Destroying Pests	Problems associated with wood destroying pests	Prerequisites: None.	LEC 0.5 0.5 0.5
AGS174	Regulations: Federal and State	Federal and state pesticide regulations and guidelines for licensing pest control use	Prerequisites: None.	LEC 0.5 0.5 0.5
AGS175	Pesticide Safety and Use of Equipment	Federal and state pesticide safety regulations and use of equipment	Prerequisites: None.	LEC 0.5 0.5 0.5
AGS176	Environment and Toxicology of Pesticides	Environmental concepts, endangered species and toxicology associated with the use of pesticides	Prerequisites: None.	LEC 0.5 0.5 0.5
AGS177	Aquatic Pest Control	Aquatic ecosystems, pest organisms and their control	Prerequisites: None.	LEC 0.5 0.5 0.5
AGS178	General Pest Control	Arthropods and other pest organisms and their control	Prerequisites: None.	LEC 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGS179	Terrestrial Weed Control	Terrestrial weeds and their control	Prerequisites: None.	LEC 0.5 0.5 0.5
AGS182	Gardening Practices and Techniques	Cultural practices of vegetables, fruits and ornamental plants as they relate to organic and inorganic gardening	Prerequisites: None.	LEC 2.0 2.0 2.0
AGS182AA	Gardening Practices and Techniques	Cultural practices of vegetables, fruits and ornamental plants as they relate to organic and inorganic gardening.	Prerequisites: None.	LEC 3.0 1.0 1.0 LAB 0.0 3.0 3.0
AGS183	Urban Plant Identification and Use	Identification, growth, cultural requirements, uses, maintenance, and care of landscape trees, shrubs, vines and ground covers commonly used in Arizona	Prerequisites: None.	LEC 3.0 3.0 3.0
AGS183AA	Urban Plant Identification and Use: Trees	Emphasis on trees commonly used in cityscapes in the Southwest. Review of their origin, cultural requirements, uses, required maintenance, benefits and disadvantages. Identification, planting procedures, water and nutritional requirements are covered	Prerequisites: None.	LEC 1.0 1.0 1.0
AGS183AB	Urban Plant Identification and Use: Shrubs	Emphasis on shrubs commonly used in cityscapes in the Southwest. Review of their origin, cultural requirements, uses, required maintenance, benefits and disadvantages. Identification, planting procedures, water and nutritional requirements are covered	Prerequisites: None.	LEC 1.0 1.0 1.0
AGS183AC	Urban Plant Identification and Use: Vines, Flowers, Groundcovers	Emphasis on groundcovers, annuals, perennials and vines commonly used in cityscapes in the Southwest. Review of their origin, cultural requirements, uses, required maintenance, benefits and disadvantages. Identification, planting procedures, water and nutritional requirements covered	Prerequisites: None.	LEC 1.0 1.0 1.0
AGS186	Greenhouse Management and Construction	Principles and practices of greenhouse operation; control of environmental factors and cultural practices affecting the production of greenhouse crops	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AGS186AA	Greenhouse Management and Construction	Principles and practices of greenhouse operation; control of environmental factors and cultural practices affecting the production of greenhouse crops	Prerequisites: None.	LEC 3.0 3.0 3.0
AGS187	Indoor Foliage Plants	Environmental and nutritional requirements for foliage plants used for interior decoration. Includes identification, nomenclature and uses	Prerequisites: None.	LEC 3.0 3.0 3.0
AGS188	Arid Landscape Plants	Provides information on currently propagated Xerophytes available in southern Arizona. Shows how each can be applied to specific desert landscape situations. Considers identification, cultural requirements, and physical characteristics related to landscape design	Prerequisites: None.	LEC 3.0 6.0 5.1

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGS190	Arid Land Plants Identification and Use	Covers xerophytes common in southern Arizona and their applications to specific desert landscape situations. Identification, cultural requirements, and physical characteristics related to landscape design, including both mature plants and live containerized material	Prerequisites: None.	LEC 3.0 3.0 3.0
AGS192	Urban Plant Care	Establishment, care and preservation of ornamental trees, shrubs, vines, and ground cover plants used in landscape for human well-being and pleasure.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AGS192AA	Urban Plant Care: Site Analysis, Plant Selection and Requirements	Establishment of ornamental trees, shrubs, vines, and ground cover plants used in landscape for human well-being and pleasure	Prerequisites: None.	LEC 1.0 1.67 1.46
AGS192AB	Urban Plant Care: Maintenance of Urban Plants	Care of ornamental trees, shrubs, vines, and ground cover plants used in landscape for human well-being and pleasure	Prerequisites: None.	LEC 1.0 1.67 1.46
AGS192AC	Urban Plant Care: Diagnosing and Curing Plant Problems	Preservation of ornamental trees, shrubs, vines, and ground cover plants used in landscape for human well-being and pleasure	Prerequisites: None.	LEC 1.0 1.67 1.46
AGS200	Southwest Landscape Plants: Identification and Care	Establishment, identification, growth, use, environmental requirements, maintenance, and care of Southwest Desert landscape trees, shrubs, vines, and groundcovers.	Prerequisites: None.	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0
AGS210	Landscape Construction	Focus on landscape construction methods for site preparation, planting of landscape plants, and installation of hardscapes and desertscapes. Also includes principles of lawn and turf care.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
AGS212	Sustainable Livestock Production	Exploration of conventional, organic, and sustainable livestock production systems.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AGS217	Introduction to Hydroponics and Greenhouse Management	Introduction to hydroponics and controlled environment agriculture. Includes a history of hydroponics and the greenhouse industry, basic plant physiology and anatomy, study of general cultural practices, plant protection, conventional and organic hydroponic production systems, pollination, and fertilization. Provides an overview of plant nutrition and disorders, irrigation systems and nutrients transplant production. Covers greenhouse site selection, structures and control systems, fruit harvest; food handling, safety and marketing and economics of a hydroponic business.	Prerequisites: None.	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0
AGS255	Plant Tissue Culture	Plant tissue culture techniques for cloning, reproduction, and manufacturing including media mixing, cell growth and development, aseptic transfer, manipulation, observation, and documentation	Prerequisites: A grade of C or better in AGS164.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGS260	Soils	Fundamental properties of the physical, chemical, and biological relation of soil to plant growth. Evaluation of the human impact on soil health.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
AGS261	Soil Fertility And Management	Relationship of soils, crops, and climatic factors to economic use of commercial fertilizer	Prerequisites: None.	LEC 3.0 3.0 3.0
AGS262	Irrigation Design, Installation, Operation, and Trouble Shooting	Design, installation, maintenance and troubleshooting of sprinklers, drip, and flood systems. Use of time clocks, pumps, filters, backflow devices, and other equipment to deliver water to the landscape. Types of water and their use in the landscape.	Prerequisites: None.	LEC 3.0 1.0 1.0 LAB 0.0 3.0 3.0
AGS264	Irrigation and Water Management	Irrigation and drainage problems relating to pumps, motors, pipe lines, ditches and wells in the Southwest. Installation of sprinkler, drip and subirrigation, time clock installation and repair. Land measurement and principles of land leveling	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AGS265	Sustainable Crop Production	Study of the importance of crops for food, feed, and fiber. Cultural practices for raising the major crops in the State of Arizona, including planting, environmental modifications, harvesting, handling and quality control with an emphasis on sustainability.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AGS164 or permission of Instructor.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
AGS266	Urban Insect Control	The interrelationship of plant organisms, animals and environments with insects as affected by soils, temperature, water and agricultural chemicals	Prerequisites: None.	LEC 3.0 3.0 3.0
AGS267	Weeds and Plant Diseases of Arizona	Weed identification, relationship to competition, cultural practices, prevention and chemical usage for control. General outline of plant autonomy and physiology relating to chemical usage of selectivity. Diseases of plants, their life cycles, biological interrelationships, identification, and control.	Prerequisites: None.	L+L 3.0 5.0 5.0
AGS268	Integrated Pest Management in the Cultivated Environment	Identification and management of pests of the garden, farm and landscape in the arid west. Special emphasis is given to safe handling of pesticides.	Prerequisites: None.	LEC 4.0 1.0 1.0 LAB 0.0 4.0 4.0
AGS280	Advanced Cannabis Cultivation	In-depth study of cannabis cultivation, including hands-on experience with full cycle cannabis cultivation from propagation to post harvest. Examines cannabis laws and regulations, plant biology, photoperiods, plant physiology, propagation techniques, nutrition, cultural practices, harvest and curing processes, pest identification and control. Also includes monitoring and adjusting parameters for plant health and quality products as well as record keeping and team management.	Prerequisites: A grade of C or better in AGS217.	LEC 4.0 6.0 5.4 LAB 0.0 6.0 6.0
AGS282AA	Service-Learning Experience in Agriculture	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGS282AB	Service-Learning Experience in Agriculture	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
AGS282AC	Service-Learning Experience in Agriculture	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
AGS284	Lawn and Turf Care	Factors that affect the establishment and maintenance of turf grasses. Includes budgets, schedules and selection of equipment	Prerequisites: None.	LEC 3.0 3.0 3.0
AGS285	Propagation of Horticultural Plants	Principles and processes of propagation of crops using seed, budding, grafting, and cuttings in greenhouse structures and open ground	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AGS285AA	Propagation of Horticultural Plants Structures Media and Management	Design, maintenance and repair of greenhouse structures. Principles of plant propagation media and procedures. The processes involved in nursery management, including plant care, display, and marketing	Prerequisites: None.	LEC 1.0 0.67 0.67 LAB 0.0 1.0 1.0
AGS290	Internship	Supervised field training for Urban Horticulture students with local industry businesses.	Prerequisites: Student shall be in final semester before graduation and permission of Department or Division.	LAB 3.0 6.0 0.0
AGS296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGS296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
AGS296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
AGS296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AGS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AGS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
AGS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
AHU245	Arabic Culture and Islam	A survey of Arab heritage in the Arab world (Middle East). Cultural and social institutions and their contribution to the development of the region and its heritage.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIM100	Introduction to Artificial Intelligence	Basic concepts and applications of artificial intelligence (AI), including AI project cycles. Focus on issues surrounding AI including ethics, bias, culture, regulations, and professional expectations.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIM110	Introduction to Machine Learning	Introduction to machine learning concepts and Python applications, including data acquisition, supervised and unsupervised learning, and data modeling.	Prerequisites: A grade of C or better in AIM100 and (CSC101 or CIS156) and MAT206.	L+L 3.0 4.0 4.0
AIM111	Introduction to Data Science	Introduction to the basics of data science, including data handling, problem framing in a data-centric context, the foundational techniques of exploratory data analysis (EDA), data visualization, and data ethics. Students will gain practical experience in using various data science libraries and tools through hands-on exercises and projects.	Prerequisites: A grade of C or better in (CSC101 and AIM100) or permission of Program Director.	LEC 3.0 3.0 3.0
AIM210	Natural Language Processing	Fundamental concepts in Natural Language Processing (NLP) and text processing. Focus on knowledge and skills necessary to create a language recognition application.	Prerequisites: A grade of C or better in AIM110.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIM220	Artificial Intelligence for Computer Vision	Understand and apply the basic techniques to process images using OpenCV and Python libraries.	Prerequisites: A grade of C or better in AIM110.	L+L 3.0 4.0 4.0
AIM230	Artificial Intelligence for Business Solutions	Fundamentals of artificial intelligence (AI) and machine learning to support business solutions.	Prerequisites: A grade of C or better in AIM210 and AIM220.	L+L 3.0 4.0 4.0
AIM240	Artificial Intelligence Capstone Project	Focus on how a social issue is explored, brought through the Artificial Intelligence (AI) Project cycle, and delivered as a solution using the different domains of AI, including computer vision and natural language processing.	Prerequisites: A grade of C or better in AIM210 and AIM220.	L+L 3.0 4.0 4.0
AIM250	Machine Learning I	Examination of statistical machine learning algorithms and Python applications with an introduction to deep learning. Emphasis on data input, algorithm selection, hyperparameter tuning, and model evaluation and selection.	Prerequisites: A grade of C or better in [AIM111, (MAT230 or MAT231), MAT225, and MAT206] or permission of	L+L 3.0 4.0 4.0
AIR160	Reservation/Booking Procedures	Overview of reservation/booking procedures. Includes use of availability displays, seating assignments, booking procedures, and fare rules as well as fare pricing and selling. Communication skills also covered.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIR161	Airline Reservations Systems	Practical application of a travel booking procedures using a computerized reservations system. Covers codes, Passenger Name Record, booking, and reservations.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AIR160 or permission of Instructor.	L+L 2.0 3.0 3.0
AIR163	Advanced Airline Reservations	Rules, restrictions, and procedures for handling special reservations situations and managing codeshare accounts and award plans. Also includes international travel procedures and partner carriers.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AIR160 or permission of Instructor.	L+L 2.0 3.0 3.0
AIR165	Overview of Flight Schedules/Itineraries	Basic reservation information including flight schedules, itineraries, and fares. Handling travel agent calls also covered.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIR170	International Air Transport Association Geography	Overview of world geography according to the International Air Transport Association (IATA). Includes world traffic area divisions, sub areas and office responsibilities. Also covers atlas reading including location of countries, major cities and grids in addition to use of city codes.	Prerequisites: None.	LEC 1.0 1.0 1.0
AIR171	International Air Transport	International air reservations procedures. Includes Passenger Name Record (PNR) creation and modification as well as use of availability displays and international itineraries. Covers preferred programs and partnerships.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIR172	International Fares	Overview of international fares. Includes fare basis codes, combinability and construction. Also covers transpacific routing and electronic tickets as well as procedures for completing international reissues.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIR173	International Air Transport Lab	Practical application of international air reservations procedures. Includes Passenger Name Record (PNR) creation and modification as well as use of availability displays and international itineraries.	Prerequisites: None.	LAB 2.0 6.0 6.0
AIS101	Survey of American Indian Issues	Introduction to critical issues related to American Indian peoples. Examines cultural, political, economic, educational, social, and environmental issues. Focuses on contemporary issues and factors influencing American Indian communities.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS103	Introduction to Indigenous Cultures	Introduction to political, economic and social structures of indigenous peoples. Examines the impact on indigenous peoples of contact with non-indigenous cultures.	Prerequisites: None.	LEC 1.0 1.0 1.0
AIS105	Introduction to American Indian Studies	Introduction to political, economic, and social structures of American Indian Nations. Provides overview of American Indian tribal cultures prior to contact, the impact of European contact, and the influence of western social systems on tribal nations.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS110	Navajo Government	Addresses and examines major historical developments of the Navajo People with a focus on government, law, society, livelihood, tradition, and culture. Includes the major components and operation of Navajo government and related tribal laws, such as Title II and Title VII of the Navajo Nation Code, as well as the significance of the Treaty of 1868. Federal Indian policies and their impact on Navajo society and government, the importance of federal and tribal citizenship and related federal and tribal laws, and the role of the Navajo clanship system and other relevant cultural concepts addressed	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS112	American Indian Policy	Reviews United States government policies and their impact on American Indian sovereignty. Examines historic, legal, economic, and social issues regarding Indian policies and how they impact Indian Nations and individual Indians. Studies historical as well as contemporary policies created by the Federal Government that define the trust relationship between the United States government and Indian Nations	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS113	Proposal Writing	Provides an overview of funding sources for grants. Reviews techniques and skills necessary to develop successful proposals. Focuses on the design and writing of a complete grant proposal related to a selected problem or issue.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIS140	American Indian History	Survey of American Indian history with emphasis on the last 200 years. Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS141	Sovereign Indian Nations	Explores the sovereign status of American Indians as it relates to social relationships, traditions, and culture of American Indians. Reviews historic relations with non-Indian societies, the development of federal Indian law, tribal governments and their functions. Examines treaty rights, environmental issues, public policy, economic development, other current issues, and contemporary social problems	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS160	American Indian Law	Analyzes the legal system of the United States Government as it applies to American Indian Nations. Examines how United States legal institutions have impacted Indian sovereignty. Units of analysis include the development of Indian law, United States Supreme Court decisions, Congressional Acts, treaty rights and the development of tribal governments. Focuses on legal institutions that have abridged the property rights of Indian Nations.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS170	American Indian History of the Southwest	Covers history of American Indian Peoples of the Southwestern United States from pre-European contact era to the present. Includes historical events, the development and implementation of non-Indigenous policies and their impact on American Indian Peoples in these areas, and contemporary issues of importance.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS201	Indigenous Nation Building	Discussion of the relationship between general management issues and their specific application to tribal government situations. Special consideration given to application of management theory and to the unique status and situation of tribal governments.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS203	Fundamentals of Economic Development for Indigenous Nations	Provides a practical understanding of the economic development process. Examines ways in which development can be initiated and financed. Focuses on how budget systems can be used as management tools. Reviews fundamentals of proposal writing and budget management for grants.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIS210	Multicultural Representation in the History of STEM	Aims to fill a gap by exploring the perspectives, experiences, and contributions of individuals from various cultural backgrounds in the study of science, technology, engineering, and mathematics (STEM). Analyzes and synthesizes how different cultures have shaped scientific knowledge, examining the impact of diversity on innovation and problem-solving, and addressing barriers faced by underrepresented groups in STEM fields.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIS213	American Indian Religions	An examination of the historical and cultural background of diverse lifeways and worldviews belonging to the peoples indigenous to the North American continent over time, including a study of modern day American Indian beliefs and practices.	Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.	LEC 3.0 3.0 3.0
AIS261	Indigenous Women's Literature of the Americas	Explores contemporary voices of Indigenous women authors and artists in the Americas as expressed in poetry, fiction, nonfiction, drama, and oral traditions. Focuses on themes relevant to Indigenous women and examines the trends and movements within Indigenous peoples and women's literary history. Examines themes relevant to Indigenous women such as racial and gender oppression, reservation life, acculturation, and their sociopolitical activism in the Americas.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
AIS282AA	Volunteerism for Indigenous Studies	Service-learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
AIS282AB	Volunteerism for Indigenous Studies	Service-learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
AIS296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the Instructor.	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIS296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the Instructor.	LAB 2.0 10.0 0.0
AIS296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the Instructor.	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIS296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the Instructor.	LAB 4.0 20.0 0.0
AIS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AIS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
AIS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
AIT100	Industrial Safety	Introductory course in workplace safety training, including an overview of critical safety policies, procedures, and practices that help prevent injuries and keep the workplace safe and productive.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIT101	Introduction to Industrial Automation	Introductory course in manufacturing automation systems and technologies. Includes safety practices, quality measurement, print reading, machine operation, hand tool usage, and maintenance operations.	Prerequisites: None.	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0
AIT105	Modern Maintenance Operations	Introductory course into the practice of modern maintenance operations. Includes: safely and correctly using maintenance tools (e.g., hand tools, power tools), measuring instrumentations (e.g., tape, caliper, micrometer) and reading various engineering documents (e.g., blueprints, flowcharts, parts diagrams). Use and convert units in System International (SI) and imperial. Basic discussion of industrial safety procedures, machine operations, troubleshooting, failure analysis, modern maintenance principles, rigging, workplace organization, and records keeping.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT110	Mechanical Power Transmission Systems	Introductory course in how to transmit, measure, calculate, and work safely with rotational mechanical equipment. Hands-on assembly, alignment, maintenance, and troubleshooting of mechanical power transmission systems and components e.g., belts, bearings, chains, dynamometers, gears, pulleys, couplings, bushings, and sprockets. Introduction to lubricant and grease types, their standards, safety, and application.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT112	Natural Gas Pipeline Operations	Introduction to the fundamentals of the natural gas pipeline operations. Includes topics such as damage prevention, emergency response, valve operation, and testing of facilities. This course prepares students for the Non-Joiner Operator Qualification in the natural gas pipeline industry.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIT113	Natural Gas Pipe Joiner	Principles and practices of plastic pipe joining in the natural gas industry. Includes pipe joining techniques such as solvent cements, heat fusions, mechanical saddle fittings, and compression couplings. This course prepares students for Pipe Joiner Qualification in the natural gas industry.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIT115	Hydraulic Systems	Introductory course in the principles of hydraulic system operation, components construction, maintenance, troubleshooting, and operation, as well as the role of the individual components in an operating hydraulic system. Includes hydraulic fitting and seals, accumulators, cylinders, directional control valves (DVC), relief valves, check valves, pumps, filters, hoses, and a variety of hydraulic control circuits.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIT117	Introduction to Data Center Operations	Provides the foundational aspects of data center fundamentals, data center compliance, operations, and physical infrastructure. Introduces mission critical operations (MCOs) as they apply to data centers. Includes an overview of the physical components of a data center, its interoperability, and the usage of data center equipment.	Prerequisites: None.	L+L 3.0 4.0 4.0
AIT120	Pneumatic Systems	Introductory course in the principles of pneumatic system operation, components construction, maintenance, troubleshooting, and operation, as well as the role of the individual components of an operating pneumatic system. Includes pneumatic fitting, seals, accumulators, actuator/cylinders, Directional Control Valves (DCV), manifolds, relief valves, check valves, pumps, filters, regulators, dryers, and common pneumatic control circuits.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT121	Vacuum Technology and Maintenance	Overview of vacuum pumps used in high-vacuum industries such as advanced manufacturing, thin-film technology, optoelectronics, semiconductors, and more. Includes the operational methodology, components, and proper use of vacuum pumps. Focus on maintenance, repair and troubleshooting of a vacuum system.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT123	J-STD Soldering Certification	This course will prepare the successful student to receive the "Certified IPC Specialist" (CIS) certification from The Institute for Interconnecting and Packaging Electronic Circuits (IPC) in "Requirements for Soldered Electrical and Electronic Assemblies" (IPC J-STD-001). Topics covered and skills to be demonstrated are: soldered wires and terminals, through hole connections, surface mount components, and inspection. Certification is verified by a certified IPC trainer (CIT).	Prerequisites: Permission of Instructor.	L+L 3.0 4.0 4.0
AIT124	Composites	Basic composite materials, construction, and repair. Manufacturing methods and equipment. Assessment and repair of composite structures using vacuum bagging and other approved procedures. Corrosion control, electrical bonding, materials substitutions, machining of composite components, mold fabrication. Hot bond repair of composite components including complex shapes and varied materials.	Prerequisites: None.	L+L 3.0 4.0 4.0
AIT125	DC and AC Components and Circuits	An introductory course in Alternating Current (AC) and Direct Current (DC) electric theory. Includes electric circuits using resistors, capacitors and inductors. Also includes solenoids, relays, transformers, basic DC and AC motors, circuit protection devices and a variety of switches.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIT126	Energy Industry Fundamentals	Various types of energy and their conversion to useable energy such as electrical power. How generated electrical power is transmitted and distributed to the point of use.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIT127	Power Plant Components	Theory, construction and application of basic power plant mechanical components. Basic concepts of electrical fundamentals and electronics discussed.	Prerequisites: None.	L+L 3.0 3.0 3.0
AIT128	A-620 Cable and Wire Harness Assembly Certification	This course will prepare the successful student to receive the "Certified IPC Specialist" (CIS) certification from The Institute for Interconnecting and Packaging Electronic Circuits (IPC)/Wire Harness Manufacturer's Association (WHMA) in "Requirements and Acceptance for Cable and Wire Harness Assemblies" (IPC/WHMA-A-620 Certification). Topics covered and skills to be demonstrated are: soldered terminations, crimp terminations, insulation displacement terminations (IDC), splices, connectorization, marking/labeling, coaxial cable assemblies, electrical shielding, wire marking and labeling, and testing methodologies. Certification is verified by a certified IPC trainer (CIT).	Prerequisites: None.	L+L 3.0 4.0 4.0
AIT130	Maintenance Piping	Overview of the area of maintenance of piping systems for manufacturing or industrial facilities. Preparation to sit for the NIMS Duty Area 9: Maintenance Piping Certification Exam.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT132	Industrial Technology for the Semiconductor Industry	Introduction to semiconductor manufacturing concepts, processes, and hands-on application. Includes electrical theory, circuits, schematics, hand tools, safety, clean room protocols, model based problem solving, lean manufacturing, vacuum technology, and troubleshooting.	Prerequisites: None.	L+L 3.0 4.0 4.0
AIT205	Power Electronics and Variable Frequency Drives	Introductory course in AC and DC power electronic theory. Includes power supplies, power conditioning, solid-state power devices, and power control circuits. Also includes proximity sensors, analog thermal sensors, control feedback loops, and the setup and operation of Variable Frequency Drives (VFDs).	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT210	Programmable Logic Controller Programming and Troubleshooting	Introductory course in Programmable Logic Controller (PLC) Ladder Logic programming and troubleshooting PLC connected components and systems. Also includes basic Human Machine Interface (HMI) navigation, connecting to a PLC, and program downloading.	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT212	Valve Maintenance II	Fundamentals of hand lapping. Dexter and Unislip resurfacing tools. Valve packing: purpose, components and specifications. Valve survey data sheet. Procedure for field manufacture of die-formed packing rings. Function of the Optical Flat. Valve inspection. Gaskets and torquing techniques.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIT213	Pumps II	Rotary, reciprocating and centrifugal pump operation. Positive displacement and metering pump operation. Diaphragm pulsafeeder operation. Disassembly, inspection and reassembly of radially and axially split centrifugal pumps. Troubleshooting and lab safety.	Prerequisites: None.	LEC 3.0 3.0 3.0
AIT215	Process Control Systems	Introductory course in Process Control Systems design, operation, and tuning of Proportional, Integral, Derivative (PID) controllers for regulating flow, temperature, pressure, and level of industrial process variables. Includes manual control, feedback control, automated controls, analysis process setup, operate, and troubleshooting processes of control systems. Also includes typical Pipe and Instrument Diagram (P&IDs) symbols and tags along with the development of a basic P&ID drawing.	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0
AIT225	Industrial Motors and Motor Control	An introductory course in DC, single-phase AC, and 3-phase AC electric motors and motor control circuits. Includes electric motor control circuit components, motor control circuit applications, sequence circuits, and timer circuits.	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT227	Power Distribution Systems	Introduces transmission and distribution of electrical power. Includes application of transformers, distribution and over-current protection devices, switchboards, feeders, bus-ways, motor control centers, generators, and troubleshooting techniques associated with these systems and devices.	Prerequisites: A grade of C or better in AIT125.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT250	Automated Industrial Technology Capstone	An examination of the integration of mechanical, hydraulic, pneumatic, electrical, piping, electronic control, and process control systems. Experience in designing, building, maintaining, troubleshooting, and repairing such integrated systems will be gained.	Prerequisites: A grade of C or better in AIT210, or permission of Instructor.	LEC 3.0 2.0 2.0 LAB 0.0 2.0 2.0
AIT270	Robotics I	Fundamental principles of working safely with robots, and applications and trends in industrial robotics. Includes types of robots, axes and coordinate systems, programming and operating robots. Incorporates end effectors and collaborative robots.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AIT100 or permission of Instructor.	LEC 3.0 2.0 2.0 LAB 0.0 2.0 2.0
AIT275	Robotics II	Intermediate principles of working safely with robots; robot auxiliary, subsystems, and components. Includes robot maintenance, troubleshooting and repair. Integrates a basic robot design project.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AIT270.	LEC 3.0 2.0 2.0 LAB 0.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIT276	Robotics Operations and Programming	This course is intended for an operator, technician, or programmer who must setup, record and/or troubleshoot programs on a Handling Tool software package. The course covers the Robot Operations intermixed with the tasks required to set up the Handling Tool application, test run, and refine the program and production setup.	Prerequisites: A grade of C or better in (ATP190, ATP201, and ATP205) or permission of Instructor.	L+L 3.0 6.0 6.0
AIT280	Industry 4.0 and Industrial Control Systems	Introductory course in Industry 4.0, physical processes within factories, and the virtualization techniques and intelligent decision making capabilities. Includes Cyber-Physical Systems (CPS), Supervisory Control and Data Acquisition (SCADA), Distributed Control Systems (DCS), Smart Factories, lean manufacturing, and the Internet of Things (IOT). Also includes an introduction and setup of SCADA software.	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT285	Sensors and Data Acquisition	Introductory course in sensors and data acquisition. Includes sensor types, function, installation, adjustment, and maintenance. Also includes a brief overview of sensor signal conditioning, data acquisition configuration, chart recorder operation, and data storage.	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
AIT291	Automated Industrial Technology Internship	Supervised work experience in production environments. Includes experiences in maintenance, troubleshooting, repair of production environment and specific manufacturing processes. Also includes experiences in problem solving; working as a team; soft skills; time and resource management; and exposure to specific manufacturing processes.	Prerequisites: A grade of C or better in AIT225, or permission of Instructor or Corequisites: AIT225.	LAB 3.0 6.0 0.0
AIT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AIT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AIT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
AJS100	Police Academy Preparation	Preparation for individuals entering a police academy as well for those who are in the beginning stages of preparing for a career in law enforcement. Includes principles of policing and job responsibilities. Covers expectations of recruits in the areas of academics, physical fitness, mental and emotional preparation. Emphasis on professional and ethical behavior.	Prerequisites: None.	LEC 2.0 2.0 2.0
AJS101	Introduction to Criminal Justice	An introduction to crime and society's responses to it. Examines the nature and causes of crime, the criminal law, constitutional safeguards, and the organization and operation of the criminal justice system including the police, courts, jails, prisons, probation and parole departments, and community corrections agencies. Covers the history of the criminal justice system, terminology and career opportunities.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS107	Patrol Procedures	Specialized areas of the patrol function, including responding to crowds, riots, bomb threats, intoxication, hazardous materials, fires, and domestic disputes.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS109	Substantive Criminal Law	Covers philosophy of legal sanctions and historical development from the common law to modern American criminal law, classifications of crimes, elements of and parties to crimes, general definition of crimes, common defenses utilized. Includes specific offenses and the essential elements of each offense.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS110	Law and Legal Review I	In-depth study of the Arizona laws governing arrest by peace officers, as well as, an intensive study of the Arizona substantive criminal law code (ARS Title 13). Focuses on specific sections of ARS Title 4 and ARS Title 8, as they apply to peace officers in Arizona. Partially fulfills the Arizona POST (Peace Officer Standard and Traiining) Board requirements for Proficiency Skills Academy attendance	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS112	Wellness for Law Enforcement Officers	The value of physical fitness in law enforcement and the basic elements of strength training, aerobic conditioning, flexibility, nutrition, and back injury prevention	Prerequisites: None.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS113	Criminal Justice Crime Control Policies and Practices	Focus on changing the distribution of crime opportunities rather than offender motivation. Topics include application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, and crime prevention through environmental design.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS115	Community Emergency Response Team (CERT): Level I	Basic skills, including instruction in teamwork and disaster simulations, needed to help oneself, family, and neighbors in the event of a community disaster in accordance with the Federal Emergency Management Agency (FEMA) guidelines.	Prerequisites: None.	LEC 1.5 1.5 1.5
AJS116	Crime Prevention	Examines the principles and skills associated with crime prevention. Analyzes the appropriate techniques and strategies police agencies use to operate crime prevention programs.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS119	Computer Applications in Justice Studies	Provides literacy in microcomputer applications in major areas of the criminal justice system. Examines availability and uses of current software packages in criminal justice work. Provides hands-on experience with appropriate integrated software packages pertaining to justice studies.	Prerequisites: None.	L+L 3.0 4.0 4.0
AJS123	Ethics and the Administration of Justice	Introduces and explores ethical issues and the justice system. Focuses on ethics and the law, the police, courts and corrections. Reviews ethical theory, concepts and practices as they relate to administration of justice. Explores issues of how media/social media shape ethics. Encourages critical thinking and value decision making in criminal justice system situations.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS124	Correctional Institutions	An examination of correctional institutions with an emphasis on security measures, inmate classification, culture, employment, education, treatment programs, and institutional planning.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS131	Police Management Techniques I	Police supervisory techniques related to employee grievances, internal investigations, counseling personnel, discipline, organization, and coordination, as well as communication and leadership styles.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS132	Police Management Techniques II	Supervision in a law enforcement organization including accountability, transparency, leadership and management of personnel issues.	Prerequisites: A grade of C or better in AJS131 or permission of Instructor.	LEC 3.0 3.0 3.0
AJS137	Public Safety Dispatcher: Basic	Designed to provide in-depth orientation and standardized training of public safety dispatchers within the law enforcement community and familiarize the student with the skills and information important to functioning in a competent, ethical, and professional manner.	Prerequisites: None.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS139	Emergency Response to Terrorism	Fundamentals of emergency response to suspected terrorist events. Historical perspective of terrorist activities and methods by which responders can identify and protect themselves and the public from these threats. Coordination of responding agencies.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS140AA	Patrol Rifle Concepts	Pre-law enforcement employment course relating to how rifles are used in the patrol function	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS146	Disaster Recovery Operations	Specialized knowledge and skills for the emergency manager in developing programs and activities associated with disaster recovery assistance and mitigation actions that reduce losses from future disasters.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS147	Emergency Preparedness	Emergency preparedness related to natural and manmade disasters. Planning concepts and the planning process; awareness and education programs and strategies for the general community as well as business and industries.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS148	Fundamentals of Emergency Management	Emergency management systems including career opportunities, function, tasks and responsibilities of the emergency management program manager, role of the emergency manager in mitigation, preparedness, response, and recovery. Past civil defense and current emergency management systems since evolution from World War II.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS149	Hazard Mitigation	Knowledge and skills required to develop programs to reduce losses from future disasters, emergencies, and other extreme events caused by natural and man-made hazards.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS150	Defensive Tactics	Skills in the protection against persons armed with dangerous and deadly weapons, demonstration and drill in a limited number of holds and come-alongs, and restraint of prisoners and the mentally ill.	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS151	Firearms I	Moral aspects, legal provisions, safety precautions and restrictions covering the use of firearms, and the firing of sidearms.	Prerequisites: None.	L+L 1.0 1.0 1.0
AJS153	Firearms II/Handguns	Advanced familiarization with handguns. Variations of basic shooting stance. Legal and moral repercussions of self-defense. Includes range practice.	Prerequisites: A grade of C or better in AJS151 or equivalent certified firearms training as reviewed by the Department.	L+L 1.0 1.0 1.0
AJS154	Firearms III/Long Weapons	Familiarization with different types of long weapons and associated ammunition. Emphasis on safety techniques for use and storage of weapons. Limited use of range for practice.	Prerequisites: None.	L+L 1.0 1.0 1.0
AJS155	Concealed Weapons Carry	Training in safe handling and use of handguns. Examines legal provisions related to carrying a concealed weapon; legal and moral implications of self-defense	Prerequisites: None.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS156	Home and Vehicle Personal Defense	Development of personal safety plans, confrontation avoidance, and effective self-defense tactics. Legal and safe use of firearms. Includes range practice	Prerequisites: A grade of C or better in AJS151 or permission of Instructor.	L+L 1.0 1.0 1.0
AJS162	Domestic Violence	Explores domestic violence as a social problem within the United States from historical, cultural, political, legal, and law enforcement perspectives. Provides an overview of theories, definitions and causes of, and interventions for domestic violence involving spousal, elder and child abuse along with teen dating violence. Examines the dynamics and effects of domestic violence. Addresses research issues and contemporary domestic violence policy.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS170	Fire and Arson Investigation for Law Enforcement	An examination of fire and arson investigative techniques along with the motives and pathology of the arsonist and the chemistry of fire. Other topics include documenting the scene, evidence, eliminating accidental causes and surveillance.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS192	Serial Killers and Mass Murderers	The study of serial killers, mass murderers and their victims. Examines the history and frequency of these crimes, profiles the killers and their victims, explores theories of causation, and discusses the problems and techniques of investigation, prosecution, punishment, and prevention.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS195	International and Domestic Terrorism	An overview of the history, structure, goals, and activities of domestic and international terrorist groups. Explores theories explaining terrorism and reviews methods used to combat it.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS198AB	Special Topics in the Administration of Justice	Explores special topics related to the administration of justice with an emphasis on current issues.	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS198AF	Special Topics in the Administration of Justice	Explores special topics related to the administration of justice with an emphasis on current issues.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS200	Current Issues in Criminal Justice	Examines current issues, techniques and trends in the Criminal Justice System.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS201	Rules of Evidence	A practical insight into the rules of evidence. Examines the general rules governing admissibility of evidence. Explores types of evidence, the hearsay rule, witness testimony, the exclusionary rule, privileged communications, best evidence rule. Examination of chain of custody and the use of scientific evidence.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS205	Effective Communication and Report Writing in Criminal Justice	Overview of effective communication for criminal justice agencies. Covers the communication process and flow. Written communication emphasized with report writing, including characteristics of reports and field notes, and the importance and uses of each. Form, style, and procedures for writing various reports, including elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS210	Constitutional Law	An examination of the U.S. Constitution as it relates to the law enforcement function. Includes statutory law and judicial decisions governing the areas of arrest, search and seizure, interrogations and confessions, self-incrimination and other constitutional guarantees. Required in AJS curriculum	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS211	Police Planning	An analysis of the process of planning, and a descriptive study of logical and systematic approaches to strategic, short-range, operational, organizational and tactical planning within a law enforcement organization.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS212	Juvenile Justice Procedures	Examines the nature and extent of juvenile delinquency to the present. Including but not limited to the history, jurisdictions, terminology, procedures, and institutions of the juvenile justice system.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS213	Evidence Technology: Fingerprints	Covers the fundamental principles of fingerprints, including the history of fingerprint classification, the biology of friction ridge skin, pattern analysis, comparison, and identification as well as their application in significant court cases. Also includes techniques for obtaining inked prints and developing and preserving latent prints.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS213AB	Fingerprint Classification I	Identification of typelines, deltas, and cores. Rules for classification of loops, whorls, and arches.	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS214	Evidence Technology/Photography	The use of photography and other aids in identification and preservation of evidence such as fingerprints, footprints, and impressions. Techniques in crime scene and traffic accident photography.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS215	Criminalistics: Physical Evidence	The scientific analysis and examination of physical evidence with emphasis on scientific investigation, recognition, collection, and preservation of evidence. Topics include fingerprints, shoe prints, tool marks, firearms identification, paint chips and arson	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS216	Criminalistics: Biological Evidence	The scientific analysis and examination of biological evidence with emphasis on collection and preservation of evidence. Topics discussed include blood, drugs, blood alcohol, hairs and fibers, and topics of special interest in criminalistics	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS218	Special Investigations: Drugs	Advanced course in the specialized investigation area of drug enforcement. Emphasis on the pharmacological propertiew of abused drugs, field testing, evidence requirements and specialized investigation techniques utilized in narcotic and dangerous drug investigations	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS219	Crime Scene Technology: Physical Evidence	Scientific analysis and examination of physical evidence with emphasis on scientific investigation, recognition, collection, and preservation of evidence. Fingerprints, shoe prints, tool marks, firearms identification, paint chips and arson.	Prerequisites: None.	L+L 3.0 3.0 3.0
AJS220	Transnational Organized Crime	The study of organized crime on a domestic and global scale. Examines the history, structure, and activities of domestic and transnational organized crime groups. Explores domestic and global responses to transnational organized crime, along with accompanying challenges and future implications.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS223	Forensic Pathology: Death Investigation	An examination of the medical investigation of sudden, unnatural, unexplained or violent deaths. Explains the legal and medical roles of death investigators and medical examiners. Additional topics include the autopsy, documenting and evaluating the body, routine and special investigative techniques, and death event reconstruction.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS225	Criminology	Study of deviance, society's role in defining behavior; theories of criminality and the economic, social, and psychological impact of crime; relationships between statistics and crime trends. Examines crime victimization and the various types of crime and categories of offenders. Required in the AJS curriculum.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS230	The Police Function	An examination of the history, organization, procedures, and methods of operation of public policing in the United States. Career opportunities and current challenges in law enforcement presented.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS240	The Correction Function	Examines the history and development of correctional theories and institutions.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS243	Crime Scene Reconstruction	Examines techniques used to reconstruct the physical actions that occurred at a crime or accident scene. Involves the use of physical, testimonial, and documentary evidence, knowledge of criminal modus operandi and the scientific method, including deductive and inductive logic. Includes analysis of case studies.	Prerequisites: A grade of C or better in AJS215 or AJS216 or AJS219 or AJS275 or FOR105 or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS255	Mental Health Conditions and the Criminal Justice System	An introduction to methods police, court, and correctional personnel employ specific to those with mental health conditions. Covers various types of mental health conditions and police emergency responses to persons in crisis. Examines how criminal and civil courts intersect with persons diagnosed with mental disorders; includes diversion programs and the correctional response both within the community and under confinement.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS256	Law Enforcement Firearm Instructor	A train the trainer course for police firearm instructors. Covers instructional techniques for the pistol, revolver, and shotgun.	Prerequisites: AzPost (Peace Officer Standard and Training) Certified Police General Instructor or permission of Department or Division.	LEC 5.0 5.0 5.0
AJS256AA	Law Enforcement Patrol Rifle Instructor	Techniques on proper manipulation and marksmanship skills needed by a patrol officer/deputy in the use of the patrol rifle, and techniques of teaching those skills to other officers/deputies.	Prerequisites: AzPOST (Peace Officer Standard and Training) certified law enforcement firearms instructor or permission of Instructor.	LEC 3.0 3.0 3.0
AJS258	Victimology and Crisis Management in Public Safety	Victimology, the criminal justice system, techniques of crisis intervention and management, and the importance of a multicultural and global perspective. Includes violent crimes, sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, developing effective coping skills of victims and responders, appropriate community resources, and the cultural responsiveness of the justice system.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS260	Procedural Criminal Law	Concerned with the understanding of procedural criminal law. Examines the processes and procedures followed by law enforcement, attorneys, and the courts in the apprehension and prosecution of criminal offenders. Examines the rationale underlying major court holdings impacting the criminal justice process, the procedural requirements that stem from these holdings and their effect on the daily operations of the criminal justice system.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS269AA	Internship	Supervised field training for pre-service administration of justice students with an approved criminal justice agency.	Prerequisites: Student sponsored by criminal justice agency, permission of Program Director or Division Chair	LAB 1.0 1.25 0.0
AJS269AB	Internship	Supervised field training for pre-service administration of justice students with an approved criminal justice agency.	Prerequisites: Student sponsored by criminal justice agency, permission of Program Director or Division Chair	LAB 2.0 2.5 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS269AC	Internship	Supervised field training for pre-service administration of justice students with an approved criminal justice agency.	Prerequisites: Student sponsored by criminal justice agency, permission of Program Director or Division Chair	LAB 3.0 4.0 0.0
AJS270	Community Relations	Examination of community problems; community action programs and trends; human behavior, conflict and communication; and the relationship between the criminal justice system and community.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS275	Criminal Investigation I	Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, identification, and basic investigative techniques.	Prerequisites: None.	LEC 3.0 3.0 3.0
AJS276	Terrorism Liaison	Provides knowledge and skills required for the Terrorism Liaison Officer (TLO) role to coordinate and communicate with various fire, police, and military agencies in managing threat vulnerability and other emergency disasters.	Prerequisites: Permission of Program Director.	L+L 4.0 4.0 4.0
AJS277	Threat Vulnerability Assessment	Provides a historical perspective of threats and the activities and methods used by first responders to identify and mitigate future threats. Introduces and examines threat vulnerability of critical infrastructure within jurisdictions. Provides assessment techniques for responding agencies.	Prerequisites: Permission of Program Director.	L+L 1.0 1.0 1.0
AJS278	Hostile Intent and Intervention Training	Provides knowledge and skills required to detect and anticipate terrorist activities as a member of a Hostile Intent and Intervention Team (HIIT).	Prerequisites: Permission of Program Director.	L+L 2.0 2.0 2.0
AJS279	Field Intelligence Team Training	Provides knowledge and skills required for situational awareness of suspicious activities and the deployment of first responders for mitigation and investigation for the Field Intelligence Team (FIT).	Prerequisites: Permission of Program Director.	L+L 3.0 3.0 3.0
AJS280	Terrorism Hazmat First Responder Training	Provides knowledge and skills to understand the chemistry of reactive and unstable hazardous materials, the toxicology of dangerous chemicals, and the measures taken to protect the safety of responders, the community, and the environment of chemical accidents. Also includes an introduction to field sampling of unknown substances for the Field Intelligence Team (FIT) and the Hostile Intent and Intervention Team (HIIT).	Prerequisites: Permission of Program Director.	L+L 4.0 4.0 4.0
AJS282AA	Service-Learning Experience in Administration of Justice Studies	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
AJS282AB	Service-Learning Experience in Administration of Justice Studies	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS282AC	Service-Learning Experience in Administration of Justice Studies	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
AJS290AH	Use of Force	Examines issues related to the use of force by and against police officers. Explores police use of force decision-making options. Reviews recent changes in Arizona law relative to police officers	Prerequisites: Permission of Department or Division.	L+L 0.5 0.5 0.5
AJS290AI	Theories of Criminal Behavior	Theories of human behavior and crime. Biological, sociological, and psychological approaches to the theories of criminal behavior	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290AU	Child Abuse Investigation	Definition and investigation of the causes and effects of child abuse	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290AW	Narcotics and Dangerous Drugs	Pharmacological effects of the use and abuse of drugs, including a description of common abuse patterns and investigative techniques used in the enforcement of drug laws	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290AZ	Police Interrogation Techniques	Proper interview and interrogation techniques, including a discussion of the constitutional rights of the defendant and applicable court decisions	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290BB	Police Report Writing	Writing clear, concise, complete, and accurate reports with an emphasis on sentence structure, paragraph construction, grammar, punctuation, and spelling.	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290BE	Probation and Parole	Current issues in probation and parole, including sentencing, parole revocation, and administrative procedure	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290BH	Sex Crimes Investigation	Investigative procedures employed by the police and courtroom procedures utilized by the prosecuting attorney in sex-related crimes.	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290BJ	Accident Investigation I	Skills and concepts necessary to conduct an adequate traffic accident investigation	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290BN	Courtroom Testimony Seminar	Courtroom demeanor and protocol. Role and primary functions of witness and legal counsels.	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290BU	Family Violence	Family violence issues as they relate to the criminal justice response	Prerequisites: None.	LEC 1.0 1.0 1.0
AJS290BV	Victim Assistance	An overview of victim issues emphasizing strategies used to reduce the trauma associated with crime. Includes description of counseling methods, referral procedures, intervention techniques, and community resources	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
AJS296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
AJS296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AJS296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
AJS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AJS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
AJS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ALT100	Academic Literacy Through Integrated Reading and Writing	Develops academic language skills and critical reading skills for organizing, analyzing, and retaining material through complementary reading and writing assignments. Prepares students for college level reading and writing intensive courses as well as career-related reading and writing tasks.	Prerequisites: An appropriate District placement.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AMS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AMS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
AMS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
AMT124	Aircraft Forms, Regulations, Weight and Balance, Drawings and Ground Operations	Federal Aviation maintenance regulations, publications, forms, and records. Overview of technician`s privileges and limitations. Perform aircraft weight and balance, aircraft ground operations, and fuel servicing techniques. Interpretation and production of drawings, symbols, and schematic diagrams. Emphasis on safety and other human factors.	Prerequisites: Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+ or higher or a grade of C or better in ENG101 and RDG100 and (MAT120 or higher level mathematics course).	L+L 5.0 7.0 7.0
AMT126	Fundamentals of Mathematics and Electricity	Mathematical computation of fundamental electrical circuit parameters. Basic definitions, laws, and concepts. Schematics, wiring, and parts placement diagrams. Test and troubleshoot electrical and electronic components and circuits.	Prerequisites: Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+ or higher or a grade of C or better in ENG101 and RDG100 and (MAT120 or higher level mathematics course).	L+L 9.0 11.0 11.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AMT128	Physics for Aviation, Corrosion Control, Materials, Hardware, Processes, Fluid Lines and Fittings	General concepts of fluid lines and fittings, aircraft materials, hardware and processes, cleaning and corrosion control, physics for aviation, inspection concepts and techniques.	Prerequisites: Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+, or higher or a grade of C or better in ENG101 and RDG100 and (MAT120 or higher level mathematics course).	L+L 5.0 7.0 7.0
AMT220	Fundamentals of Bonded Composite and Wooden Aircraft Structures, Fabric Coverings and Finishes	Concepts of aircraft structural design and materials including bonded composites, wooden structures, fabric coverings, and protective finishing maintenance.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 3.0 5.0 5.0
AMT222	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems	Operation and maintenance of aircraft auxiliary systems. Inspection, servicing, troubleshooting, and repair of environmental control, ice and rain control, fire protection, and warning systems.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 4.0 6.0 6.0
AMT224	Aircraft Metallic Structures	Inspection, fabrication, and repair techniques of aircraft metallic structures.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 5.0 7.0 7.0
AMT226	Aircraft Hydraulics, Pneumatics, Fuel, Landing Gear, Positioning and Warning Systems	Identification, inspection, troubleshooting, and repair techniques of aircraft hydraulics, pneumatics, landing gear, positioning and warning, and fuel systems.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 7.0 9.0 9.0
AMT228	Aircraft Electrical, Instruments, Communication and Navigation Systems	Operation, inspection, installation, servicing, and troubleshooting of aircraft electrical, Direct Current (DC), Alternating Current (AC), instruments, communication, navigation systems, and fuel indication systems.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 7.0 9.0 9.0
AMT230	Airframe Assembly and Inspection	Airframe inspection and special inspection techniques, reporting, and documentation procedures.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 6.0 8.0 8.0
AMT263	Aircraft Turbine Engines	Turbine engine theory and maintenance. Focuses on operational characteristics and engine test techniques on the aircraft and in test cells.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 5.0 7.0 7.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AMT264	Aircraft Reciprocating Engines	Reciprocating engines theory, design, and operations. Focusing on techniques used in troubleshooting, overhaul, inspection, and repair of opposed and radial engines.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 7.0 9.0 9.0
AMT266	Engine Fuel Systems, Fuel Metering and Induction System	Inspection, servicing, troubleshooting, overhaul, and repair of aircraft fuel delivery systems, fuel metering devices, turbochargers, superchargers, and induction system principles of operation and design.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 6.0 8.0 8.0
AMT268	Engine Electrical, Ignition and Starter Systems	Maintain powerplant electrical systems including inspecting, servicing, troubleshooting, overhauling, and repairing engine electrical, ignition, starter systems, and components.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 6.0 8.0 8.0
AMT270	Engine Instruments, Fire Protection, Lubrication, Cooling, and Exhaust Systems	Operation, inspection, and maintenance of engine instruments, fire detection and extinguishing, engine lubrication, cooling, and exhaust systems.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 5.0 7.0 7.0
AMT272	Propeller Systems and Engine Inspections	Propeller systems operation, inspection, troubleshooting, servicing, repair, and maintenance. Reciprocating and turbine engine inspection and documentation.	Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.	L+L 4.0 6.0 6.0
AMT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AMT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AMT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
APT101	Automotive Service Operations	Theory and operation of basic automotive systems. Basic principles of working in an automotive service area. Management-employee relations, resume writing, interviewing, shop practices, flat-rate system, equipment care, and basic hand tools.	Prerequisites: None.	LEC 3.0 3.0 3.0
APT111	Internal Combustion Engines Theory	Study of construction and operating principles of internal combustion engines and related lubrication, cooling, fuel, and electrical systems.	Prerequisites: None.	LEC 3.0 3.0 3.0
APT131	Automotive Manual Power Trains	Designed for beginning automotive students. Operation, diagnosis, service, and repair of the automotive power train. Includes manual transmissions and transaxles, clutches, front and rear drive axles, drive shafts, differentials and transfer case.	Prerequisites: None.	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0
APT141	Alignment, Steering, and Suspension	Designed for beginning automotive students. Fundamental principles of steering and suspension systems. Includes two- wheel and four-wheel alignment procedures. Emphasis on diagnosis, testing, service, and replacement of steering and suspension components.	Prerequisites: None.	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0
APT151	Automotive Brake Systems	Designed for beginning automotive students. Fundamentals of drum, disc, ABS and hybrid regenerative braking theory. Includes training in diagnosis, testing, service, and repair.	Prerequisites: None.	LEC 4.0 2.0 2.0 LAB 0.0 5.0 5.0
APT161	Auto Electrical/Electronic Systems I	Designed for beginning automotive students. The principles of electricity including Ohm`s Law, circuit principles and wiring diagrams. Skill development will include diagnosis, testing, service and repair of batteries, starting systems, charging systems, lighting systems, horns, wipers, defoggers, door locks, power mirrors, power windows, power seats and the use of Digital Multi Meters (DMM) will be addressed in this course.	Prerequisites: None.	LEC 4.0 2.0 2.0 LAB 0.0 5.0 5.0
APT171	Automotive Air Conditioning	Designed for beginning automotive students. Theory and principles of ventilation, heating, automotive refrigeration, vacuum-electric controls, and automatic temperature control systems. Includes training in diagnosis, testing, service and repair.	Prerequisites: None.	LEC 4.0 2.0 2.0 LAB 0.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
APT181	Engine Performance and Diagnosis I	Designed for beginning automotive students. Engine construction and operating principles, including lubrication, cooling, induction, exhaust, fuel, and ignition systems. Includes training in diagnosis, testing, service, and repair.	Prerequisites: None.	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0
APT262	Auto Electrical/Electronic Systems II	Designed for experienced students. This course develops knowledge of body control modules including skill development, diagnosis, testing, service, and repair of the following systems - advanced lighting circuits, vehicle stability control, traction control, basic and advanced climate control systems, integrated safety systems, collision avoidance systems, start-stop technology, hybrid technology, mobile connectivity, use of Digital Multi Meters (DMM) and automotive oscilloscopes.	Prerequisites: A grade of C or better in APT161 or permission of Instructor.	LEC 4.0 2.0 2.0 LAB 0.0 5.0 5.0
APT282	Engine Performance and Diagnosis II	Designed for the experienced engine performance student. This course will include training in fuel systems, emission systems, ignition systems, turbocharging, computerized engine controls and engine driveability. Also, training in diagnosis, testing, service, repair, and documenting for customer understanding using the 3C's which are Concern, Cause and Correction will be addressed in this course.	Prerequisites: A grade of C or better in APT181 or permission of Instructor.	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0
ARB101	Elementary Arabic I	Introduction to the basic alphabet, grammar, pronunciation and vocabulary of the Arabic language. Listening, speaking, reading and writing skills.	Prerequisites: None.	L+L 5.0 5.0 5.0
ARB102	Elementary Arabic II	A continuation of ARB101. Continued study of grammar and vocabulary, with emphasis on pronunciation and speaking skills.	Prerequisites: A grade of C or better in ARB101. Completion of prerequisites within the last three years is required.	L+L 5.0 5.0 5.0
ARB201	Intermediate Arabic I	Review of essential grammar of the Arabic language and study of the Arabic culture. Continued practice and development of reading, writing, and speaking skills. Emphasis on both fluency and accuracy in the spoken language.	Prerequisites: A grade of C or better in ARB102 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 5.0 5.0 5.0
ARB202	Intermediate Arabic II	Advanced grammatical structures in Arabic. Further development of language skills with emphasis on speaking the language.	Prerequisites: A grade of C or better in ARB201 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARB296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
ARC100	Introduction to Architecture Technology	Survey of architectural technology profession and associated professions. Exploration of design through historical, technical, environmental, and theoretical movements. Principles, concepts, phases, and skills associated with designs of actual and rendered architecture.	Prerequisites: None.	L+L 3.0 4.0 4.0
ARC110	Revit - Introduction	Basic skills required to complete architectural drawings with Revit software; simplified overview of the software program and operations gained through completing typical plan, elevation, sectional, and 3D views, using generic walls and related components.	Prerequisites: None.	L+L 3.0 6.0 6.0
ARC111	Architectural Computer Aided Design I: Introduction	Introduction to Computer-aided drafting (CAD) for the creation of construction documents including: annotated plans, elevations, schedules and schematic section views. Dimensions, notes, and symbols to be included in the set of construction documents.	Prerequisites: None.	L+L 3.0 6.0 6.0
ARC112	Architectural Computer Aided Design II: Plans and Elevations	Computer-aided drafting (CAD). Creation of a fully annotated plan, elevation, and schematic section views including dimensions, notes, symbols, and schedule, using a computer aided drafting software such as AutoCAD. Includes an introduction to three-dimensional (3D) CAD using SketchUp and Building Information (BIM) software such as Revit.	Prerequisites: A grade of C or better in ARC/INT111. Completion of prerequisites within the last three years is required unless current work experience to override this time constraint is approved with permission of Instructor.	L+L 3.0 6.0 6.0
ARC120	Design Fundamentals I	An introduction to architectural drawing and graphic representation methods. Using architectural drawings and graphic representations as visualization, and problem-solving methods. Emphasis on visual communication, and the application and development of the visual design via process as well as product.	Prerequisites: None.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARC121	Introduction to Architectural Drafting: Manual	Emphasis on basic techniques and principles of manual architectural drafting. Includes hand lettering, line work, dimensioning, multi-view projection, work in plan, section, and elevation views, design standards, wall details, office procedures, and portfolio development	Prerequisites: None.	L+L 3.0 6.0 6.0
ARC140	Rendering and Portfolio Development	Two-dimensional and three-dimensional drawings and rendering methods, including freehand and/or use of drawing tools for presentation of ideas. Techniques for use of pencil, ink, and colors. Professional formatting of portfolios	Prerequisites: None.	L+L 3.0 6.0 6.0
ARC143	Architectural CAD: Extended Study	Reinforcement and extended study of basic two-dimensional computer aided drafting (CAD) skills for Architecture, Interior Design, and related professions using AutoCAD software. Includes sending/receiving drawing files on web; templates/set-ups; dimension/text formats; sheet management; external referencing, design center, basic/extended drawing and editing commands, and plotting.	Prerequisites: A grade of C or better in ARC141 or permission of Instructor.	L+L 3.0 6.0 6.0
ARC146	Architectural Print Reading	Analysis and interpretation of architectural working drawings including written specifications and drawings prepared by consulting engineers.	Prerequisites: None.	L+L 3.0 3.0 3.0
ARC148	Methods and Materials of Construction	Modern methods of construction and materials for residential, multiple, and commercial building, including the four types of structures used: wood, concrete, steel and masonry. Methods of assembly and how different materials can be used to create desired designs. Requirements of most recent building codes and the F.H.A. standards.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARC150	Architectural Desktop I	Residential construction drawing using Architectural Desktop (ADT). Includes preliminary workspace setups, configuration procedures, modules operations, and on screen menus applicable for producing components of a building model.	Prerequisites: A grade of C or better in CON130 or permission of Department or Division.	L+L 3.0 6.0 6.0
ARC160	Site Planning	Emphasis on the basic art of site planning, using professional design techniques and principles of architecture to develop site plans. Selection of materials, awareness of problems, and emphasis on the production of site plan drawings using board and/or computer aided drafting (CAD) skills.	Prerequisites: A grade of C or better in DFT122 or permission of Program Director.	L+L 3.0 6.0 6.0
ARC161	Residential Architectural Drafting	Basics of residential drafting and documentation topics and techniques. Includes preliminary planning and preparation for residential documentation; use of the local building codes and standards; complete drawing and annotation of a floor plan, reflected ceiling plan, roof plan, a building sections, framing plan, and exterior elevations.	Prerequisites: A grade of C or better in CON130 or permission of Department or Division.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARC162	Advanced Residential Architectural Drafting	Advanced residential drafting and documentation topics and techniques. Includes site orientation, layout and legal description; window and door schedules; interior elevation of kitchen and bath rooms; advanced instruction on framing and structural detail methods; foundation systems, support and layout; and other needed residential details and layouts.	Prerequisites: A grade of C or better in ARC161 and CON230 or permission of Department or Division.	L+L 3.0 6.0 6.0
ARC163	Commercial Architectural Drafting	Fundamental commercial drafting and documentation topics and techniques. Includes preliminary planning and preparation for commercial documentation; use of the local building codes and standards; building methods and materials of commercial structures; complete drawing and annotation of a floor plan, reflected ceiling plan, roof plan, building sections, and exterior elevations.	Prerequisites: A grade of C or better in CON130 or permission of Department or Division.	L+L 3.0 6.0 6.0
ARC164	Advanced Commercial Architectural Drafting	Further development of advanced commercial drafting and documentation topics and techniques. Covers commercial building materials and methods, specifications, land drawings, foundation plans, interior elevations, and more details specific to commercial buildings.	Prerequisites: A grade of C or better in (ARC163 and CON130) or permission of Department or Division.	L+L 3.0 6.0 6.0
ARC165	Introduction to Architecture Professional Practice and Ethics	Professional, legal, and ethical issues in architecture practice and services. Includes marketing issues, communications, standards, insurance and bonds, agreements, contracts and contractors, standard American Institute of Architecture (AIA) forms and conditions, selection of contractors, and bidding procedures	Prerequisites: None.	LEC 3.0 3.0 3.0
ARC180	Architectural Technology: Applied Building Codes	Introduction to building codes and the American Disabilities Act (ADA) for the built environment. Explores permitting process. Includes application of building code to a small commercial project.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARC225	Fundamentals of Architectural Detailing	Introduction to construction /architecture detailing. Examines functional, construction-related, and aesthetic applications of detailing.	Prerequisites: A grade of C or better in CON130 or CON252 or permission of Department or Division.	LEC 3.0 3.0 3.0
ARC226	Advanced Architectural Detailing	Advanced methods of detailing major construction materials such as wood, steel, and concrete, ranging from simple residential to more complicated commercial structures. Includes detailing foundations, exterior and interior walls, roof and ceiling areas.	Prerequisites: A grade of C or better in CON130 or CON252 or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARC243	Architectural Drawings: Site Plans and Sections	Revit (or Building Information Modeling equivalent) instruction directed to the creation of fully annotated site plans and sectional views. Development of professional quality site plans, wall sections, and building sections working from given residential and commercial layouts. Assignments incorporate applicable codes, construction materials and methods and office practices typical to the local area.	Prerequisites: A grade of C or better in (ARC100 and ARC/INT110), or permission of Department or Division.	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0
ARC244	Architectural Drawings: Structural Systems	Revit (or BIM Equivalent)-based instruction for layout and completion of fully annotated structural drawings. Focuses on working from residential and commercial layouts to develop professional quality roof, roof framing, floor framing and foundation plans. Emphasis on the use of applicable codes, construction materials and methods, and office practices typical to the local area.	Prerequisites: A grade of C or better in (ARC100 and ARC/INT110), or permission of Department or Division.	LEC 3.0 3.0 3.0, LAB 0.0 3.0 3.0
ARC245	Architectural Drawings: Mechanical and Electrical Systems	Revit (or BIM Equivalent)-based instruction for layout and completion of fully annotated building systems drawings. Focuses on working from residential and commercial layouts to develop professional quality Electrical, Mechanical(HVAC), Plumbing and Reflected Ceiling plans. Emphasis on the use of applicable codes, construction materials and methods, and office practices typical to the local area.	Prerequisites: A grade of C or better in (ARC100 and ARC/INT110), or permission of Department or Division.	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0
ARC246	Architectural CAD VI: Construction Details	Typical southwestern construction systems and details. Creation of personal standard detail files for wood frame, concrete masonry, and other specialized construction systems.	Prerequisites: A grade of C or better in ARC243 or permission of Department or Division.	L+L 3.0 6.0 6.0
ARC251	Intermediate Revit	Comprehensive use of Revit Design Development tools through the development of 3-D model(s) in working drawing and rendered formats. Includes completing a set of construction documents from creating walls, incorporating doors, windows, floor, stairs, etc., to adding views and annotation to various sheets and coordinating those sheets within the finished set.	Prerequisites: None. ARC250 or previous architectural and CAD experience strongly recommended.	L+L 3.0 6.0 6.0
ARC252	Advanced Revit	Advanced applications and use of REVIT architectural software in completing assigned projects; focus on customization of the Revit environment and developing Revit families.	Prerequisites: A grade of C or better in ARC251 or permission of Instructor.	L+L 3.0 6.0 6.0
ARC255	Introduction to Revit Structure	Introduction to Revit Structure software, addressing specialized options and processes used in structural engineering offices; includes project modeling, model analysis, reinforcement modeling, detailing, and documentation.	Prerequisites: None. Previous educational/professional experience in architecture or structural engineering strongly recommended.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARC261	Architectural CAD 3D I: Introduction	Introduction to construction, manipulating, and rendering three-dimensional (3D) objects and architectural spaces on the computer using AutoCAD software.	Prerequisites: A grade of C or better in ARC/INT111 or equivalent or permission of Department or Division. ARC/INT112 suggested but not required.	L+L 3.0 6.0 6.0
ARC262	Architectural CAD 3D II: ADT and VIZ	Additional skill development in constructing, manipulating, and rendering three-dimensional (3D) architectural computer models using AutoCAD Architectural Desktop (ADT) and Viz Render (VIZ) software	Prerequisites: A grade of C or better in ARC261 or equivalent or permission of Department or Division.	L+L 3.0 6.0 6.0
ARC265	SketchUp - Introduction	Provides students with introductory level instruction utilizing Sketchup rendering software for school and workplace applications. Addresses basic drawing/rendering commands, accessing external drawing files, and plotting through the creation of both three-dimensional schematic and rendered interior and exterior building views.	Prerequisites: None. Previous CAD experience recommended but not required.	L+L 3.0 6.0 6.0
ARC266	Sketchup II: Advanced Rendering Techniques	Provides students with advanced instruction utilizing Sketchup, Google Earth, Sandbox and Podium rendering software for school and workplace applications. Creation of photo-realistic rendered three-dimensional interior and exterior building/site views.	Prerequisites: A grade of C or better in ARC265/INT251 or permission of Instructor.	L+L 3.0 6.0 6.0
ARC270	Architectural Technology: Practicum	Provides students an opportunity to integrate and synthesize knowledge and skills acquired in prerequisite courses. Includes completion of a full set of working drawings using Building Information Modeling (BIM) under supervision comparable to workplace situations. Designed to provide practice in self-checking work, correcting and editing drawings, and assembling a portfolio.	Prerequisites: A grade of C or better in ARC243, ARC244 and ARC245, or permission of Program Director.	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0
ARC282AA	Volunteerism for Architecture: A Service Learning Experience	Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	LAB 1.0 1.0 0.0
ARC282AB	Volunteerism for Architecture: A Service Learning Experience	Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	LAB 2.0 2.0 0.0
ARC282AC	Volunteerism for Architecture: A Service Learning Experience	Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	LAB 3.0 3.0 0.0
ARC290AA	Architecture Internship	Architecture internship office and field experience with private agencies, public agencies, or citizen volunteer groups.	Prerequisites: A grade of C or better in ARC282++ or permission of Department or	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARC290AB	Architecture Internship	Architecture internship office and field experience with private agencies, public agencies, or citizen volunteer groups.	Prerequisites: A grade of C or better in ARC282++ or permission of Department or	LAB 2.0 2.0 0.0
ARC290AC	Architecture Internship	Architecture internship office and field experience with private agencies, public agencies, or citizen volunteer groups.	Prerequisites: A grade of C or better in ARC282++ or permission of Department or	LAB 3.0 3.0 0.0
ARC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
ARC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARC296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
ARC296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
ARC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ARC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ARH100	Introduction to Art	Understanding and enjoyment of visual art through the study of art media, design elements, techniques and processes, and cultural contexts. Building awareness of the meaning, functions, and significance of art.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH101	Art from Prehistory Through Middle Ages	History of art from the Paleolithic period through the Middle Ages.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH102	Art from Renaissance to Modernism	History of art from the Renaissance through Modernism.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH109	History of American Art	Study of the major art historical developments and traditions in the United States from pre-colonial times to the present, including the changing nature of American art and identity in the age of globalization. Consideration of major genres and stylistic characteristics with emphasis on the sociocultural contexts in which art was created and received.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH110	History of Graphic Design	Survey of the history of graphic design from its origins to the present. Traces the characteristics, aesthetics, and relationships between graphic design and society. Includes movements, individual artists, and interpretation. Emphasizes the function of graphic design as a branch of human visual communication.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH112	Introduction to Modern and Contemporary Art	Study of art and theory from the mid-nineteenth century to the present. Focus on European and American modern and contemporary art while considering other regions of the world. Examination of the historical, social, and cultural contexts of artistic developments. Application of various interpretive models to examine modern and contemporary art.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH115	History of Photography	Survey of history of photography from beginning to present. Emphasizes the reciprocal relationship between the medium's development and reception, society, and other visual arts. Technical developments, photographic practices, and sociocultural themes are studied.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARH118	Introduction to Chinese Art	Introduction to Chinese Art. Exploring the influence of philosophy, symbolism, history, and religions that underlie the choice of subject matter and styles, and the development of new techniques and media in Chinese art.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH145	History of Native American Art	Survey of Native American Art from pre-contact to present focusing on the United States and Canada. Explores characteristics, socio-political and cultural influences, and issues represented in various art forms.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH201	Art of Asia	Introduction to the origins and historical development of art in Asia, with emphasis on Asia's major sub-regions including West, Central, East, South, and Southeast.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH202	Art of Africa, Oceania, and Americas	Study of the material cultures of Africa, America, and Oceania, with an emphasis on diverse worldviews and their expression within a contemporary global context.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH203	Art of Ancient Egypt	The art and culture of ancient Egypt from prehistoric through the Greco-Roman period	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH204	Roman Art and Architecture	Detailed examination of the art and architecture of ancient Rome from the monarchical period to the late empire, with emphasis on the visual culture and artifacts of the civilization.	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH216	Pre-Columbian Art History	Art of the Americas prior to European contact, focusing on Mesoamerica and the Central Andean region and their respective adjoining areas, with some attention to the U.S. Southwest and Eastern Woodlands Mound Building cultures	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH217	Mexican Art History	Art of Mexico and related cultures, from the prehistoric to the contemporary period	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH240	Art and Architecture of the Islamic World to 1800	Introduction to the principal achievements in art and architecture of the Islamic world circa 650-1800 CE and placing them in social and cultural contexts and consideration of the historical evolution of Western knowledge and understanding of these works	Prerequisites: None.	LEC 3.0 3.0 3.0
ARH250	Visual Language and Interpretation	Examines the communication of concepts through visual interpretation and expression.	Prerequisites: A grade of C or better in (ART111, ART112, ART131, ART167 and ARH100) or permission of instructor.	LEC 1.0 1.0 1.0
ARH298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ARH298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ARH298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ART105	Art Beyond the Classroom	Visual arts experience. Includes field trips to galleries, museums, and collections as well as art lectures, demonstrations, and varied studio experiences.	Prerequisites: None.	L+L 1.0 2.0 2.0
ART106	Gallery Operations	Operation of an art gallery. Includes organization, publicity, evaluation of artwork, selection and installation of exhibits.	Prerequisites: Permission of Instructor.	L+L 3.0 6.0 6.0
ART110	Experimental Chinese Painting	Explores ancient Chinese techniques with rice paper and Chinese ink to create traditional and nontraditional designs. Emphasis on use of Chinese techniques in mixed media works.	Prerequisites: None.	L+L 1.0 2.0 2.0
ART111	Drawing I	Fundamental principles of drawing. Emphasis on composition and facility in objective and expressive representation, using variety of drawing media	Prerequisites: None.	L+L 3.0 6.0 6.0
ART112	Two-Dimensional Design	Study of fundamental elements and principles of two-dimensional design.	Prerequisites: None.	L+L 3.0 6.0 6.0
ART113	Color	Investigation seeking visual solutions to a variety of problems concerning color in two and three dimensions and modes of color appearances, including light and effects in design and theory of design.	Prerequisites: None.	L+L 3.0 6.0 6.0
ART115	Three-Dimensional Design	Fundamental principles of three-dimensional design.	Prerequisites: None.	L+L 3.0 6.0 6.0
ART116	Life Drawing I	Use of form, structure and anatomy of draped and undraped human figure to develop basic principles of sound draftsmanship	Prerequisites: None.	L+L 3.0 6.0 6.0
ART117	Life Drawing II	Further study of form, structure, and anatomy of the draped and undraped human figure with emphasis on composition	Prerequisites: A grade of C or better in ART116.	L+L 3.0 6.0 6.0
ART118	Art Anatomy	Artistic study of the concept of anatomical unity. Principle skeletal and muscular structures affecting surface form of the human figure. Includes drawing project, portfolio, and tests.	Prerequisites: A grade of C or better in ART116 or permission of Instructor.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ART122	Drawing and Composition II	Emphasis on composition and exploration of drawing media	Prerequisites: A grade of C or better in ART111.	L+L 3.0 6.0 6.0
ART131	Photography I	Basic photographic principles and techniques. Basic camera functions and controls. Experience in the image-making process by creating and editing photographs for various display environments. Introduction to the photographic aesthetic and photography's role in society.	Prerequisites: None.	L+L 3.0 6.0 6.0
ART132	Photography II	Advanced camera and darkroom techniques. Aesthetic awareness with personal expression	Prerequisites: A grade of C or better in ART131 or permission of Instructor.	L+L 3.0 6.0 6.0
ART133	Photography III	Refinement of aesthetic and technical aspects producing convincing images of highest quality	Prerequisites: A grade of C or better in ART132 or permission of Instructor.	L+L 3.0 6.0 6.0
ART134	Photography IV	Emphasis on personal statement and style. Related graphic art forms explored. Development of portfolio	Prerequisites: A grade of C or better in ART133 or permission of Instructor.	L+L 3.0 6.0 6.0
ART136	Documentary Photography	Explore the history and contemporary trends of documentary photography. Students will learn how to research and define a topic, ethics of documentary photography, storytelling, production and post production techniques and distribution methods. Students will create a final documentary portfolio.	Prerequisites: A grade of C or better in ART131, or ART142, or permission of Instructor.	L+L 3.0 6.0 6.0
ART137	Alternative Photographic Processes	This course focuses on the 19th-century photographic processes including new picture-making technologies. Discussing the history of photography in relation with techniques taught in class. Students encouraged to explore historical processes in combination with contemporary technologies. Through technical demonstrations, hands-on workshops, and technical assignments, students develop a working knowledge of a range of processes while developing their own visual language.	Prerequisites: None.	L+L 3.0 6.0 6.0
ART151	Sculpture I	Exploration of sculptural form and expression in clay, plaster, stone, wood and metal.	Prerequisites: None.	L+L 3.0 6.0 6.0
ART152	Sculpture II	Emphasis on control of sculptural media	Prerequisites: A grade of C or better in ART151.	L+L 3.0 6.0 6.0
ART153	Woodworking I	Fundamental woodworking techniques to produce creative functional and sculptural, three-dimensional objects.	Prerequisites: None.	L+L 3.0 6.0 6.0
ART154	Woodworking II	Advanced design, joinery, fixture building, and woodworking techniques. Application of design principles.	Prerequisites: A grade of C or better in ART153.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ART155	Glass Fusing and Slumping I	Introduction to the basics involved in glass fusing and slumping. The concepts of glass, glass fusing, and glass slumping will be covered with hands-on experience using a variety of techniques to create finished glass projects such as jewelry, dishes, frames, and door bells.	Prerequisites: None.	L+L 3.0 6.0 6.0
ART156	Glass Fusing and Slumping II	Further study in the area of glass fusing and slumping. Advanced techniques including Pate-de-Verre, Pattern Bars, watchbands, bracelets, and patterned dishes.	Prerequisites: A grade of C or better in ART155.	L+L 3.0 6.0 6.0
ART158	Introduction to Glass Blowing	Introduction to the basics involved in free hand blowing glass. The concepts of hot glass, glass shaping, and glass blowing will be covered with hands-on experience using a variety of techniques to create finished glass projects such as spheres, cones, cups, and other hollow glass objects.	Prerequisites: None.	L+L 3.0 6.0 6.0
ART159	Intermediate Glass Blowing	Further study in the area of glass blowing. Advanced techniques including traditional techniques as well as further investigation into color, form, and scale.	Prerequisites: A grade of C or better in ART158.	L+L 3.0 6.0 6.0
ART160	Advanced Glass Blowing	Further study in the area of glass blowing with emphasis on advanced techniques and design considerations, such as sculpting, larger scale projects, working in multiples, and further refinement of technical skill.	Prerequisites: A grade of C or better in ART159.	L+L 3.0 6.0 6.0
ART161	Ceramics I	Introduction to ceramic materials and techniques of hand construction, decorating, glazing and throwing on potters' wheel	Prerequisites: None.	L+L 3.0 6.0 6.0
ART162	Ceramics II	Major emphasis on wheel throwing, glaze making and decorating techniques	Prerequisites: A grade of C or better in ART161.	L+L 3.0 6.0 6.0
ART165	Watercolor Painting I	Transparent and Gouache watercolor painting.	Prerequisites: A grade of C or better in (ART111 and ART112) or permission of Instructor.	L+L 3.0 6.0 6.0
ART166	Watercolor Painting II	Painting in water soluble media. Emphasis on individual techniques and design.	Prerequisites: A grade of C or better in ART165.	L+L 3.0 6.0 6.0
ART167	Painting I	Exploration of technical and expressive possibilities of various media in painting.	Prerequisites: A grade of C or better in (ART111 and ART112) or permission of Instructor.	L+L 3.0 6.0 6.0
ART168	Painting II	Continued refinement of painting skills and investigation of new possibilities in painting	Prerequisites: A grade of C or better in ART167 or permission of Instructor.	L+L 3.0 6.0 6.0
ART171	Jewelry I	Fundamentals of jewelry making. Covers hand formed methods, including cutting, shaping, forging, soldering, and lost wax technique	Prerequisites: None.	L+L 3.0 6.0 6.0
ART172	Jewelry II	Further refinement of personal expression using techniques and design concepts of ART171	Prerequisites: A grade of C or better in ART171.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ART211	Drawing and Composition III	Advanced development of drawing skill with emphasis on compositional theory	Prerequisites: A grade of C or better in ART122 or permission of Instructor.	L+L 3.0 6.0 6.0
ART216	Life Drawing III	Advanced creative study from model in various painting and drawing media	Prerequisites: A grade of C or better in ART117 or permission of Instructor.	L+L 3.0 6.0 6.0
ART217	Life Drawing IV	Further development of skills in expressive drawing materials and techniques as applied to finished drawings of the human form	Prerequisites: A grade of C or better in ART216 or permission of Instructor.	L+L 3.0 6.0 6.0
ART222	Drawing and Composition IV	Further study of drawing techniques with emphasis on individual problems and techniques	Prerequisites: A grade of C or better in ART211 or permission of Instructor.	L+L 3.0 6.0 6.0
ART234	Color Photography	Basic principles of color theory, camera and input and output techniques using analog or digital photography.	Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor.	L+L 3.0 6.0 6.0
ART241	Intaglio	Introduction to traditional concepts and techniques for Intaglio printmaking. Deals with black and white printing; includes brief introduction to color printing. Covers various tools and materials used in Intaglio	Prerequisites: A grade of C or better in ART111 and ART113.	L+L 3.0 6.0 6.0
ART250	Introduction to Printmaking	Introduction to concepts and techniques involved in the Fine Art field of Printmaking.	Prerequisites: A grade of C or better in ART111 or ART112.	L+L 3.0 6.0 6.0
ART251	Sculpture III	With emphasis on attention to individual problems and techniques	Prerequisites: A grade of C or better in ART152.	L+L 3.0 6.0 6.0
ART252	Sculpture IV	Advanced sculpture problems and professional practices	Prerequisites: A grade of C or better in ART251.	L+L 3.0 6.0 6.0
ART253	Woodcut	Focuses on relief method of printing, utilizing the techniques of Woodcut. Deals specifically with black and white images. Study of printing materials and tools, papers and printing methods. Relief printing in color introduced. Traditional forms of Woodcut, also an overview of innovative techniques in the field	Prerequisites: A grade of C or better in ART111 and ART113.	L+L 3.0 6.0 6.0
ART255	Art Marketing	Career goals, presentation of artist and art work (portfolio, resume, business cards, catalog), pricing and selling works, networking, establishing a studio, promotion and publicity, writing press releases, proposal writing, business ethics, artist rights, copyright law, contracts and agreements, royalties, record keeping, and communication skills	Prerequisites: None.	LEC 3.0 3.0 3.0
ART255AB	The Portfolio	Choosing the right pieces to include, presenting art work, developing the portfolio.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ART255AC	Marketing Fine Art	Exhibitions and galleries, establishing a studio, alternative markets	Prerequisites: A grade of C or better in ART255AB or permission of Instructor.	LEC 1.0 1.0 1.0
ART256	Glass Fusing and Slumping III	Further study in the area of glass fusing and slumping with emphasis on advanced techniques and design considerations, such as, plates designed using different techniques, weaving or strip glass, and combining previous techniques to create projects.	Prerequisites: A grade of C or better in ART156.	L+L 3.0 6.0 6.0
ART257	Glass Fusing and Slumping IV	Further study of advanced glass fusing and slumping including problems, professional practices, personal expression and experimental research into various techniques.	Prerequisites: A grade of C or better in ART256.	L+L 3.0 6.0 6.0
ART258	Papermaking	Introduction to concepts and techniques of Fine Art Papermaking. Basic overview of historical origins of craft and importance of modern papermaking to fine arts	Prerequisites: A grade of C or better in ART111 and ART113.	L+L 3.0 6.0 6.0
ART259	Monoprinting	Introduction to concepts and techniques for Monoprintmaking. Deals with la prima technique used in painting in first part of course. Multi-plate printing and how method of printing relates to use of color and separation in second part of course	Prerequisites: A grade of C or better in ART111 and ART113.	L+L 3.0 6.0 6.0
ART261	Ceramics III	Emphasis on wheel throwing skill and individual style development	Prerequisites: A grade of C or better in ART162.	L+L 3.0 6.0 6.0
ART262	Ceramics IV	Experimental work in clays and glazes	Prerequisites: A grade of C or better in ART261.	L+L 3.0 6.0 6.0
ART263	Figure Painting	Study of the nude and clothed figure in painting with special attention upon relevant color palettes, direct and indirect figurative painting techniques, and development of anatomical knowledge and compositional structure. Students will draw upon both historical and contemporary modes of depicting the figure to develop a personalized approach to figure painting. Live models, photographs, drawings, "Planes of the Head" models, and the studio skeleton will be used as the basis of projects.	Prerequisites: A grade of C or better in ART167 or permission of Instructor.	L+L 3.0 6.0 6.0
ART264	Glass Casting	Further study of glass art with a focus on casting and kiln working, including problems, professional practices, personal expression and experimental application of various techniques.	Prerequisites: A grade of C or better in ART160.	L+L 3.0 6.0 6.0
ART265	Watercolor Painting III	Continuation of watercolor painting with emphasis on control and expression	Prerequisites: A grade of C or better in ART166.	L+L 3.0 6.0 6.0
ART266	Watercolor Painting IV	Advanced problems directed toward more personal expression	Prerequisites: A grade of C or better in ART265.	L+L 3.0 6.0 6.0
ART267	Painting III	Development of materials and techniques of painting. Individual problem-solving	Prerequisites: A grade of C or better in ART168 or permission of Instructor.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ART268	Painting IV	Advanced problem in painting. Study with greater emphasis on personal expression	Prerequisites: A grade of C or better in ART267 or permission of Instructor.	L+L 3.0 6.0 6.0
ART271	Jewelry III	Emphasis on advanced jewelry design techniques and practices.	Prerequisites: A grade of C or better in ART172.	L+L 3.0 6.0 6.0
ART272	Jewelry IV	Emphasis on expanding repertoire of advanced jewelry design techniques and practices.	Prerequisites: A grade of C or better in ART271.	L+L 3.0 6.0 6.0
ART275	Lost Wax Casting I	Introduction to lost wax casting techniques for jewelry and small sculptures. Emphasis on design concepts as related to three-dimensional forms	Prerequisites: None.	L+L 3.0 6.0 6.0
ART276	Lost Wax Casting II	Advanced course in lost wax casting techniques for jewelry and small sculptures. Emphasis on the continuation of individual expression using the lost wax method	Prerequisites: A grade of C or better in ART275.	L+L 3.0 6.0 6.0
ART277	Textiles I	Introduction to exploration of textile media.	Prerequisites: A grade of C or better in ART112 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290AA	Studio Art	Studio course for art majors allowing continuation in a subject field.	Prerequisites: Permission of Instructor.	L+L 1.0 2.0 2.0
ART290AB	Studio Art	Studio course for art majors allowing continuation in a subject field.	Prerequisites: Permission of Instructor.	L+L 2.0 4.0 4.0
ART290AC	Studio Art	Studio course for art majors allowing continuation in a subject field.	Prerequisites: Permission of Instructor.	L+L 3.0 6.0 6.0
ART290BC	Studio Art: Drawing	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART111 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290CC	Studio Art: Mixed Media	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART112 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290DC	Studio Art: Life Drawing	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART117 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290EC	Studio Art: Photography	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART132 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290FF	Studio Art: Sculpture	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART252 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290GC	Studio Art: Ceramics	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART162 or permission of Instructor.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ART290HC	Studio Art: Watercolor	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART166 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290JC	Studio Art: Color	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART113 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290KC	Studio Art: Glazing Techniques	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART162 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290LC	Studio Art: Clay Bodies	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART162 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290MC	Studio Art: Digital Photography	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in AVC143 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290PC	Studio Art: Painting	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART168 or permission of Instructor.	L+L 3.0 6.0 6.0
ART290WC	Studio Art: Woodworking	Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART154 or permission of Instructor.	L+L 3.0 6.0 6.0
ART295AC	Art Workshop/Seminar: Drawing	Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	L+L 3.0 6.0 6.0
ART295BC	Art Workshop/Seminar: Sculpture	Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	L+L 3.0 6.0 6.0
ART295DA	Art Workshop/Seminar: Photography	Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ART295DB	Art Workshop/Seminar: Photography	Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	L+L 2.0 4.0 4.0
ART295DC	Art Workshop/Seminar: Photography	Advanced-level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	L+L 3.0 6.0 6.0
ART295EA	Art Workshop/Seminar: Painting	Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	L+L 1.0 2.0 2.0
ART295EC	Art Workshop/Seminar: Painting	Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	L+L 3.0 6.0 6.0
ART295GB	Art Workshop/Seminar: Ceramics	Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	L+L 2.0 4.0 4.0
ART295HC	Art Workshop/Seminar: Mixed Media	Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	L+L 3.0 6.0 6.0
ART295LB	Art Workshop/Seminar: Glazing Techniques	Advanced level workshop seminar in art disciplines	Prerequisites: Permission of Instructor.	L+L 2.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASB100	Introduction to Global Health	Examination of the field of global health from an anthropological perspective, including but not limited to understanding health systems, diverse medical practices, and ideas about health, illness, and the body in cross-cultural contexts. Focus on using critical frameworks to understand the relationships between culture and epidemiology, ecologies, political economies, health equity issues and human rights.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB102	Introduction to Cultural Anthropology	Introduces concepts and methods of cultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of cultural and social practices such as subsistence, economics, politics, marriage, kinship, gender and religion.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB202	Ethnic Relations in the United States	Basic concepts and processes, including historic overview, of interethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to interethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB211	Women Across Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB214	Magic, Witchcraft and Healing: An Introduction to Comparative Religion	Origins, elements, and forms of religion; a comparative survey of religious beliefs, myths, rituals and symbolism including magic, witchcraft and healing as practiced in selected regions of the world; the place of religion in the total culture	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB220	Anthropology Goes to the Movies	Archaeology and anthropology through the lens of popular films of the 20th and 21st Century. Explores the popularity of ancient humans as a topic for film ventures and how accurately they are portrayed. Provides the student with a basic knowledge of anthropology and offers film images of anthropologists and archaeologists and the practice of archaeology and anthropology. Analyzes accuracy of films depicting culture and our human past.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASB222	Buried Cities and Lost Tribes: Old World	Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which tend to fragment societies. Examples drawn from Africa, Asia, Europe, the Pacific Islands, and Australia	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB223	Buried Cities and Lost Tribes: New World	Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which fragment societies. Examples drawn from North America, Central America, and South America.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB226	Human Impacts on Ancient Environments	Interrelationship between humans and their environments, using archaeological data and case studies beginning with early hominids. Uses of research to identify environmental change and distinguish between climatic and human-induced global change. Explores ways in which prehistoric people caused and responded to environmental changes	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB230	Principles of Archaeology	Introduction to archaeological methods and theory	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB231	Archaeological Field Methods	Excavation of an archaeological site; recording and interpreting data collected during the field experience. Overview of the cultures concerned; contemporary issues in archaeology.	Prerequisites: None.	L+L 4.0 6.0 6.0
ASB234	Art and Archaeology of Ancient Egypt	Introduction to the major social, political, religious and economic institutions of Ancient Egypt. The historical events and people that shaped Egyptian civilization.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB235	Southwest Archaeology	Anthropological perspective and comparative study of the cultures of prehistoric native peoples of the North American southwest.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB245	American Indians of the Southwest	Comparative study of the cultures, including the histories and present status, of American Indians of the Southwest.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASB252	Sports and Culture	Cross-cultural examination of symbolic and social dimensions of sports, past and present.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASB253	Death and Dying Across Cultures	Responses to death and dying in cultures around the world. Explanations for particular cultural responses to death and dying. Examples drawn from ancient and contemporary cultures.	Prerequisites: None. ASB102 suggested but not required.	LEC 3.0 3.0 3.0
ASB282AA	Service-Learning Experience in Anthropology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
ASB282AB	Service-Learning Experience in Anthropology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
ASB282AC	Service-Learning Experience in Anthropology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
ASB298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ASB298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ASB298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ASD100	Foundations of Addictions and Substance Use Disorders	Introduction to the foundations of the alcohol and drug abuse rehabilitation field. Emphasis on the roles and responsibilities of the addictions counselor, ethical issues, pharmacology, family dynamics, dual diagnosis, intervention techniques, self-help groups, levels of care, symptom identification, and conducting alcohol/drug histories. Interactive work stressed.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASD102	Communication Skills in Treating Addiction	Further examination and refinement of communication and beginning professional counseling skills as they relate to the addicted client and family members. Emphasis on practicing the application of these skills to various situations associated with treatment planning. Recordkeeping/documentation skills emphasized.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASD110	Pharmacology of Substances of Abuse and Dependency	Exploration of the pharmacology of substance of abuse and dependency. Examines the effects of psychopharmacological chemicals on human physiology. Emphasis on identification and management of substances of abuse and dependency.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASD120	Professional Ethics in Addictions and Substance Use Disorders	Exploration of topics relative to the professional and ethical development of the addictions and substance use disorders counselor, including codes of ethics, confidentiality laws, professionalism and boundary issues, and the meeting of individual counselor needs within the field.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD145	AIDS and Addiction	Exploration of AIDS and its relationship to addiction. Emphasis on myths and realities of AIDS, personal values, feelings, and limitations and treatment goals.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD146	Peer Support Specialist	Introduction to the role and foundational responsibilities of a peer support specialist in the field of addictions and substance use. Explores basic pharmacology, ethics, case management, and crisis management. Recovery-Oriented Systems of Care (ROSC) is emphasized.	Prerequisites: None. Corequisites: ASD147.	LEC 4.0 4.0 4.0
ASD147	Peer Support Specialist Practicum	Peer support specialist preparation related to addictions and substance use disorders. Opportunity for students to use their developed knowledge and skills in an applied setting with supervision.	Prerequisites: None. Corequisites: ASD146.	LAB 3.0 5.0 0.0
ASD148	Introduction to the Science of Prevention	Overview of the science underlying evidence-based prevention interventions and strategies and the effective application of these approaches in prevention practice.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD149	Physiology and Pharmacology for Prevention	Overview of the physiology and pharmacology of psychoactive substances and their effects on the brain to affect mood, cognition, and behavior and the consequences of such use on the individual, family, and community.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD150	Principles of Self-Help Groups	Overview of the fundamental principles, concepts and historical antecedents of the various self-help groups. Emphasis on the self-help groups of Alcoholics Anonymous, Al-anon, Alateen, Narcotics Anonymous, Co-dependents Anonymous, and Adult Children of Alcoholics.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASD151	Prevention Interventions and Policies	Overview of primary evaluation methods used to measure evidence-based prevention interventions and gives guidance in applying them to "real-world" prevention settings.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD152	Family-Based Prevention Interventions	Overview of the family as the primary socialization agent of children, the science behind family-based prevention interventions, and the application of such evidence-based approaches to help prevent the onset of substance use in children.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD153	School-Based Prevention Interventions	Overview of the role of the school in society, the science behind school-based prevention interventions, and the application of such evidence-based approaches in school settings around the world.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD154	Workplace-Based Prevention Interventions	Overview of the role of work and the workplace in society, how stressors and other work-related influences affect risk of substance use, the science behind workplace prevention interventions, and the application of such evidence-based approaches in work settings around the world.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD155	Environment-Based Prevention Interventions	Overview of the science underlying evidence-based substance use prevention using environmental interventions, involving policy, and community-wide strategies.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD156	Media-Based Prevention Interventions	Overview of the science underlying the use of media for substance use prevention interventions.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD157	Community-Based Prevention Implementation Systems	Overview of the science underlying the systems approach to prevention interventions and guidance for developing such approaches, as well as exemplars of evidence-based drug use prevention systems.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD158	Gambling Disorders Prevention	Overview of gambling disorders prevention. Emphasis on current prevention research. Also includes information on gambling prevention resources.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD159	Adolescent Substance Use Prevention	Adolescent substance use prevention issues. Emphasis on current and developing adolescent prevention information. Covers common adolescent substance use characteristics and prevention strategies.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD160	Behavioral Addictions Prevention	Overview of behavioral addictions prevention issues. Emphasis on current research. Also includes community resources information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD161	Beginning Clinical Documentation Skills	Overview of addictions and substance use disorders counseling, interviewing, and documentation. Includes record keeping and documentation skills. Alcohol and drug abuse counselor core functions emphasized.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASD165	Theories and Techniques in the Treatment of Addictions	Overview of counseling theories including the application to addictions and substance use disorders groups. Recordkeeping skills and beginning counseling skills emphasized.	Prerequisites: None.	LEC 2.0 2.0 2.0
ASD220	Family Dynamics and Addiction	Analysis of the impact of addictions on all the members of a family. Interviewing, assessment and therapeutic approaches particularly useful for these family members presented.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASD226	Counseling Multicultural and Diverse Populations	Exploration of influences of culture and diversity on addictions and substance abuse. Emphasis on recovery and therapeutic relationships.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASD236	Relapse, Recovery, and Addiction	Review of the bio-psycho-social processes of recovery and relapse in addictions. Exploration into those factors that both contribute to and inhibit recovery and relapse.	Prerequisites: None.	LEC 2.0 2.0 2.0
ASD245	Co-Occurring Disorders	Examines co-occurring disorders from the bio-psycho-social model. Includes causes, consequences, assessment, and treatment, emphasizing the psychoeducational model of treatment.	Prerequisites: None.	LEC 2.0 2.0 2.0
ASD250	Group Interventions	Focus on group dynamics and group process as they relate to addictions and substance use disorders. Exploration of group developmental stages, family intervention models, various counseling approaches/techniques and their application to therapeutic, education and family groups.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASD275	Advanced Theory and Techniques in the Treatment of Addiction Disorders	Capstone course for level two certificate in addictions and substance use disorders program. Focus on counseling theories and techniques used by counselors as they relate to the client and family members.	Prerequisites: A grade of C or better in ASD220, ASD226, ASD245 and ASD250 or permission of Instructor.	LEC 3.0 3.0 3.0
ASD280	Addictions and Substance Use Disorders Practicum	Opportunity for advanced students to use his/her developed knowledge and skills in an applied setting with supervision.	Prerequisites: A grade of C or better in ASD275 or permission of Department or Division.	LAB 6.0 18.0 0.0
ASD285	Addictions Seminar	Special topics in addictions and substance use disorders with an emphasis on current issues not covered in other addictions and substance use disorders courses.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285AA	Treatment for Stimulant Use Disorders Seminar	Stimulant use disorder treatment issues. Emphasis on current and developing treatment information. Covers common stimulant abuse characteristics and treatment strategies. Also includes community resource information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285BB	Adolescent Substance Abuse Treatment Seminar	Adolescent substance abuse treatment issues. Emphasis on current and developing treatment information. Covers common adolescent substance abuse characteristics and treatment strategies. Also includes community resource information.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASD285CC	Addiction Review Seminar	A brief review of current addiction issues. Emphasis on current and developing treatment information. Covers common alcohol and drug addiction characteristics and treatment strategies. Also includes community resource information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285DD	Motivation for Change in Substance Abuse Treatment Seminar	Issues regarding motivational change in substance abuse treatment. Emphasis on current and developing treatment information. Covers common motivational change techniques. Also includes community resource information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285EE	Domestic Violence and Substance Abuse Seminar	Domestic violence and substance abuse treatment issues. Emphasis on current and developing domestic violence and substance abuse information. Covers techniques, strategies, and treatment modalities for domestic violence and substance abuse patients. Also includes community resource information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285FF	Street Drugs Seminar	Street drug issues. Emphasis on current and developing street drug information. Covers techniques strategies and treatment modalities for street drug abuse patients. Also includes community resource information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285GG	Addictive and Medical Plants Seminar	Addictive and medical plant issues. Emphasis on current and developing addictive and medical plant information. Covers addictive and medical plant typology. Also includes community resource information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285HH	Intervention and Treatment for Addictions and Substance Use Disorders Seminar	Brief interventions and treatment for addictions and substance use disorders. Emphasis on current and developing intervention and treatment information. Covers treatment and intervention techniques for use with addictions and substance use disorders. Also includes community resource information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285II	Multicultural Aspects	Multicultural aspects of counseling in addictions and substance use disorders. Emphasis on current and developing treatment information. Covers common aspects of multicultural characteristics and treatment strategies. Also explores ethical counselor/client relationships.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285JJ	Clinical Supervision Training of Supervisors	Clinical supervision training of supervisor issues. Emphasis on current and developing treatment information. Also includes community resource information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285KK	Recovery-Oriented Systems of Care Seminar	Overview of recovery-oriented systems of care programs. Covers research, development, and characteristics of programs in addition to applicable federal mandates.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285LL	Gambling Addiction Seminar	A brief review of gambling addiction issues. Emphasis on current research, intervention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASD285MM	Sexual Addiction Seminar	A brief review of sexual addiction issues. Emphasis on current research, intervention, and treatments in the field. Also includes community resources information.	Prerequisites: Student must be 18 years or older.	LEC 1.0 1.0 1.0
ASD285NN	Eating Disorders Seminar	An overview of issues associated with eating disorders. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285OO	Eating Disorders: Special Considerations and Populations Seminar	A review of issues associated with eating disorders within diverse populations. Emphasis on multicultural populations, current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285PP	Eating Disorders: Conceptualization and Treatment Seminar	A review of issues associated with eating disorders. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285QQ	Behavioral Addictions Seminar	A review of issues associated with behavioral addictions. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285RR	Behavioral Addictions Seminar: Internet-Related Addictions	A review of issues associated with internet-based behavioral addictions. Emphasis on diagnostic descriptions and considerations for internet-based addictions including current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285SS	Marijuana Addiction Seminar	An overview of issues associated with marijuana addiction. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD285TT	Opioid Addiction Seminar	An overview of issues associated with opioid addiction. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASD295	Advanced Foundations: Addictions and Substance Use Disorders Counselor Licensing/Certification Exams	Review for individuals preparing for addictions and substance use disorders counselor licensing and/or certification exams. Emphasis on ethics, treatment, pharmacology, family issues, and self-help groups.	Prerequisites: None.	LEC 3.0 3.0 3.0
ASE100	Introduction to Automotive Service	Introduction to the standards of the automotive industry. Includes an overview of the major automotive systems, safety practices, workplace habits, tools, and equipment.	Prerequisites: None.	L+L 2.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASE102	Automotive Express Service	Use of standard service publications; performance of commonly used service operations following published service procedures; emphasis on good attitude development and safety habits about automotive service.	Prerequisites: None.	L+L 2.0 4.0 4.0
ASE102AU	Automotive Express Service	Use of standard service publications; performance of commonly used service operations following published service procedures; emphasis on good attitude development and safety habits about automotive service.	Prerequisites: None.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE110	Engine Fundamentals	Diagnosis, disassembly, repair and reassembly of automotive internal combustion engines.	Prerequisites: None.	L+L 4.0 7.5 7.5
ASE110AU	Engine Fundamentals	Diagnosis, disassembly, repair and reassembly of automotive internal combustion engines.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ASE100.	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5
ASE111	Engine Diagnosis and Inspection	Diagnosis and inspection of automotive internal combustion engines.	Prerequisites: None.	L+L 2.0 4.0 4.0
ASE111AU	Engine Diagnosis and Inspection	Diagnosis and inspection of automotive internal combustion engines.	Prerequisites: None.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE120	Automatic Transmission and Transaxle	Principles of automotive operation, servicing and repair procedures for automatic transmissions/transaxles; includes diagnostics and testing of mechanical, electrical, and hydraulic components.	Prerequisites: None.	L+L 4.0 7.5 7.5
ASE120AU	Automatic Transmission and Transaxle	Principles of automotive operation, servicing and repair procedures for automatic transmissions/transaxles; includes diagnostics and testing of mechanical, electrical, and hydraulic components.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ASE100.	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5
ASE130	Manual Drive Trains and Axles	Operation, diagnosis, service, and repair of the automotive powertrain. Includes manual transmissions/transaxles, clutches, drive axles, driveshafts, differentials, four-wheel drive, and all-wheel drive.	Prerequisites: None.	L+L 4.0 7.5 7.5
ASE130AU	Manual Drive Trains and Axles	Operation, diagnosis, service, and repair of the automotive powertrain. Includes manual transmissions/transaxles, clutches, drive axles, driveshafts, differentials, four-wheel drive, and all-wheel drive.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ASE100.	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5
ASE140	Automotive Steering, Suspension and Alignment	Principles of automotive suspension and steering systems. Diagnosis, service, and repair procedures emphasis on four-wheel alignment.	Prerequisites: None.	L+L 4.0 7.5 7.5
ASE140AU	Automotive Steering, Suspension and Alignment	Principles of automotive suspension and steering systems. Diagnosis, service, and repair procedures emphasis on four-wheel alignment.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ASE100.	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5
ASE141	Steering, Suspension and Pre-Alignment	Principles and operation of automotive suspension and steering systems.	Prerequisites: None.	L+L 2.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASE141AU	Steering, Suspension and Pre-Alignment	Principles and operation of automotive suspension and steering systems.	Prerequisites: None.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE150	Automotive Brake Systems	Operation, diagnosis, service, and repair of automotive brake systems.	Prerequisites: None.	L+L 4.0 7.5 7.5
ASE150AU	Automotive Brake Systems	Operation, diagnosis, service, and repair of automotive brake systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ASE100.	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5
ASE151	Introduction to Brake Systems	Fundamentals and operation of automotive braking systems. Includes training in service, testing, and repair of basic brake and brake-related components.	Prerequisites: None.	L+L 2.0 4.0 4.0
ASE151AU	Introduction to Brake Systems	Fundamentals and operation of automotive braking systems. Includes training in service, testing, and repair of basic brake and brake-related components.	Prerequisites: None.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE160	Introduction to Automotive Electrical	Automotive electrical systems foundations. Emphasis on testing and diagnosis of automotive battery, starting, and charging systems.	Prerequisites: None.	L+L 4.0 7.5 7.5
ASE160AU	Introduction to Automotive Electrical	Automotive electrical systems foundations. Emphasis on testing and diagnosis of automotive battery, starting, and charging systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ASE100.	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5
ASE161	Basic Automotive Electrical/Electronics	The basic principles of automotive electricity and electrical systems.	Prerequisites: None.	L+L 2.0 3.0 3.0
ASE161AU	Basic Automotive Electrical/Electronics	The basic principles of automotive electricity and electrical systems.	Prerequisites: None.	LEC 2.0 1.0 1.0 LAB 0.0 2.0 2.0
ASE162	Automotive Battery, Starting and Charging Systems	The principles of operation, testing and diagnosis of automotive battery, starting and charging systems.	Prerequisites: A grade of C or better in ASE161, or permission of Instructor.	L+L 2.0 3.0 3.0
ASE162AU	Automotive Battery, Starting and Charging Systems	The principles of operation, testing and diagnosis of automotive battery, starting and charging systems.	Prerequisites: A grade of C or better in ASE161, or permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 2.0 2.0
ASE170	Automotive Heating, Ventilation and Air Conditioning Systems	Theory and operation of automotive heating, ventilation and air conditioning systems. Includes diagnosis, service and repair of these systems.	Prerequisites: None.	L+L 4.0 7.5 7.5
ASE170AU	Automotive Heating, Ventilation and Air Conditioning Systems	Theory and operation of automotive heating, ventilation and air conditioning systems. Diagnosis, service and repair of these systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ASE100.	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5
ASE180	Introduction to Engine Management	Introduction to automotive engine management. Includes the construction and operating principles of automotive internal combustion engines. Focus on operation and diagnosis of fuel systems, ignition systems, lubrication, and cooling systems.	Prerequisites: None.	L+L 4.0 7.5 7.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASE180AU	Introduction to Engine Management	Introduction to automotive engine management. Includes the construction and operating principles of automotive internal combustion engines. Focus on operation and diagnosis of fuel systems, ignition systems, lubrication, and cooling systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ASE100.	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5
ASE181	Introduction to Engine Performance	An introductory course in automotive engine performance as it relates to the construction and operating principles of automotive internal combustion engines, fuel systems, ignition systems, and the related lubrication and cooling systems.	Prerequisites: None.	L+L 2.0 4.0 4.0
ASE181AU	Introduction to Engine Performance	An introductory course in automotive engine performance as it relates to the construction and operating principles of automotive internal combustion engines, fuel systems, ignition systems, and the related lubrication and cooling systems.	Prerequisites: None.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE182	Fundamentals of Automotive Fuel/Air and Ignition Systems	The theory and fundamentals of automotive fuel/air delivery and ignition systems. The proper diagnosis and repair of the fuel/air delivery and ignition systems.	Prerequisites: A grade of C or better in ASE181, or permission of Instructor.	L+L 2.0 4.0 4.0
ASE182AU	Fundamentals of Automotive Fuel/Air and Ignition Systems	The theory and fundamentals of automotive fuel/air delivery and ignition systems. The proper diagnosis and repair of the fuel/air delivery and ignition systems.	Prerequisites: A grade of C or better in ASE181, or permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE240	Advanced Driver Assistance Systems	Principles of Advanced Driver Assistance Systems (ADAS). Diagnosis, service, and repair procedures.	Prerequisites: A grade of C or better in ASE140, or ASE140AU, or permission of	L+L 2.0 4.0 4.0
ASE241	Advanced Steering, Suspension and Alignment	Advanced automotive principles of suspension and steering systems. Diagnosis, service and repair procedures, with emphasis on four-wheel alignment.	Prerequisites: A grade of C or better in ASE141, or permission of Instructor.	L+L 2.0 4.0 4.0
ASE241AU	Advanced Steering, Suspension and Alignment	Advanced automotive principles of suspension and steering systems. Diagnosis, service and repair procedures, with emphasis on four-wheel alignment.	Prerequisites: A grade of C or better in ASE141, or permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE251	Advanced Brake Systems	The operation, diagnosis, service and repair of advanced automotive brake systems.	Prerequisites: A grade of C or better in ASE151, or permission of Instructor.	L+L 2.0 4.0 4.0
ASE251AU	Advanced Brake Systems	The operation, diagnosis, service and repair of advanced automotive brake systems.	Prerequisites: A grade of C or better in ASE151, or permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE260	Advanced Automotive Electrical	Advanced principles of automotive electronics.	Prerequisites: A grade of C or better in ASE160, or ASE160AU, or permission of	L+L 4.0 7.5 7.5
ASE260AU	Advanced Automotive Electrical	Advanced principles of automotive electronics.	Prerequisites: A grade of C or better in ASE160, or ASE160AU, or permission of	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASE261	Automotive Electrical Diagnostics and Repair	Principles of automotive electrical diagnostics and repair.	Prerequisites: A grade of C or better in ASE162, or permission of Instructor.	L+L 2.0 4.0 4.0
ASE261AU	Automotive Electrical Diagnostics and Repair	Principles of automotive electrical diagnostics and repair.	Prerequisites: A grade of C or better in ASE162, or permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE262	Automotive Electronic Control Systems	Principles and operation of automotive electronics and electronic control systems.	Prerequisites: A grade of C or better in ASE261, or permission of Instructor.	L+L 2.0 4.0 4.0
ASE262AU	Automotive Electronic Control Systems	Principles and operation of automotive electronics and electronic control systems.	Prerequisites: A grade of C or better in ASE261, or permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE263	Hybrid Vehicle Overview	Automotive hybrid vehicle design and operation. Safety practices as suggested by manufacturers for servicing hybrid vehicle.	Prerequisites: A grade of C or better in ASE100.	L+L 2.0 4.0 4.0
ASE264	Automotive Electrical/Electronic Systems III	Designed for the advanced automotive student, this course covers the automotive computer, multiple computer systems, and automotive computer networks.	Prerequisites: A grade of C or better in ASE161 and ASE162, or permission of Instructor.	L+L 3.0 5.0 5.0
ASE265	Introduction to Electric and Hybrid Vehicles	Principles of electric drive vehicles, including electric drive, hybrid, and fuel cell electric vehicles.	Prerequisites: A grade of C or better in ASE260, or permission of Instructor.	L+L 2.0 4.0 4.0
ASE266	Electric/Hybrid Vehicle High Voltage Batteries	This course covers the safety, operation, testing, diagnosis, and repair of electrical and hybrid high voltage batteries.	Prerequisites: A grade of C or better in ASE161 and ASE162, or permission of Instructor.	L+L 1.0 2.0 2.0
ASE267	Electric Vehicle Operation and Diagnosis	Covers the operation and diagnosis of electric/hybrid vehicles.	Prerequisites: A grade of C or better in ASE161 and ASE162, or permission of Instructor.	L+L 3.0 5.0 5.0
ASE280	Engine Management	Diagnostic concepts of advanced engine management. Operation and diagnosis of engine management control systems, communication networks, and vehicle emissions.	Prerequisites: A grade of C or better in ASE180, or ASE180AU, or permission of	L+L 4.0 7.5 7.5
ASE280AU	Engine Management	Diagnostic concepts of advanced engine management. Operation and diagnosis of engine management control systems, communication networks, and vehicle emissions.	Prerequisites: A grade of C or better in ASE180, or ASE180AU, or permission of	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5
ASE281	Computerized Automotive Engine Control Systems	The theory of computerized engine control systems as they relate to engine performance and emissions control.	Prerequisites: A grade of C or better in ASE261 and ASE182, or permission of Instructor.	L+L 2.0 4.0 4.0
ASE281AU	Computerized Automotive Engine Control Systems	The theory of computerized engine control systems as they relate to engine performance and emissions control.	Prerequisites: A grade of C or better in ASE182, or permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASE282	Advanced Engine Performance Diagnosis	Diagnosis and repair of emission and engine control systems. Emphasizes the proper diagnosis, documentation, and repair of systems faults.	Prerequisites: A grade of C or better in ASE261 and ASE281, or permission of Instructor.	L+L 2.0 4.0 4.0
ASE282AU	Advanced Engine Performance Diagnosis	Diagnosis and repair of emission and engine control systems. Emphasizes the proper diagnosis, documentation, and repair of systems faults.	Prerequisites: A grade of C or better in ASE261 and ASE281, or permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
ASE290AA	Automotive Service Internship	Automotive work experience in the automotive service industry.	Prerequisites: Permission of Department or Division.	L+L 1.0 1.0 0.0
ASE290AB	Automotive Service Internship	Automotive work experience in the automotive service industry.	Prerequisites: Permission of Department or Division.	L+L 2.0 2.0 0.0
ASE290AC	Automotive Service Internship	Automotive work experience in the automotive service industry.	Prerequisites: Permission of Department or Division.	L+L 3.0 3.0 0.0
ASE296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
ASE296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASE296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0
ASE296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
ASE298AA	Special Projects	An organized and tailored activity around the interests and needs of the individual student. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ASE298AB	Special Projects	An organized and tailored activity around the interests and needs of the individual student. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ASE298AC	Special Projects	An organized and tailored activity around the interests and needs of the individual student. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ASL090AA	Speedy American Sign Language I	Introduction of techniques for communicating with deaf people using American Sign Language (A.S.L.). Expressive and receptive sign skills, manual alphabet, numbers, and basic sign vocabulary.	Prerequisites: None. ASL103 suggested but not required.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASL101	American Sign Language I	Introduction of principles, methods, and techniques for communicating with deaf people who sign. Development of expressive and receptive sign skills, manual alphabet, numbers, and sign vocabulary. Overview of syntax, grammar, and culture related to American Sign Language (A.S.L.).	Prerequisites: None. ASL103 suggested as a corequisite but not required.	LEC 4.0 4.0 4.0
ASL102	American Sign Language II	Continued development of knowledge and language skills for communicating with deaf people who sign. Includes numbers, fingerspelling, and culture. Emphasis on enhancement of receptive sign skills and continued development of expressive sign skills. Application of rudimentary, syntactical, and grammatical structure stressed with continued development of sign vocabulary.	Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 4.0 4.0 4.0
ASL103	Introduction to the Deaf Community	History and development of American Sign Language (ASL) and English codes. Overview of education for Deaf and Hard of Hearing children. Legal rights and common adaptive devices used by Deaf and Hard of Hearing individuals.	Prerequisites: None.	LEC 1.0 1.0 1.0
ASL110	Fingerspelling	Introduction to fingerspelling techniques. Focus on methods, theory, and applications on receptive and expressive skills including manual alphabet production and numbers. In addition, skill development in speed, dexterity, clarity, and lexicalized fingerspelling, numeric incorporation, prefixes, suffixes, and polysyllabic words.	Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 3.0 3.0 3.0
ASL200	Issues and Resources	Implications of laws pertaining to educational choices and rights of deaf, deaf-blind, and hard of hearing individuals. Local, state, and national organizations, activities, and agencies affecting the deaf community.	Prerequisites: A grade of C or better in ASL102 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
ASL201	American Sign Language III	Linguistics of American Sign Language (A.S.L.) including non-manual behaviors and signing English idioms with conceptual accuracy. Emphasis on practical application of A.S.L. skills, expanded vocabulary, and cross-cultural communication.	Prerequisites: A grade of C or better in ASL102 or permission of Department or Division. (ENG101 or ENG107) and (CRE101 or equivalent as indicated by assessment) suggested but not required. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASL202	American Sign Language IV	Advanced American Sign Language skills including continued vocabulary. Emphasis on conversational techniques in a cross-cultural framework. Continued work on conceptual accurate signing of English idioms and words with multiple meanings.	Prerequisites: A grade of C or better in ASL201 or permission of Department or Division. (ENG101 or ENG107), ASL200, and (CRE101 or equivalent as indicated by assessment) suggested but not required. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
ASL203	American Sign Language V	Advanced study of vocabulary, classifiers, use of space, and grammatical features of American Sign Language (ASL). Includes evaluation of changes that occur in ASL as a living language. Advanced use of ASL in demonstrations, reports, and presentations	Prerequisites: A grade of C or better in ASL202. Completion of prerequisites within the last three years is required.	LEC 4.0 4.0 4.0
ASL204	Comparative Linguistics: ASL/English	A variety of topics about linguistics of American Sign Language (ASL) and English including phonology, morphology, lexicon, syntax, discourse, and language acquisition. Aspects of using sign language and how visual languages differ and are similar to spoken language.	Prerequisites: A grade of C or better in ASL202. Corequisites: ASL203. Completion of prerequisites within the last three years is required.	LEC 3.0 3.0 3.0
ASL212	Deaf Culture	Linguistic, social, educational, and political issues in deaf culture. Values and group identity issues as related to heritage and literature. Special emphasis on the cultural and philosophical attitudes shared with other minority groups.	Prerequisites: A grade of C or better in ASL202 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
ASL296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify), or permission of Instructor. Corequisites: Concurrent in at least one class related to student's major or career interest, or permission of Instructor.	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASL298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ASL298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ASL298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ASM104	Bones, Stones, and Human Evolution	Study of human evolution and variation; including fossil hominids and their tools, primate anatomy and behavior, human genetics, and the environment and human biology.	Prerequisites: None.	L+L 4.0 5.0 5.0
ASM265	Laboratory Methods in Archaeology	Techniques of artifact. Basic archaeological research techniques; methods of report writing.	Prerequisites: None.	L+L 4.0 4.0 4.0
ASM275	Forensic Anthropology	Survey of the role of forensic anthropologists, from the crime scene to the courtroom. Course focuses on how skeletal analysis can aid in medicolegal investigations, especially by identifying aspects of the life history of unknown individuals and by reconstructing events that took place at crime scenes. Covers both the legal aspects of forensic practice and the underlying biological basis for evidence obtained from skeletal remains. Examines applications of forensic anthropology in mass disasters, human rights investigations, and the deciphering of historic cases. Lab activities designed to illustrate techniques and principles central to the discipline.	Prerequisites: None.	L+L 4.0 5.0 5.0
ASM282AA	Service-Learning Experience in Anthropology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ASM282AB	Service-Learning Experience in Anthropology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
ASM282AC	Service-Learning Experience in Anthropology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
ASM298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ASM298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ASM298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
AST101	Survey of Astronomy	Survey of astronomy for the nontechnical student. The history, content, and evolution of the solar system and the universe in general. Astronomical principles and instrumentation. The planets, moons, sun, comets, stars and star formation, galaxies, and cosmology.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
AST106	Life in the Universe	Introduction to the search for life in the universe for the non-science major. Earth's location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets.	Prerequisites: A grade of C or better in MAT090 or MAT091 or MAT092 or completion of higher level mathematics course, or satisfactory score on placement exam.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AST111	Introduction to Solar System Astronomy	Introduction to astronomy for the non-science major. The scientific method, properties of light, astronomical instruments, our Solar System and solar systems around other stars. Includes hands-on astronomical observations and laboratory exercises.	Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory district placement.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
AST112	Introduction to Stars, Galaxies, and Cosmology	Introduction to astronomy for the non-science major. Structure and evolution of stars; supernovae, black holes, and quasars; nebulae; star clusters; galaxies; cosmology, including the birth and death of the universe.	Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory score on district placement exam.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
AST282AA	Service-Learning Experience in Astronomy	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
AST294	Special Topics in Astronomy	Conceptual, experimental, and computational aspects of a special topic in astronomy.	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
AST294AB	Special Topics in Astronomy	Conceptual, experimental, and computational aspects of a special topic in astronomy.	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
AST294AC	Special Topics in Astronomy	Conceptual, experimental, and computational aspects of a special topic in astronomy.	Prerequisites: Permission of Department or Division.	LEC 0.5 0.5 0.5
AST298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
AVC100	Introduction to Digital Arts	Foundation course in digital arts and design, with emphasis in the production of art using the computer.	Prerequisites: None.	L+L 1.0 2.0 2.0
AVC103	Typography in the Digital Age	Survey of the history of typography and individual designers. Emphasis on the function of typography as an integral part of effective visual communication. Study of type anatomy, mechanics, characteristics, structure, and the principles of effective selection and the relation of copy and image in graphic design. Evaluate fonts both visually and technically and learn how to manage them.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC104	Cross-Media Marketing for Designers	Role of graphic designer in business with an emphasis on using graphic design to achieve marketing and sales objectives. Variety of communication channels explored, such as print and digital and including social media, web, and mobile media.	Prerequisites: None.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC110	Survey of Graphic Design and Visual Communication	A survey of graphic design and visual communication with an emphasis on application, history, and design processes. Tracing connections between contemporary and historical design. Apply knowledge to assemble and produce projects.	Prerequisites: None.	LEC 3.0 3.0 3.0
AVC114	Digital Color	Overview of how color is perceived and utilized in a digital environment and how to ensure consistent color from capture to final output in print or online. Investigate visual solutions utilizing electronic devices for color correction, manipulation and integrity.	Prerequisites: None.	L+L 3.0 6.0 6.0
AVC119	Penciling for Sequential Art	Development of observational skills as they apply to sequential art. Emphasis on techniques that showcase how characters interact with their environment and manipulate props and cartooning anatomy. Includes techniques on composing page layouts, adapting scripts and reference gathering.	Prerequisites: None. ART111, or ART116, or previous drawing experience strongly recommended.	L+L 3.0 6.0 6.0
AVC120	Inking for Sequential Art	Development of inking materials and techniques used in sequential art. Emphasis on the types of tools used in the industry and the various means of employing them. Understanding the duties of the inker and the process of computer finishing.	Prerequisites: None.	L+L 3.0 6.0 6.0
AVC135	Foundations of Photojournalism	Basic technical knowledge of photographic process as applied by mass media.	Prerequisites: A grade of C or better in ART131 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC138	Commercial Photography I	Basic techniques of lighting, camera work, and reproduction of commercial photography. Cooperation with commercial art community.	Prerequisites: A grade of C or better in (ART131 or AVC142) or permission of Instructor.	L+L 3.0 6.0 6.0
AVC139	Commercial Photography II	Advanced techniques with portfolio organization and presentation.	Prerequisites: A grade of C or better in AVC138.	L+L 3.0 6.0 6.0
AVC140	Portrait Photography	Fundamentals of portrait photography. Basic techniques of lighting, posing, design, and digital workflows applicable to the industry. Theory and practices of a portrait photography business.	Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor.	L+L 3.0 6.0 6.0
AVC142	Introduction to Digital Photography	Fundamentals of digital photography. Includes camera operations, exposure techniques, introduction to digital output, and theory of digital photography.	Prerequisites: None.	L+L 3.0 6.0 6.0
AVC143	Intermediate Digital Photography	Intermediate theory and techniques of digital photography. Aesthetic awareness and personal expression from image capture through intermediate techniques in the digital darkroom. Introduction to high-resolution digital output.	Prerequisites: A grade of C or better in AVC142 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC150	Multimedia Storytelling	Enables students to find and develop their personal stories. Emphasis on the use of digital technology to create, edit, produce and archive a multimedia story.	Prerequisites: None.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC169	2D Media Design	Generation of two-dimensional (2D) images, designs, and media using digital and traditional methods of visual problem solving. Understanding digital and design-based techniques and workflows.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC170	3D Computer Design	Artistic manipulation of computer images. Emphasis on color and three-dimensional (3D) design in production of these images. Existing software used to generate three-dimensional art.	Prerequisites: A grade of C or better in AVC100 or AVC169 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC173	Computer Art	Introduction to the multiple elements of paint software programs using the microcomputer. Basic foundation in the use of computer techniques including color paint programs for the production of computer images. Use of electronic input and output devices.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC174	Electronic Color Principles	Interactive use of color for graphic communication. Color theory, color relationships and electronic color manipulation for computer graphic art, animation and multimedia.	A grade of C or better required in all prerequisites. Prerequisites or Corequisites: AVC100.	L+L 1.0 2.0 2.0
AVC175	Electronic Publishing Design I	Introduction to the multiple elements of commercial publishing using the microcomputer. Basic foundation in the use of electronic page layout techniques. Emphasis on publication design layout and concepts.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC177	Digital Photographic Imaging I	Introduction to multiple elements of digital imaging. Basic foundation in photographic manipulation of images, with special attention to aesthetic foundations underlying photographic composition.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC178	Digital Arts Studies	Designed for broad overview of the digital arts. Experience in digital based media, creative problem solving, design and aesthetics.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC180AD	Designer's Tools: Adobe Illustrator	Introduction to the multiple elements of Adobe Illustrator, a visual art adaptation software package using the Macintosh microcomputer. Basic foundation course in the use of electronic techniques, including appropriate input and output production devices.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 1.0 2.0 2.0
AVC180AE	Designer's Tools: Adobe Photoshop	Introduction to the multiple elements of Photoshop software package using the microcomputer. Basic foundation in the use of electronic techniques including appropriate input and output production devices.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 1.0 2.0 2.0
AVC180AK	Designer's Tools: Adobe Premiere	Basic functions and use of Adobe Premiere video editing software. Applications for computer animation, multimedia, and digital video production.	Prerequisites: A grade of C or better in AVC100. AVC/MMT184 is strongly recommended but not required. Xref: AVC184	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC180AS	Designer's Tools: Adobe InDesign	Basic functions and operations of Adobe InDesign software. Application for graphic design, publishing, digital pre- press production and web layout.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 1.0 2.0 2.0
AVC181	Graphic Design I	Basic understanding of design principles and the stages of graphic design, with an emphasis on final product and presentation.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC182	Graphic Design II	Utilizing graphic design essentials of typography, contrast and layout to develop design solutions to problems in consumer advertising, typography and structure.	Prerequisites: A grade of C or better in AVC181 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC183	Digital Graphic Arts I	Graphic design use in microcomputer; black and white graphics, standard and color brushes, lines, shapes, area fills and fonts. Application to illustration, advertising graphics, typography, and video interaction.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC184	Digital Animation I	The art of animation (animated sequences, special effects, titles, etc.) using the computer. Construction characters, background graphics, color, scaling, storyboard, cells, timing, editing, and surface rendering. Screening and discussion of selected animated short films and videos.	Prerequisites: A grade of C or better in (ART111 or ART116) or permission of Instructor. Corequisites: AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC185	3D Modeling and Animation I	Basic concepts of 3D modeling. Anatomy of computer geometry; basic elements that make computer models-curves, surfaces, non-uniform rational basis spline (NURBS), and polygons. 3D translation, shading, materials, and rendering.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC190	Art of Web Site Design	Introduction to design production for websites. Layout, typography and presentation style for HTML (Hyper Text Markup Language). Design of mock-ups using digital design software to produce artistic form and content for the Web using Hyper Text Markup Language (HTML), digital text, and graphics. Discussion of color, proportion, typography and Web-specific design principles. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability.	Prerequisites: A grade of C or better in AVC100, or permission of Instructor.	L+L 3.0 6.0 6.0
AVC190AA	Art of Website Design I	Introduction to design production for websites. Layout, typography and presentation style for HTML (Hyper Text Markup Language). Design of mock-ups using digital design software to produce artistic form and content for the Web using Hyper Text Markup Language, digital text, and graphics.	Prerequisites: A grade of C or better in AVC100, or permission of Instructor.	L+L 1.0 2.0 2.0
AVC190AB	Art of Website Design II	Producing Web site pages, using design and Hyper Text digital text and graphics. Discussion of color, proportion, typography and Web-specific design principles.	Prerequisites: A grade of C or better in AVC100 and AVC190AA, or permission of Instructor.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC190AC	Art of Website Design III	Producing Web sites using artistic form and content. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability.	Prerequisites: A grade of C or better in AVC100 and AVC190AB, or permission of Instructor.	L+L 1.0 2.0 2.0
AVC191	Storyboarding and Layout	Introduction to storyboarding, including film storytelling and scene presentation.	Prerequisites: A grade of C or better in ART111.	L+L 3.0 6.0 6.0
AVC192	Advanced Web Presentation Design	Advanced interactive application and training for Web designers and graphic artists using Quark, Illustrator, Photoshop, HTML Flash, Dreamweaver and Digital Video site optimization techniques. Development of design concepts for web pages that communicate and deliver Web content creatively.	Prerequisites: A grade of C or better in AVC/MMT190 or permission of instructor.	L+L 3.0 6.0 6.0
AVC200	Animation and Interactivity	Animation and object-oriented programming concepts and techniques using industry standard authoring tools applied by the creative industry to animation productions, and interactive media. Introduction to animation and object- oriented programming concepts and techniques using industry standard authorizing tools. Includes tools used by the creative industry for animation productions and interactive media	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC201	Variable Data Printing	Understanding variable data and all areas including: design, utilizing data, cleaning and creating a database, file setup, prepress and press setup. Software used: Excel, Adobe InDesign, Acrobat.	Prerequisites: A grade of C or better in AVC175, or permission of Instructor.	L+L 3.0 6.0 6.0
AVC202	Media Productions I	Introduction to digital media production tools, equipment, and broadcast applications. Pre-production including script writing, storyboards, budgeting and copyright; studio and mobile production including the use of cameras, lighting, audio recording, and new media tools; post-production including media editing, transitions, titles, overlays and basic motion graphics.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC204	Creative Design for Advertising	Focuses on the design and production of advertisement layouts and visual marketing campaigns for digital, mobile, and social channels which drive business objectives. Emphasis on terminology, analysis, and critique of advertising design, campaign methods, techniques, and the use of video across digital, mobile, and social channels.	Prerequisites: None.	L+L 3.0 6.0 6.0
AVC210	Design Tools for Imagery, Production, and Publishing	Industry standard development of image manipulation, digital production, digital negatives, typography, and desktop publishing. New techniques using integrated software with multiple platform applications. Emphasis on alternative processes including: technique, aesthetics and creative imagery.	Prerequisites: A grade of C or better in AVC100 and [AVC169 or (AVC180AD, AVC180AE, and ART180AS)] and AVC181, or permission of Instructor.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC215	Advanced Electronic Publishing	Advanced use of electronic page layout techniques including in-depth styles; typography; technical documents and digital publishing interactivity.	Prerequisites: A grade of C or better in AVC175.	L+L 3.0 6.0 6.0
AVC219	Coloring, Toning and Lettering for Sequential Art	Understanding of the digital rules and programs used in coloring, toning and lettering comics, and the problems presented therein within the sequential narrative. Emphasis on rules and guidelines within the industry, and digital coloring and lettering.	Prerequisites: A grade of C or better in (AVC100 and AVC119) or permission of Instructor. AVC120 recommended.	L+L 3.0 6.0 6.0
AVC220	Publishing for the Comic Industry	Understanding of the comics industry. Includes researching, marketing, packaging, and distributing comics. Emphasis on selling and submitting to comic publishers, how to develop comics for self-publishing, promotional materials, and understanding contracts and copyrights involved in the process of publishing comics.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC221	Comics Creation	Development of a complete sequential comic, using all comics skills from beginning to end. Process includes scripting, penciling, inking, coloring or toning, lettering, and printing for publication.	Prerequisites: A grade of C or better in (AVC100 and AVC219) or permission of Instructor.	L+L 3.0 3.0 3.0
AVC227	Estimating for Digital Output	Introduction to estimating for digital output including job costing, labor/time, material and equipment costs. Focus on layout and imposition for press. Learn outside purchasing and vendor relationship management.	Prerequisites: None.	L+L 3.0 6.0 6.0
AVC230	Visual Brand Design	Simulates an actual working environment which exposes students to the challenges and advantages of working in cross-functional teams. Topics include preparation for collaborative work environments, critical thinking and communication, messaging, and effectively employing marketing and design principles. Reviews logo creation and implementation, preparing online and offline collateral, creating marketing messaging and campaigns, written and oral communication, and personal presentation skills.	Prerequisites: A grade of C or better in (AVC100 and MKT110) or permission of Instructor.	L+L 3.0 6.0 6.0
AVC232	Studio Lighting	This course covers the fundamentals of lighting techniques with studio strobes, speed lights, and continuous lighting systems. Teaches students to use different light modifiers according to situation, subject and personal vision.	Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor.	L+L 3.0 6.0 6.0
AVC236	Photography Location Shooting	Practical application of camera techniques, use of lighting, and on-location shooting for post-production printing.	Prerequisites: A grade of C or better in (ART131 or AVC142) or permission of Instructor.	L+L 3.0 6.0 6.0
AVC237	Fashion Photography	Practical application of photographic techniques within the fashion industry. Includes the photographing of models, garments, and accessories.	Prerequisites: A grade of C or better in (ART131 or AVC142) or permission of instructor.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC240	Cinematography and Directing for 2D/3D Animation	Essential skills, concepts and the use of virtual cameras in 2D and 3D animation environments: planning, pre-production, storyboards and pre-visualization using real-world camera principles is combined with rendering, sound and post-production in a nonlinear environment.	Prerequisites: A grade of C or better in (AVC/MMT184 or AVC/MMT185 or FMP108) or permission of Instructor. Xref: AVC184 AVC185	L+L 3.0 6.0 6.0
AVC246	Digital Fabrication	Introduction to concepts and application of computer visualization, modeling, and rapid prototyping for interdisciplinary arts. Students will design sculptures applying 3D computer modeling techniques, rapid prototyping, and other available digital output devices to produce solid models.	Prerequisites: None.	L+L 3.0 6.0 6.0
AVC247	High Resolution Digital Model Making through 3D Laser Scanning and Photogrammetry	This course introduces students to the cutting-edge world of 3D laser scanning and photogrammetry, focusing on creating high-resolution digital models of various objects.	Prerequisites: None.	L+L 3.0 6.0 6.0
AVC248	Design Self Promotion	Defining career goals, and developing a self-promotional marketing plan to enter the workplace, including a resume, business card, leave behind, social media presence, interactive portfolio and printed portfolio. Understand business ethics and etiquette, artist's rights, copyright laws and contractual agreements, and develop networking, interview and communication skills.	Prerequisites: None.	L+L 3.0 6.0 6.0
AVC249	Visual Communication Project Management and Workflow	Communication and coordination of digital projects from inception through completion. Emphasis on job workflow including professional communication, time management, detailed follow through and conflict resolution with stakeholders.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC269AC	Digital Studio	Continued development of digital studio media with emphasis on advanced use of media techniques within a digital environment.	Prerequisites: A grade of C or better in (AVC169 or AVC170 or AVC173 or AVC192 or AVC274 or AVC284 or AVC289 or AVC291) or permission of Instructor.	L+L 3.0 6.0 6.0
AVC270	Digital Photographic Imaging II	Intermediate digital photographic imaging techniques. Refinement of aesthetic awareness and personal expression.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC177.	L+L 3.0 6.0 6.0
AVC274	Digital Photographic Imaging III	Advanced digital photographic imaging techniques. Advanced manipulation techniques of photographic images and time-based media. Continued development of aesthetic awareness and personal expression.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC270.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC279	Media Productions II	Intermediate digital media production techniques. Continued pre-production, production, and post-production skills. Exploration of types of productions including interviews, informational/how-to, marketing/product, and documentary/artistic media productions. Refinement of aesthetic awareness and personal expression.	Prerequisites: A grade of C or better in AVC202 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC280AA	Digital Media Arts and Design Capstone	Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design.	Prerequisites: Permission of Program Director or Instructor.	L+L 1.0 2.0 2.0
AVC280AB	Digital Media Arts and Design Capstone	Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design.	Prerequisites: Permission of Program Director or Instructor.	L+L 2.0 4.0 4.0
AVC280AC	Digital Media Arts and Design Capstone	Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design.	Prerequisites: Permission of Program Director or Instructor.	L+L 3.0 6.0 6.0
AVC281	Graphic Design III	Advanced course in the process of graphic design and problem solving to meet customer specifications. Emphasis on steps needed to create and promote complex graphic design projects.	Prerequisites: A grade of C or better in AVC182 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC283	Digital Graphic Arts II	Advanced skill development of graphic design through use of microcomputer. Emphasis on computer design and techniques for producing all types of camera-ready advertising art for printed matter and package design. Includes illustration, typography, photo imaging, and color separation.	Prerequisites: A grade of C or better in AVC183 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC284	Digital Animation II	Elements of electronic animation with interactive text graphics, photography, sound, film, and video construction.	Prerequisites: A grade of C or better in AVC/MMT184 or permission of Instructor. Xref: AVC184	L+L 3.0 6.0 6.0
AVC285	3D Modeling and Animation II	Advanced techniques for 3D modeling and computer animation. Creating and applying 2D background and 3D model textures, creating and applying special effects to models and animation, designing, modeling, and animating a digital 3D character from a character study.	Prerequisites: A grade of C or better in AVC/MMT185. Xref: AVC185	L+L 3.0 6.0 6.0
AVC286	Graphic Design IV	Continuing advanced course in the process of graphic design and problem solving to meet customer specifications. Emphasis on creating complex graphic design projects.	Prerequisites: A grade of C or better in AVC281 or permission of Instructor.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC287	3D Character Animation	3D-Character modeling and animation for multimedia, film, broadcast, video games and interactive entertainment. Character motion, editing, and blending electronic with traditional techniques.	Prerequisites: A grade of C or better in AVC/MMT184. Corequisites: ART116 or permission of Instructor. AVC184	L+L 3.0 6.0 6.0
AVC288	PDF Portable Document Format	Focuses on complexity, versatility and creation of a PDF file. Emphasis on the importance of the settings regarding color management, compression, and output. Includes fillable forms and interactive files with audio and video capabilities, editing functions, preflight abilities and security.	Prerequisites: A grade of C or better in AVC175 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC289	Computer Illustration	Introduction to the multiple elements of commercial illustration using the microcomputer. Basic foundation in the use of computer techniques including color paint and draw programs for the production of commercial illustrations for publications and printed matter. Use of and output devices.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC290AN	Art Studio: Animation	Practical course that draws on previous knowledge of Animation.	Prerequisites: A grade of C or better in AVC284, or AVC/MMT285, or permission of Instructor. Xref: AVC285	L+L 3.0 6.0 6.0
AVC290DP	Art Studio: Digital Photography	Practical course that draws on previous knowledge of Digital Photography.	Prerequisites: A grade of C or better in AVC274 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC290GD	Art Studio: Graphic Design	Practical course that draws on previous knowledge of Graphic Design.	Prerequisites: A grade of C or better in AVC280AC, or AVC283, or permission of	L+L 3.0 6.0 6.0
AVC290IL	Art Studio: Illustration	Practical course that draws on previous knowledge of Illustration.	Prerequisites: A grade of C or better in AVC280AC, or AVC289, or permission of	L+L 3.0 6.0 6.0
AVC291	Digital Prepress	Introduction to fundamental concepts of digital prepress necessary for the designer to create digital documents for accurate output and reproduction.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC292	Digital Output Prepress	Introduction to prepress for digital output. Foundation of job costing and the functions of a job ticket for proper file preparation including trapping, color management, file transfers, workflow, RIPping, imposition and file proofing.	Prerequisites: A grade of C or better in AVC291 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC293	Digital Output	Emphasis on setup, operation, and maintenance of a digital press. Introduction to specialty and common substrates and inks. Instruction on quality control, troubleshooting techniques, and proper safety precautions for press, equipment, and consumables.	Prerequisites: Permission of Instructor.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC295XC	Art Workshop/Seminar: Digital Photography	Advanced level workshop seminar in digital photography disciplines.	Prerequisites: A grade of C or better in AVC143 or permission of Instructor.	L+L 3.0 6.0 6.0
AVC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the	LAB 1.0 5.0 0.0
AVC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the	LAB 2.0 10.0 0.0
AVC297AA	Commercial Art Internship	Digital design, development, and photographic imaging work experience in a business or industry. 80 hours of designated work.	Prerequisites: Permission of Department or Division.	L+L 1.0 1.0 0.0
AVC297AB	Commercial Art Internship	Digital design, development, and photographic imaging work experience in a business or industry. 160 hours of designated work.	Prerequisites: Permission of Department or Division.	L+L 2.0 2.0 0.0
AVC297AC	Commercial Art Internship	Digital design, development, and photographic imaging work experience in a business or industry. 240 hours of designated work.	Prerequisites: Permission of Department or Division.	L+L 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
AVC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
AVC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
AVC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
BAM305	Mathematics for Machine Learning	Advanced mathematical concepts essential for understanding and applying techniques in machine learning using Python programming language. Focus on vector-based calculus, probability distributions, continuous optimization, and information theory.	Prerequisites: A grade of C or better in (AIM250 and MAT227) or permission of Program Director.	L+L 3.0 4.0 4.0
BAM310	Machine Learning II: Deep Learning	Examination of deep learning algorithms and Python applications. Emphasis on data input, algorithm selection, hyperparameter tuning, and deep learning model evaluation and selection.	Prerequisites: A grade of C or better in AIM250 or permission of Program Director.	L+L 3.0 4.0 4.0
BAM320	Computer Vision	Examination of vision with computers utilizing Python tools and libraries. Emphasis on image processing and feature detection as it applies to various computer vision tasks, utilizing visualizations for transparency. Includes statistical and deep computer vision techniques.	Prerequisites: A grade of C or better in (BAM310 and BAM/MAT305) or permission of Program Director. Xref: BAM305	L+L 3.0 4.0 4.0
BAM330	Natural Language Processing for Machine Learning	Examination of natural language processing utilizing Python tools and libraries. Emphasis on computer linguistic understanding as it applies to various natural language tasks. Statistical and deep natural language techniques will be covered including large language models.	Prerequisites: A grade of C or better in (BAM310 and BAM/MAT305) or permission of Program Director. Xref: BAM305	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BAM440	Hardware Optimization for Machine Learning	Explores advanced techniques in parallel computing for optimizing performance in machine learning applications. Focus on design, implementation, and evaluation of parallel algorithms across various hardware architectures, including CPUs, GPUs, and custom artificial intelligence accelerators. Includes hands-on projects and real-world case studies to develop the skills necessary to leverage parallel computing effectively to accelerate machine learning tasks.	Prerequisites: A grade of C or better in CSC/EEE230, CSC240++, BAM/MAT305, and BAM310. Xref: CSC230 BAM305	L+L 3.0 4.0 4.0
BAM450	Planning and Optimization for Automation	Explores optimization path for automation. Covers a diverse array of techniques including evolutionary algorithms, reinforcement learning, and swarm intelligence to navigate complex environments. Emphasis on hands-on projects and theoretical exploration, including design and implementation of optimized paths.	Prerequisites: A grade of C or better in CSC310, BAM/MAT305, and BAM310. Xref: BAM305	L+L 3.0 4.0 4.0
BAM490	Artificial Intelligence Capstone I	Capstone project with opportunities for research and application of artificial intelligence and machine learning knowledge and skills obtained throughout the student's program of study. Focus on project research, selection, design, and implementation with emphasis on communication, critical thinking, and technical skills.	Prerequisites: A grade of C or better in BAM320, BAM330, and CSC310.	L+L 3.0 4.0 4.0
BAM499	Artificial Intelligence Capstone II	Completion of capstone project using research and application of artificial intelligence and machine learning knowledge and skills obtained throughout the student's program of study. Focus on project testing, enhancement, and evaluation. Emphasis on self-assessment, development of a written report, project defense, and career development.	Prerequisites: A grade of C or better in BAM490.	L+L 3.0 4.0 4.0
BAW100	Nail Technology I	Introduction to basic nail services, general sciences, safety, and infection control practices in the nail care industry.	Prerequisites: None.	L+L 4.0 8.0 8.0
BAW102	Aesthetics Essentials	Effective client communication, interpersonal skills, and how to deliver an effective skin care facial treatment and client pre and post consultations. Topics also include sanitation, Arizona laws, client care, and facial care.	Prerequisites: None.	L+L 4.0 8.0 8.0
BAW104	Hair Essentials I	Introduction to the basic theory and procedures in cosmetology hair essentials.	Prerequisites: None.	L+L 4.0 8.0 8.0
BAW105	Nail Technology II	Apply advanced techniques and continue to build on previous concepts learned in nail services, general sciences, safety, and infection control in the nail industry.	Prerequisites: A grade of C or better in BAW100 or permission of Program Director.	L+L 4.0 8.0 8.0
BAW106	Hair Essentials II	Hair-shaping techniques and chemical application procedures in cosmetology hair essentials.	Prerequisites: A grade of C or better in BAW104.	L+L 4.0 8.0 8.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BAW110	Advanced Aesthetics	Theory and application of advanced skin care modalities, resurfacing, and cosmetic chemistry. Hair removal techniques, makeup application, and an introduction to body treatments are also included. Application of theory and skills through treatment services provided to the public. Focus on communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB).	Prerequisites: A grade of C or better in BAW102.	L+L 4.0 8.0 8.0
BAW111	Nail Technology III	Preparation for the written and practical examinations for Arizona Barbering and Cosmetology Board licensure. Includes concepts related to nail services, general sciences, and business skills in the nail care industry.	Prerequisites: A grade of C or better in BAW105 or permission of Program Director.	L+L 4.0 8.0 8.0
BAW112	Hair Essentials	Focus on the competencies of the Cosmetologist and the Hair Stylist certificate programs and the Arizona Barbering & Cosmetology Board as an introduction to the basic theory and procedures in cosmetology hair essentials.	Prerequisites: None.	L+L 7.0 17.0 17.0
BAW114	Student Salon I	Continuation of cosmetology theory and practical concepts at an intermediate level. Theory will be focusing on professional development, salon ecology, anatomy and hair decisions. Practical skills will be demonstrated daily on clients and manikins. Rubrics on procedures are done monthly. One day a month on Arizona Barbering and Cosmetology Board (BCB) state licensure focus.	Prerequisites: A grade of C or better in BAW106.	L+L 4.0 8.0 8.0
BAW115	Aesthetics Mastery	Focus on theories and performance of comprehensive professional aesthetics treatments for the public including communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB). Overview of business planning and employment in the field including marketing, job search strategies, professional development, and self promotion. BCB licensure examination preparation.	Prerequisites: A grade of C or better in BAW110.	L+L 4.0 8.0 8.0
BAW116	Student Salon II	Apply concepts learned in the classroom and the student salon to develop real life scenarios while servicing a client and/or becoming a future business owner in the beauty industry.	Prerequisites: A grade of C or better in BAW114.	L+L 4.0 8.0 8.0
BAW118	Hair Stylist State Licensure	Preparation for the written and practical examinations for Arizona Barbering & Cosmetology Board (BCB) licensure as related to hairstyling. Focus on BCB testing procedures for the written and practical examinations, as well as applicable Arizona State laws for a Hairstylist. Final salon business practices and services.	Prerequisites: A grade of C or better in BAW114.	L+L 4.0 8.0 8.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BAW119	Nail Essentials	Introduction to nail services in the beauty industry. Focus on knowledge and skills of providing nail services on actual clients in a salon setting.	Prerequisites: A grade of C or better in BAW116.	L+L 4.0 8.0 8.0
BAW120	Massage Therapy Basics	Introduction to massage therapy. Includes sanitation, hygiene, safety, contraindications, ethics, healthy therapeutic relationships, professional communication, overview of the human body (integumentary, muscular, and skeletal systems), healthcare terminology, muscle theory, client care, self-care, and Swedish massage.	Prerequisites: None.	L+L 3.5 7.0 7.0
BAW121	Massage Therapy Advanced	A massage basics course covering: sanitation, hygiene, safety, contraindications, ethics, healthy therapeutic relationships, professional communication, overview of the human body (integumentary, muscular, and skeletal systems), healthcare terminology, muscle theory, client care, self-care, and Swedish massage.	Prerequisites: None.	L+L 3.5 7.0 7.0
BAW212	Skin Essentials	Introduction to skin services in the beauty industry. Focus on knowledge and skills of providing skin services on actual clients in a salon setting.	Prerequisites: A grade of C or better in BAW119.	L+L 4.0 8.0 8.0
BAW214	Student Salon III	Prepares cosmetology students to be industry ready and prepared to perform services in their chosen field of expertise after licensure with the Arizona Barbering and Cosmetology Board (BCB).	Prerequisites: A grade of C or better in BAW212.	L+L 4.0 8.0 8.0
BAW218	Cosmetology State Licensure	Prepares cosmetology students for the written and practical examinations for Arizona Barbering and Cosmetology Board licensure.	Prerequisites: A grade of C or better in BAW214.	L+L 2.0 4.0 4.0
BAW220	Massage Therapy Mastery I	Advanced anatomy and massage. Focuses in detail on the skeletal and muscular components and manipulations of the upper body. Includes review of bones and muscles of the upper body and the kinesiology that develops from their interactions. Practical application of advanced anatomy in deep-tissue massage for the upper body. Emphasis on the integration of deep tissue, Thai massage, myofascial, and structural massage. Introduction to Subjective, Objective, Assessment, and Plan (S.O.A.P.) notes.	Prerequisites: A grade of C or better in BAW121 or permission of Program Director.	L+L 3.5 7.0 7.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BAW221	Massage Therapy Mastery II	Advanced anatomy and massage. Focus on the skeletal and muscular components and manipulations of the lower body. Review all of the bones and muscles of the lower body and the kinesiology that develops from their interactions. Practical application of advanced anatomy in deep-tissue massage for the lower body. Includes client assessment, treatment planning, and documentation for clients with common needs and clients with unique needs (such as athletes, expecting mothers, infants, older adults, obese individuals, people with disabilities, and end of life care). Also includes entrepreneurial skills conducive to the industry of massage therapy.	Prerequisites: A grade of C or better in BAW220 or permission of Program Director.	L+L 3.5 7.0 7.0
BAW298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
BAW298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
BAW298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
BHS150	Introduction to Behavioral Health and Social Services	Survey of the behavioral health and social services professions, including scope of practice and training requirements. Exploration of employment opportunities in the field and self-assessment/academic planning for a career in mental health. Overview of mental health disorders and first responder skills in a mental health crisis situation.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BHS155	Professional Resiliency and Well-Being	Exploration of building human resilience and well-being to prevent burnout, traumatic stress, and compassion fatigue for social services and mental health professionals, healthcare providers, emergency first responders, and other relationship-intense occupations. Causes, symptoms, and effects of traumatic stress, burnout compassion fatigue and other work-related stress. Focus on enhancing quality of life and improving a healthy lifestyle by incorporating evidenced-based practices in psychological and emotional resilience training, cognitive behavioral therapy, mindfulness, positive psychology, prevention, peer support, and self-care, including nutrition, exercise, and sleep.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS160	Ethical, Legal, and Professional Issues in Counseling Services	Explores relevant ethical, legal, and professional issues inherent in the behavioral health and social services field, including expectations of and limitations on providers. Key areas of inquiry include boundaries and dual relationships, mandated reporting, confidentiality, scope of practice, beneficence and non-maleficence, rights and responsibilities, professional relationships, and credentialing/regulating agencies.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS165	Applied Therapeutic Communication Skills	Theory and practice of communication skills to establish and maintain effective helping relationships and enhance the therapeutic alliance. Emphasis on verbal communication, nonverbal communication, paraverbal communication, rapport building, empathetic and active listening skills, resolving interpersonal conflicts, appropriate feedback, and developing and maintaining personal and professional relationships.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS170	Case Management and Clinical Documentation	Overview and application of the principles, practices, and function of case management in human services. Case management service delivery and coordination for clients with psychological, developmental, and psychiatric and comorbid medical conditions. Documentation techniques necessary to maintain clinical records in a variety of behavioral healthcare settings.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS175	Trauma-Informed Care and Recovery Treatment	Comprehensive overview of various types of trauma, neurobiological effects of traumatic stress, and ethics associated in working with a trauma survivor. Concepts and skills needed to become a fully functioning trauma-informed caregiver professional in the mental health and primary care setting.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BHS180	Child, Family, and Adult Advocacy	The role of advocacy in relation to multiple systems affecting children, families, and adults. Emphasis on identifying appropriate supports, community resources, and "wrap-around" services to help foster healthy family and child development, adult recovery, and social welfare.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS185	Cultural Competence in Behavioral Health	Exploration of cultural diversity and its potential impact on behaviors, emotions, cognitions and perceptions, relationships, and values. Intercultural communication skills through the examination of cultural and racial diversity, sexual and gender identity, social justice, and religious and spiritual diversity. Consideration of its implications for the therapeutic process and the importance of self-awareness and effective communication skills for professionals in the behavioral health and social sciences.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS190	Supervised Practice in Behavioral Health and Human Services	Supervised, entry-level work-based experience in mental health, social service, or a related behavioral health care provider setting. 80 hours of designated volunteer or paid work-based learning.	Prerequisites: A grade of C or better in BHS150, or BHS155, or BHS160, or permission of Department or Division.	LAB 1.0 1.0 0.0
BHS205	Introduction to Individual Counseling Theories	Introduction to the major evidence-based therapeutic models and interventions in social and behavioral sciences. Defines the key concepts, techniques and procedures of each theoretical model.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS210	Addictions, Substance Use Disorders, and Recovery	Introduction to the historical and current developments in the field of addiction, as well as sociological, psychological, and physiological aspects of addictive behaviors and substance use. Introduces contemporary treatment methods within addiction practice, including self-help groups, levels of care, symptom identification, and models of prevention, and intervention. Examines factors that predict relapse and support recovery.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS215	Introduction to Group Therapy	Overview of the methods and techniques for influencing change in group settings. Examination of theories and concepts essential to provision of group counseling in behavioral health and addiction settings.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS216	Group Process	Evaluate and demonstrate the methods and techniques for influencing change in group settings.	Prerequisites: A grade of C or better in BHS151 or permission of Department or Division.	LEC 3.0 3.0 3.0
BHS220	Introduction to Integrated Behavioral Healthcare	Introduction to key concepts related to the provision of integrated health care services, as well as role of wellness and prevention in community health services. The course will introduce students to the theory and clinical practice of integrated behavioral health in primary care, as well as evidence-based approaches to promote wellness in individuals and communities.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BHS230	Crisis and Trauma Stabilization	Theoretical and applied foundation designed for behavioral health service providers working with people in crisis. Examines the phenomena and dynamics of crises and emergencies, as well as the related strategies/modalities.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS235	Emergency Mental Health Crisis Response and Recovery	Comprehensive study of natural and human-caused disasters and their effects on the trauma survivor. Introduction to basic emergency mental health interventions to help stabilize those experiencing crisis following critical incident disasters.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS251	Harm Reduction in Addiction, Substance Use, and Social Services	Introduction to harm reduction principles, policies, programs, and practices that aim to reduce the adverse health, social and economic consequences of the use of legal and illegal drugs. This course will introduce behavioral health and social service providers as well as paraprofessional counselors to the theory and practice of harm reduction strategies in addiction, social service, and community settings.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS255	Health and Wellness Coaching in Professional Resiliency	Comprehensive overview of the art, science, and role of coaching and teaching resiliency for the following issues: personal and work-related stress, burnout, traumatic stress, and compassion fatigue. Develop pedagogical techniques and practical application of evidence-based interventions in biobehavioral self-regulation, mindfulness, cognitive restructuring, positive psychology, peer support, and holistic self-care. Designed to develop skills as a health and wellness coach in professional resiliency for enhancing health and quality of life.	Prerequisites: A grade of C or better in BHS155.	LEC 3.0 3.0 3.0
BHS262	Behavioral Health Service Techniques for the Elderly	Specific counseling skills and appropriate intervention strategies for working with the elderly. Focus on the particular psychological, sociological and physical problems of this age group.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS266	Violence and Abuse Services	Techniques, strategies, and treatment modalities necessary for the helping professional working with the victims and perpetrators of violence and abuse.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS267	Introduction to Play Therapy	Exploration and application of therapeutic play techniques and strategies for the helping professional working with children.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS269	Grief Support Techniques	Techniques, strategies, and treatment modalities necessary for the helping professional working with the bereaved and others affected by traumatic loss.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS271	Developmental Disabilities Assistance Training	Introduction to the field of developmental disability assistance. Also includes common causes of developmental disabilities, treatments and other behavioral conditions that may affect such individuals.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BHS272	Child and Adolescent Mental Health and Interventions	Strategies for training and reinforcing positive interaction with children. Covers behavior management strategies and techniques to prevent behavioral problems, replace behaviors and manage consequences.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS275	Infant and Early Childhood Mental Health	Foundational knowledge of mental health during infancy and early childhood. Exploration of social-emotional development and relational influences on mental health. Emphasis on identifying early warning signs, making appropriate referrals, and employing a multidisciplinary child and family team approach to services.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS281	Introduction to Art Therapy	Exploration of the process, dynamics and objectives of the therapeutic art experience. Emphasis on Art Therapy from both the psychological and artistic perspectives. Highlights topics in the history, theory and practice of Art Therapy.	Prerequisites: None.	LEC 3.0 3.0 3.0
BHS300	Research Methods for Evidence-Based Practice	Overview of the uses, limitations, and ethics of research methodology in the behavioral sciences, and the qualitative and quantitative methods associated with common research designs. Prepares students to conduct evaluations of literature published research, use empirical evidence as the basis for interventions, and evaluate the effectiveness of their own interventions. Focuses on applications of descriptive and inferential statistics using statistical software.	Prerequisites: A grade of C or better in MAT206, or PSY230, or (PSY230 and PSY231), or PSY230WL, or SWU225, or GBS221.	L+L 4.0 4.0 4.0
BHS310	Fundamentals of Family Systems Counseling	Study of the family as a system and the concepts and principles applicable to helping individuals from a systemic perspective. Examines family processes, including functional and dysfunctional patterns, difficulties that families may experience as they move through their developmental stages, and the family's interactions with individuals and communities. Introduction to family systems theory as it applies to the predominant models of family therapy.	Prerequisites: A grade of C or better in BHS205, or permission of Instructor or Department.	LEC 3.0 3.0 3.0
BHS320	Behavioral Development Across the Lifespan	Critical analysis of human development throughout the lifespan, including physical, cognitive, emotional, and social development. Prepares students in the behavioral sciences to conceptualize clients through a developmental perspective. Overview of both normal human development and developmental psychopathology. Focus on child, adolescent, and adult development through the study of major theories and models, with implications for helping professionals.	Prerequisites: A grade of C or better in PSY101.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BHS340	Psychopathology Across Cultures	Overview of the scientific study of mental illness and substance use disorders (psychopathology). Evaluates theories of psychopathology from sociological, psychological, and behavioral perspectives. Examines the most prevalent categories of mental disorders from several different theoretical and treatment perspectives. Focus on diagnostic features, etiology, epidemiology, prognosis, and treatment issues related to various psychiatric disorders. Legal, ethical, and cultural issues pertaining to psychopathology also discussed, in addition to prevention and intervention strategies.	Prerequisites: A grade of C or better in (BHS150 and BHS185), or permission of Instructor.	LEC 3.0 3.0 3.0
BHS385	Multicultural Approaches to Behavioral Health Care	Advanced application of multicultural competencies, focusing on necessary awareness, knowledge, and skills needed in behavioral health settings. Examination of the dimensions of personal identities and intersectionality in the conceptualization, planning, and implementation of interventions in human services fields.	Prerequisites: A grade of C or better in BHS185, or permission of Instructor.	LEC 3.0 3.0 3.0
BHS400	Biological and Environmental Bases of Behavior	Examination of human behavior from biophysiological, psychosocial-cognitive, and social-cultural perspectives using relevant theories. Focuses on the nervous system, brain function, and cognition, as well as the role of psychopharmacology in behavioral healthcare.	Prerequisites: A grade of C or better in BIO160, or (BIO201 and BIO202).	LEC 3.0 3.0 3.0
BHS410	Co-Occurring Substance Use and Mental Disorders	Advanced instruction in co-occurring behavioral health and substance use disorders from the bio-psycho-social model for application in the behavioral health field. Includes philosophies and practices of empirically supported models. Emphasis on causes, consequences, assessment, treatment, recovery, and harm reduction.	Prerequisites: A grade of C or better in (BHS210 and BHS340), or permission of Instructor.	LEC 3.0 3.0 3.0
BHS420	Relational Approach to Trauma	Exploration of the science of trauma and recovery within the family context. Includes the dynamic elements of trauma treatment with the integration of systemic and family treatment models. Examines the lifelong impact of traumatic stress and complex trauma during the early years of life. Focus on evidence-based treatment and interventions from a family theory perspective for individual, relational, and systematic traumatization.	Prerequisites: A grade of C or better in BHS175, or permission of Instructor or Department.	LEC 3.0 3.0 3.0
BHS430	Concepts and Principles of Applied Behavior Analysis	An in-depth consideration of the scientific theories, concepts, and principles of understanding and modifying behavior. Focus on applying behavior analysis for data-based decisions to resolve challenging behaviors and foster prosocial behaviors. Students will learn basic principles and procedures, such as functional behavior assessment, assessment of reinforcers, and implementation of a behavior intervention plan to reach socially meaningful outcomes.	Prerequisites: A Grade of C or better in (BHS205 and BHS320), or permission of Instructor or Department.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BHS490	Advanced Supervised Practice in Behavioral Health and Human Services	Advanced, supervised work experience in mental health, social service, or a related behavioral health care provider setting. 160 hours of designated volunteer or paid work-based learning.	Prerequisites: A grade of C or better in BHS410 and BHS430.	LAB 2.0 2.0 0.0
BIO100	Biology Concepts	This course will introduce students to the basic principles and concepts of biology, from the smallest molecules to the largest ecosystems. Students will learn about the methods of scientific inquiry that biologists use to study life.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO100CM	Biology Concepts	This course will introduce students to the basic principles and concepts of biology, from the smallest molecules to the largest ecosystems. Students will learn about the methods of scientific inquiry that biologists use to study life.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO101	Introduction to Human Genetics for Non-Majors	Study of inheritance in humans, at the organismal, cellular and molecular levels. Includes exploration of gene expression, isolation and manipulation of DNA, Mendelian genetics, pedigree analysis, as well as chromosomal abnormalities and genetic diseases.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO101CM	Introduction to Human Genetics for Non-Majors	Study of inheritance in humans, at the organismal, cellular and molecular levels. Includes exploration of gene expression, isolation and manipulation of DNA, Mendelian genetics, pedigree analysis, as well as chromosomal abnormalities and genetic diseases.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO102	Cells to Systems: An Introduction to Biology for Non-Majors	Study of living things. Builds from basic molecular components to structure and physiology of cells and organ systems of animals and plants.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO102CM	Cells to Systems: An Introduction to Biology for Non-Majors	Study of living things. Builds from basic molecular components to structure and physiology of cells and organ systems of animals and plants.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO105	Environmental Biology	Fundamentals of ecology and their relevance to human impact on natural ecosystems.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO105CM	Environmental Biology	Fundamentals of ecology and their relevance to human impact on natural ecosystems.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO107	Introduction to Biotechnology	An introduction to laboratory techniques and their applications in biotechnology. Students will explore the broad impact of biotechnology on society including its global economic potential, medical, forensic, environmental and military applications, as well as the associated risks, ethical and legal issues that are shaping the field.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO107CM	Introduction to Biotechnology	An introduction to laboratory techniques and their applications in biotechnology. Students will explore the broad impact of biotechnology on society including its global economic potential, medical, forensic, environmental and military applications, as well as the associated risks, ethical and legal issues that are shaping the field.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO108	Plants and Society	A global study of plants in relation to humans; as a source of food, fiber, drugs, and other products; for aesthetic value, survival, and energy.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO109	Natural History of the Southwest	Study of the common plants and animals of the Southwest including their distribution, adaptation, behavior, and ecology. Introduction to basic field and laboratory techniques used in the study of natural history. Specific field problems presented dealing with plant and animal analysis and ecological interrelationships.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO109CM	Natural History of the Southwest	Study of the common plants and animals of the Southwest including their distribution, adaptation, behavior, and ecology. Introduction to basic field and laboratory techniques used in the study of natural history. Specific field problems presented dealing with plant and animal analysis and ecological interrelationships.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO111	Microbes and Society	A study of microorganisms and the roles they play in everyday life.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO111CM	Microbes and Society	A study of microorganisms and the roles they play in everyday life.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO116	Introduction to Animal Behavior	Scientific study of animal behavior for non-majors. Includes experimental exploration of current hypotheses for genetic and environmental influences, communication, reproductive strategies, habitat selection, and sociality.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO116CM	Introduction to Animal Behavior	Scientific study of animal behavior for non-majors. Includes experimental exploration of current hypotheses for genetic and environmental influences, communication, reproductive strategies, habitat selection, and sociality.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO145	Marine Biology	A survey of marine environments and their biotic communities with emphasis on the natural history of marine organisms.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO145CM	Marine Biology	A survey of marine environments and their biotic communities with emphasis on the natural history of marine organisms.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO149AK	Field Biology: Ecological and Environmental Field Experience	Field expeditions in which ecological and environmental principles and concepts are observed and studied.	Prerequisites: None.	LAB 1.0 7.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO149AL	Field Biology: Ecological and Environmental Field Experience	Field expeditions in which ecological and environmental principles and concepts are observed and studied.	Prerequisites: None.	LAB 2.0 14.0 2.0
BIO149AM	Field Biology: Ecological and Environmental Field Experience	Field expeditions in which ecological and environmental principles and concepts are observed and studied	Prerequisites: None.	LAB 3.0 21.0 0.0
BIO149AN	Field Biology: Ecological and Environmental Field Experience	Field expeditions in which ecological and environmental principles and concepts are observed and studied	Prerequisites: None.	LAB 4.0 28.0 0.0
BIO149SV	Field Biology: Ecological and Environmental Field Experience	Field expeditions in which ecological and environmental principles and concepts are observed and studied.	Prerequisites: None.	L+L 1.0 1.34 0.0
BIO156	Introductory Biology for Allied Health	An introductory biology course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics.	Prerequisites: A grade of C or better in RDG100 or RDG100LL or higher or eligibility for CRE101 as indicated by appropriate reading placement test score. One year of high school or one-semester of college level chemistry is strongly recommended.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO156CM	Introductory Biology for Allied Health	An introductory biology course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics.	Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college level chemistry is strongly recommended.	L+L 4.0 6.0 6.0
BIO156XT	Introductory Biology for Allied Health	An introductory biology course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics.	Prerequisites: A grade of C or better in RDG100 or RDG100LL or higher or eligibility for CRE101. One year of high school or one-semester of college level chemistry is strongly recommended.	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO160	Introduction to Human Anatomy and Physiology	Principles of scientific method. Structural organization, homeostasis and control mechanisms of the body. Specific chemistry concepts. Structure and function of the major systems of the body.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO160CM	Introduction to Human Anatomy and Physiology	Principles of scientific method. Structural organization, homeostasis and control mechanisms of the body. Specific chemistry concepts. Structure and function of the major systems of the body.	Prerequisites: None.	L+L 4.0 6.0 6.0
BIO181	General Biology (Majors) I	The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics.	Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO181CM	General Biology (Majors) I	The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics.	Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly	L+L 4.0 6.0 6.0
BIO181XT	General Biology (Majors) I	The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics.	Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0
BIO182	General Biology (Majors) II	The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology.	Prerequisites: A grade of C or better in BIO181, or BIO181CM, or BIO181XT, or permission of Department or Division.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO182CM	General Biology (Majors) II	The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology.	Prerequisites: A grade of C or better in BIO181, or BIO181CM, or BIO181XT, or permission of Department or Division.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO182XT	General Biology (Majors) II	The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology.	Prerequisites: A grade of C or better in BIO181, or BIO181CM, or BIO181XT, or permission of Department or Division.	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0
BIO192	Recitation in Biology	Discussion, guided practice and problem solving related to a topically focused area of biology.	Prerequisites: None. Corequisites: Any 100-level BIO Biology course or permission of Instructor.	L+L 1.0 1.0 1.0
BIO194AA	Special Topics in Biology	Conceptual and research basis of a current topic in biology.	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0
BIO194AB	Special Topics in Biology	Conceptual and research basis of a current topic in biology. Includes integrated laboratory and/or field applications of related methodologies.	Prerequisites: Permission of Instructor.	L+L 1.0 2.0 2.0
BIO194AC	Special Topics in Biology	Conceptual and research basis of a current topic in biology. Includes laboratory and/or field applications of related methodologies.	Prerequisites: Permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
BIO195AA	Principles and Practice of Scientific Research	Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in (BIO181 or CHM151 or PHY111) or permission of Instructor.	L+L 1.0 2.0 2.0
BIO195AB	Principles and Practice of Scientific Research	Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in (BIO181 or CHM151 or PHY111) or permission of Instructor.	L+L 2.0 4.0 4.0
BIO195AC	Principles and Practice of Scientific Research	Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in (BIO181 or CHM151 or PHY111) or permission of Instructor.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO201	Human Anatomy and Physiology I	Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system.	Prerequisites: A grade of C or better in (BIO156++, or BIO181++, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO201CM	Human Anatomy and Physiology I	Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system.	Prerequisites: A grade of C or better in (BIO156++, or BIO181++, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.	L+L 4.0 6.0 6.0
BIO201XT	Human Anatomy and Physiology I	Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system.	Prerequisites: A grade of C or better in (BIO156++, or BIO181++, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0
BIO202	Human Anatomy and Physiology II	Continuation of structure and function of the human body. Topics include endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems, pregnancy and development, and fluid and electrolyte balance.	Prerequisites: A grade of C or better in BIO201 or BIO201XT.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO202CM	Human Anatomy and Physiology II	Continuation of structure and function of the human body. Topics include endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems, pregnancy and development, and fluid and electrolyte balance.	Prerequisites: A grade of C or better in BIO201 or BIO201CM or BIO201XT.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO205	Microbiology	Study of microorganisms and their relationship to health, ecology, and related fields.	Prerequisites: A grade of C or better in (BIO156++, or BIO181++, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO205CM	Microbiology	Study of microorganisms and their relationship to health, ecology, and related fields.	Prerequisites: A grade of C or better in (BIO156++, or BIO181++, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.	L+L 4.0 6.0 6.0
BIO208	Nucleic Acid Methods	Intensive introduction to laboratory methods for the isolation, purification, manipulation analysis and quantification of nucleic acids.	Prerequisites: A grade of C or better in [ABS173 and ABS175 and (BIO156 or BIO181)] or permission of Instructor.	L+L 3.0 6.0 6.0
BIO209	Biomolecular Separation	Introduction to industrial laboratory biotechnology with intensive focus on the recovery of heterologous proteins and other biomolecules from cultivated cells and the subsequent recovery, purification and characterization of these molecules.	Prerequisites: A grade of C or better in [ABS173 and ABS175 and (BIO156 or BIO181)] or permission of Instructor.	L+L 3.0 6.0 6.0
BIO210	Advanced Lab Instrumentation	Provides training in the principles, operation and interpretation of data from laboratory instrumentation.	Prerequisites: A grade of C or better in BIO208, or BIO209, or permission of Instructor.	L+L 3.0 6.0 6.0
BIO211AA	Biotechnology Seminar: Biomedical Applications	Special topics in biotechnology with an emphasis on current issues not covered in other life science courses	Prerequisites: None.	LEC 1.0 1.0 1.0
BIO211AB	Biotechnology Seminar: Laboratory Protocol	Special topics in biotechnology with an emphasis on current issues not covered in other life science courses	Prerequisites: A grade of C or better in BIO211AA or permission of Instructor.	LEC 1.0 1.0 1.0
BIO211AE	Biotechnology Seminar: Business and Regulatory Issues	Selected topics in biotechnology with an emphasis on current issues not covered in other life science courses.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO215AB	Biotechnology Internship	Internship experience in a biotechnology laboratory. Setting, achieving, and evaluating goals for hands-on learning experience in a biotechnology laboratory. Development of skills and knowledge needed to work in a biotechnology laboratory.	Prerequisites: A grade of C or better in (BIO208 or BIO209) and permission of Program Director.	LAB 2.0 2.0 0.0
BIO215AC	Biotechnology Internship	Internship experience in a biotechnology laboratory. Setting, achieving, and evaluating goals for hands-on learning experience in a biotechnology laboratory. Development of skills and knowledge needed to work in a biotechnology laboratory.	Prerequisites: A grade of C or better in (BIO208 or BIO209) and permission of Program Director.	LAB 3.0 3.0 0.0
BIO220	Biology of Microorganisms	Detailed study of microbial cells, their structure, genetics, physiology and taxonomy.	Prerequisites: A grade of C or better in BIO181. Corequisites: (CHM152 and CHM152LL) or (CHM154 and CHM154LL).	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
BIO220CM	Biology of Microorganisms	Detailed study of microbial cells, their structure, genetics, physiology and taxonomy.	Prerequisites: A grade of C or better in BIO181, or BIO181CM, or BIO181XT. Corequisites: (CHM152 and CHM152LL) or (CHM154 and CHM154LL).	L+L 4.0 6.0 6.0
BIO234	Fundamental Evolutionary Biology	Fundamentals of evolutionary theory including natural selection, adaptation, species concepts, speciation, extinction, basics of phylogenetics, molecular and population genetics, and the evolution of sex and sociality.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: BIO182 or permission of Instructor.	LEC 3.0 3.0 3.0
BIO240	General Genetics	In depth examination of the field of genetics.	Prerequisites: A grade of C or better in BIO181, or BIO181XT, or permission of Instructor.	LEC 4.0 4.0 4.0
BIO249	Applied Biosciences: Biotechnology Internship	Internship/work experience in a biotechnology laboratory. Setting, achieving, and evaluating goals for hands-on learning experiences in a biotechnology laboratory. Development of skills and knowledge needed to work in a biotechnology laboratory.	Prerequisites: Permission of Instructor.	LAB 4.0 4.0 0.0
BIO270	Sustainable Biological Systems	Course to introduce concepts in Ecology covering abiotic and biotic systems, population biology and ecology, community ecology, biotic communities, disturbance and succession, biogeography, fire ecology, evolution in changing environments, human population biology, and issues in ecology.	Prerequisites: A grade of C or better in BIO181.	LEC 3.0 3.0 3.0
BIO282AA	Service-Learning Experience in Biology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
BIO282AB	Service-Learning Experience in Biology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
BIO282AC	Service-Learning Experience in Biology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO290AA	Biology Internship	Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
BIO290AB	Biology Internship	Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
BIO290AC	Biology Internship	Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
BIO292	Advanced Recitation in Biology	Discussion, guided practice and problem solving related to advanced topics in biology.	Prerequisites: None. Corequisites: Any 200-level BIO Biology course or permission of Instructor.	L+L 1.0 1.0 1.0
BIO292UR	Biology Undergraduate Research	Provides students with group and/or individualized undergraduate research opportunities under faculty supervision in order to maximize student development. Appropriate research facilities and equipment are made available for student use.	Prerequisites: Permission of Instructor, or Department or Division Chair.	LAB 1.0 1.0 0.0
BIO294AA	Special Topics in Biology-Advanced	Advanced evidence-based study of a current topic in biology from a research and theoretical perspective.	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0
BIO294AB	Special Topics in Biology-Advanced	Advanced evidence-based study of a current topic in biology from a research and theoretical perspective. Includes integrated laboratory and/or field applications of related methodologies.	Prerequisites: Permission of Instructor.	L+L 1.0 2.0 2.0
BIO294AC	Special Topics in Biology-Advanced	Advanced evidence-based study of a current topic in biology from a research and theoretical perspective. Includes integrated laboratory and/or field applications of related methodologies.	Prerequisites: Permission of Instructor.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
BIO295AA	Independent Research in Biology	Original scientific investigation of biological phenomenon.	Prerequisites: A grade of C or better in (BIO156++ or BIO181++ or BIO195AA) and permission of Instructor.	LAB 1.0 1.0 0.0
BIO295AB	Independent Research in Biology	Original scientific investigation of biological phenomenon.	Prerequisites: A grade of C or better in (BIO156 or BIO181) and permission of Instructor.	LAB 2.0 2.0 0.0
BIO295AC	Independent Research in Biology	Original scientific investigation of biological phenomenon.	Prerequisites: A grade of C or better in (BIO156 or BIO181) and permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
BIO296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
BIO296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BIO296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
BIO298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
BIO298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
BIO298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
BLT101	Introduction to Construction Trades	Introduction to trade and craft apprenticeships in Arizona, including concrete, carpentry, millwright, pipefitting, steamfitting and plumbing, sheet metal, painter, decorator and drywall taper, electrician and ironworker	Prerequisites: None.	LEC 1.0 1.0 1.0
BLT120	Techniques of Building Inspection	Theory and practice of zoning, foundation, structural, mechanical and electrical inspection in modern residential and commercial construction	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BLT121	Electrical Codes	Principles of safe electrical installations and proper inspection procedures. Topics include conduit installation, transformer service, raceways, control circuits, grounding and bonding, hazardous occupancies and the National Electrical Code	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT122	Basic Engineering for Building Inspectors and Contractors I	Basic engineering mechanics, gravity loads, shears, bending moments, wood frame construction, deck joints, beams, columns, bracing and shear walls.	Prerequisites: A grade of C or better in BLT120 and (MAT187 or MAT188) or equivalent or permission of Department or Division.	LEC 3.0 3.0 3.0
BLT124	Designing for the Americans with Disabilities Act(ADA)	In-depth analysis of federal standards described in the Americans with Disabilities Act (ADA). Reviews the state of Arizona's enforcement document (AzDAAG). Focuses on helping designers, architects, and building officials create barrier-free buildings and facilities	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT125	Residential Electrical Codes	National Electrical Code requirements for safe electrical installations and proper inspection procedures in residential buildings. Topics include branch circuitry, feeder calculations, services grounding, overcurrent protection, wiring methods, types and proper usage of material, swimming pool installation	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT126	Soil Mechanics	Soil conditions as related to modern building requirements. Topics include bearing value, classification and identification, exploration and samplings, behavior of fills, compaction, subsurface drainage, and field sampling.	Prerequisites: A grade of C or better in MAT150 or MAT151 or MAT152 or satisfactory score on District placement exam.	LEC 3.0 3.0 3.0
BLT127	Plumbing Codes	Code requirements and construction practices. Topics include underground and above ground plumbing, venting and finish plumbing	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT128	Mechanical Codes	Code requirements and construction practices. Topics include duct work, conductors and fuel supply, insulation, and controls	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT129	Materials of Construction	Fundamental characteristics of modern construction materials and the effective use of these materials in construction	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT131	Applied Electric Codes	National Electric Code (NEC) administration and application. NEC requirements for safe installation of system control equipment and design of electric utilization systems. Identification of wiring systems and permitted uses. Application of NEC requirements for hazardous locations, specific occupancies, and special uses of electric equipment	Prerequisites: None.	LEC 4.0 4.0 4.0
BLT132	Applied Plumbing Codes	Plumbing code administration. Application, design and installation of drainage/waste and venting systems in private and public buildings. Application of plumbing codes for design and installation of water systems	Prerequisites: None.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BLT140	Environmentally Responsible Building	An overview of environmentally responsible building and a historical survey of building methodologies. Introduces design concepts and strategies related to the mitigation of environmental impacts. Examines building processes, environmental issues and the interdependent nature of our built environment. Topics include human impacts, climate and geography, sustainability, renewable energies, water use and energy, resource efficiency, building materials, indoor air quality and waste reduction	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT142	Green Building Codes, Standards and Rating Systems	Surveys green building rating systems, environmental building standards and green construction codes; addresses the broader scope of public health, safety and general welfare in the context of regulations and the natural environment; examines site development and land use, material resource conservation, energy efficiency, water resource conservation, indoor environmental quality, building commissioning, operation and maintenance; includes exercises demonstrating the use of tools and applying the principles discussed during the course.	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT191	Applied Plumbing Codes	Uniform plumbing code and plumbing systems installation requirements. Code administration as well as requirements relative to the installation and maintenance of plumbing systems.	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT200	Construction Management: Field Operations	Skills and techniques necessary for management of construction field operations. Includes job scheduling, inspection techniques, personnel relations, safety, and the scope and supervision of the overall construction process.	Prerequisites: A grade of C or better in DFT126 and GTC121 or departmental permission.	LEC 3.0 3.0 3.0
BLT201	Construction Management: Office Operations	Develops the skills and techniques necessary for successful management of construction office operations. Includes establishing and financing the business, marketing, office operations, and relationships with other construction industry entities	Prerequisites: A grade of C or better in DFT122 or DFT126 or GTC121 or permission of Instructor.	LEC 3.0 3.0 3.0
BLT263AK	Building Codes: IBC	Designed specifically to acquaint students with safety principles of building construction under the International Building Code (IBC), including structural requirements for wood, masonry and concrete, fire resistance of building construction, fire resistant materials, and ratings and occupancy requirements	Prerequisites: None.	LEC 3.0 3.0 3.0
BLT263AL	Building Codes: IRC	Designed specifically to acquaint students with safety principles of building construction under the International Residential Code, including structural requirements for wood, masonry and concrete, fire resistance of building construction, fire resistant materials, and ratings and occupancy requirements	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BLT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
BLT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
BLT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BLT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
BLT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
BLT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
BLT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
BME101	Introduction to Biomedical Equipment Technology	Introduces fundamental concepts of the field of biomedical equipment technology. Emphasis on the responsibilities of the technician, electrical safety, and knowledge of devices and their functions, maintenance, and repair.	Prerequisites: A grade of C or better in ELE111, BIO160 and (HCC145 or HCC145AA).	LEC 3.0 3.0 3.0
BPC100AA	Business-Personal Computers I	Introduction to the use of personal computers in the business environment. Computer hardware components, operating system functions and concepts. Running application software	Prerequisites: None.	LEC 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BPC100AB	Business-Personal Computers II	Use the personal computer to create, store and retrieve information. Procedures for running and using business application software to produce documents and spreadsheets	Prerequisites: A grade of C or better in BPC100AA or permission of Instructor.	LEC 0.5 0.5 0.5
BPC100AD	Computing Fundamentals	Fundamental computer concepts and terminology for business and personal computers	Prerequisites: None.	L+L 1.0 2.0 2.0
BPC100BD	Key Software Applications	Covers basic features of software applications for business and personal computers	Prerequisites: None.	L+L 1.0 1.0 1.0
BPC100CD	Living Online	Fundamental network and Internet concepts and terminology for business and personal computers. Covers basic features of electronic mail applications	Prerequisites: None.	L+L 1.0 1.0 1.0
BPC100DD	Internet and Computing Fundamentals	Fundamental computer and Internet concepts and terminology for business and personal computers. Covers basic features of software applications	Prerequisites: None.	L+L 3.0 4.0 4.0
BPC101	Introduction to Computers	Computer software applications for the personal computer, including electronic spreadsheet and word processing, keyboarding review, a desktop environment, database management, computer graphics and operating system commands. Individualized advanced applications of software selected to solve specific problems on the personal computer.	Prerequisites: None.	L+L 3.0 4.0 4.0
BPC101AA	Introduction to Computers I	Computer software applications for the personal computer, including electronic spreadsheet and word processing, keyboarding review, and a desktop environment.	Prerequisites: None.	L+L 1.0 2.0 2.0
BPC110	Computer Usage and Applications	Introduction to business and personal computer operations and usage. Software applications for analyzing and solving business problems including word processing, spreadsheet, database, and presentation graphics	Prerequisites: None.	L+L 3.0 4.0 4.0
BPC111AA	Computer Keyboarding I	Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols	Prerequisites: None.	L+L 1.0 1.7 1.7
BPC125	Microcomputer Set Up and Maintenance	How to install and maintain a microcomputer (personal computer). Steps used to set up a new or add options to a previously installed microcomputer. Installation of internal options (memory, graphics, modems, etc.), as well as external options and devices (printers, monitors, communications, etc.). Troubleshoot (identify and repair or have repaired) microcomputer problems	Prerequisites: None.	L+L 1.0 1.0 1.0
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	Explore technical aspects of personal computers, including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis placed on hardware installation, maintenance, mobile devices, and hardware troubleshooting. Helps prepare students for the CompTIA A+ examinations.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BPC171	Recycling Used Computer Technology	Use of hardware maintenance knowledge and skills to refurbish used computers.	Prerequisites: A grade of C or better in BPC170 or Corequisites: BPC170 or permission of Instructor.	L+L 1.0 2.0 2.0
BPC260	AppleCare Exam Prep: iOS Device Repair	Prepares students for AppleCare Hardware Certification exams for iOS devices and to perform warranty-level hardware repairs.	Prerequisites: None.	L+L 3.0 4.0 4.0
BPC262	AppleCare Exam Prep: Mac Computer Models Repair	Prepares students for AppleCare Hardware Certification exams for MacOS computer models and to perform warranty-level hardware repairs.	Prerequisites: None.	L+L 3.0 4.0 4.0
BPC265	Jamf Training Foundation	The Jamf Training Foundation offers a core understanding of Jamf Pro and Jamf Protect as well as an enterprise-focused examination of the macOS, iOS, and iPadOS platforms. The hands-on and example-based environment provides experience in the configuration of Jamf Pro, Jamf Protect, device enrollment, distributing App Store apps, building and managing packages to deploy to computers, configuration and settings for computers and mobile devices, device security, a scripting overview (Bash), and an introduction to the security standards. This offering includes content and certification opportunities from the Jamf 100, 170, and 200 courses.	Prerequisites: None.	L+L 3.0 4.0 4.0
BPC270	A+ Exam Prep: Operating System Configuration and Support	Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on OS installation, maintenance, mobile devices, security, software troubleshooting, and on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
BPC274	Advanced Server Computer Maintenance: Server+ Prep	Explores the technical aspects of computer servers, including hardware installation and management; operating system configuration, access control and virtualization; and overall diagnostic and resolution of system hardware, software, connectivity, storage and security issues. Includes an emphasis on physical and network data security techniques and implementation of backup techniques to remediate disaster recoveries. Helps prepare students for the CompTIA Server+ examination.	Prerequisites: A grade of C or better in (CIS126++ and MST150++), or BPC270, or permission of Instructor.	L+L 3.0 4.0 4.0
BPC275	CompTIA Exam Prep	Focuses on reviewing key concepts, practicing skills and preparing to successfully demonstrate existing knowledge on CompTIA certification exams. The course is designed to provide an overview of exam topics, study and test-taking strategies. It also will include structured study time, group discussions, and the use of practice exams to assess test readiness.	Prerequisites: A grade of C or better in BPC170 or BPC270 or permission of Instructor.	L+L 2.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
BUS305	Business Analytics	Overview of quantitative and qualitative data analysis concepts and practices that assist with the decision-making process of managers in business. Topics include how data is used in different industries and functional areas of business; the collection, analysis and interpretation of data; internal and external communication of decisions and recommendations based on analysis, and ethical considerations.	Prerequisites: A grade of C or better in (ACC212, CIS105, GBS205, GBS221, and GBS233), or permission of Instructor.	LEC 3.0 3.0 3.0
BUS310	Finance Principles	Overview of the principles and practices of financial management in a business environment. Topics include financial analysis and financial risk, capital investment analysis and decision making, and the capital structure of the firm. Focus on analyzing financial information, identifying issues, and solving business problems to make sound business decisions. Emphasis on the ethical application of financial principles and methods for solving the problems of financial policy that managers face.	Prerequisites: A grade of C or better in ACC212, or permission of Program Director.	LEC 3.0 3.0 3.0
CAD100	Fundamentals of 2D AutoCAD	Utilize AutoCAD software to generate two-dimensional (2-D) drawings and components in a generic installation. Apply basic AutoCAD commands and properties to format, draw, edit, layer, dimension, import/export, and manage drawing files. Creation, manipulation, and hardcopy production of 2-D drawing files from major AutoCAD command and display environments and plot options	Prerequisites: None.	L+L 3.0 6.0 6.0
CAD101	Elements of CAD Graphics (AutoCAD)	Computer generation of drafting and design components using pure elements and basic geometric procedures. Incorporates concept illustration based on standard pictorial methods and develops multi-view projection techniques and presentation methods. Introduction to the fundamentals of three-dimensional (3D) modeling and the construction and printing of 3D objects.	Prerequisites: A grade of C or better in CAD100 or Corequisites: CAD100 or permission of Instructor.	L+L 3.0 6.0 6.0
CAD105	Fundamentals of Revit Architecture	Introduction to Revit Architecture. Utilize Revit software to develop and generate basic 3-D models and components. Create, edit, dimension, and manage 2-D and 3-D drawing views and projects. Produce drawing files and plots using various display environments and plot options.	Prerequisites: A grade of C or better in CAD100 or (previous architectural and CAD experience, and permission of Department or Division).	L+L 3.0 6.0 6.0
CAD106	Fundamentals of Civil 3D	Introduction to Civil 3D. Utilize Civil 3D software to develop and generate basic 3D models and components. Create, edit, dimension, and manage 2D and 3D drawing views and projects. Produce drawing files and plots using various display environments and plot options.	Prerequisites: A grade of C or better in CAD100 or (previous civil and CAD experience, and permission of Department or Division).	L+L 3.0 6.0 6.0
CAD120AH	Getting Started with CAD: Microstation	Basic Commands; drawing aids; input devices; use of default settings	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CAD125AH	Drawing Database Management: Microstation	Operating the system file manager. Establishing, updating, managing, and maintaining a CAD drawing database	Prerequisites: A grade of C or better in CAD120AH or permission of Instructor.	L+L 1.0 2.0 2.0
CAD145	Design Principles for Industry	Survey of the basic standards and procedures for drawing setups and design documentation in the fields of architecture, manufacturing, and civil technology. Multi-source hard copy design presentation.	Prerequisites: A grade of C or better in (CAD100 and CAD101) or permission of Instructor.	L+L 3.0 6.0 6.0
CAD150AH	Two-Dimensional CAD: Microstation	Constructing scaled two-dimensional drawing using CAD.	Prerequisites: A grade of C or better in CAD125AH or permission of Instructor.	L+L 1.0 2.0 2.0
CAD160	Residential Architectural Drafting	Basic skills associated with board drafting in the architectural field	Prerequisites: A grade of C or better in (CAD105 CAD110 and CAD115) or permission of Instructor.	L+L 2.0 4.0 4.0
CAD164	Residential Working Drawings	Team projects in the development of a set of architectural working drawings for a residence.	Prerequisites: A grade of C or better in CAD145 or permission of Instructor.	L+L 3.0 6.0 6.0
CAD165	Architectural Software (AutoCAD Architecture)	Introduction to AutoCAD Architecture, a modeling software used by architecture professionals. Procedures unique to advanced software and pertinent to architectural documentation. Emphasison residential working drawings.	Prerequisites: A grade of C or better in CAD145 or permission of Instructor.	L+L 3.0 6.0 6.0
CAD167	Architectural Drawings I (Revit): Residential CAD	Use of Revit architectural modeling software to develop 3-D architectural models, working drawings,construction documentation, and renderings. Emphasis on residential working drawings.	Prerequisites: A grade of C or better in CAD105 or permission of Department or Division.	L+L 3.0 6.0 6.0
CAD186	Site Development I	Use coordinate geometry and survey point databases to create topographic maps utilizing civil engineering/surveying application software. Volumetric analysis of earthwork (cut and fills) utilizing civil engineering/surveying application software. Production of base mapping, earthwork, grading, and drainage plan utilizing civil engineering/surveying application software.	Prerequisites: A grade of C or better in CAD106 or permission of Instructor.	L+L 3.0 6.0 6.0
CAD201	Three-Dimensional (3D) Modeling and Advanced CAD Techniques	Advanced Computer Aided Drafting (CAD) techniques including the automation and semi-automation of design documentation, external referencing and attribute creation and manipulation. Development of three-dimensional (3D) models including construction, manipulation, rendering and 2D/3D output.	Prerequisites: A grade of C or better in (CAD100 and CAD101) or permission of Instructor.	L+L 3.0 6.0 6.0
CAD235	Modeling, Rendering and Animation for Technical Presentations	Entry level course in technical modeling, visualization, and animation. Uses 3D modeling software, rendering, and animation tools to visualize and solve design issues. Development of professional quality presentation materials for design projects.	Prerequisites: A grade of C or better in CAD201 or Corequisites: CAD201 or permission of Department or	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CAD256	CAD Customization and Management	Emphasis on developing customized user interfaces and basic programming skills. Installation and configuration of software processes. File management techniques; file archival, batch plotting, file conversion, and CAD standards.	Prerequisites: A grade of C or better in DFT254AA or permission of Department or Division.	L+L 3.0 6.0 6.0
CAD265	Architectural Software (AutoCAD Architecture) II: Commercial CAD	Use of AutoCAD Architecture, an architectural modeling software to generate features associated with commercial building design. CAD treatment of selected details and other structural practices common to nonresidential buildings. Emphasis on the practices and standards of working drawings.	Prerequisites: A grade of C or better in CAD165.	L+L 3.0 6.0 6.0
CAD267	Architectural Drawings (REVIT) II: Commercial CAD	Use of REVIT architectural modeling software utilized by the architectural industry to generate plans and features associated with commercial building design. Focus on CAD development of selected plans, details, and structural practices common to nonresidential buildings.	Prerequisites: A grade of C or better in CAD167 or permission of Department or Division.	L+L 3.0 6.0 6.0
CAD269	Computer Aided Landscape Design	Using AutoCAD to create landscape design drawings and wire frames in Sketchup for elevations, sections and perspective sketches.	Prerequisites: A grade of C or better in (AGB139 or CAD100 or CAD101) and AGL189 or permission of Instructor.	L+L 3.0 6.0 6.0
CAD274	Residential Design CAD	Developing designs with plans and details based on current design vogues. CAD problem solving associated with design	Prerequisites: A grade of C or better in (CAD152 and CAD164) or permission of Instructor.	L+L 3.0 6.0 6.0
CAD282	HVAC and Sheet Metal Design	Drawing, design, and specification of heating, ventilating, and air conditioning (HVAC) systems. Basic types of heating and cooling systems, heat loss calculations, sheet metal development, and solar design	Prerequisites: A grade of C or better in (CAD150 and [two of CAD262 CAD264 CAD266 CAD268]) or permission of Instructor.	L+L 1.0 2.0 2.0
CAD286	Site Development II	Use a coordinate geometry and survey point database to create construction drawings utilizing civil engineering/surveying software.	Prerequisites: A grade of C or better in CAD186.	L+L 3.0 6.0 6.0
CAD287	Advanced Revit Techniques	Advanced use of Revit architectural modeling software utilized by the architectural industry. Develop custom families with parameters and formulas, generate conceptual mass plans, prepare design phasing for renovation and tenant improvement projects, and work with advanced features associated with architectural building design.	Prerequisites: A grade of C or better in CAD167 or permission of Department or Division.	L+L 3.0 6.0 6.0
CAD292	Current Developments in CAD Technology	The exploration and analysis of the newest software packages and/or plug-ins on the market designed to enhance or replace existing Computer Aided Drafting (CAD) software. Designed to introduce and develop skills in the latest state-of-the-art tools pertinent to industry today.	Prerequisites: A grade of C or better in CAD100 or permission of Department or Division.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CAN101	Introduction to Cannabis Industry	Introductory overview of the cannabis industry. Explores the historical, legal, social, and political aspects of cannabis use, cannabis careers and business management, including business plans, for the cannabis industry. Includes how industry trends and regulations have influenced supporting industries and consumer behaviors.	Prerequisites: None.	LEC 3.0 3.0 3.0
CAN105	Accounting, Finance and Funding in the Cannabis Industry	Overview of the cannabis industry's financing, funding, accounting, and tax practices. Includes capital ventures and accounting procedures unique to the cannabis industry.	Prerequisites: A grade of C or better in CAN101.	LEC 2.0 2.0 2.0
CAN110	Social Equity and Current Issues in the Cannabis Industry	Social equity programs, trends, current issues and the societal impact in the cannabis industry.	Prerequisites: None.	LEC 1.0 1.0 1.0
CAN115	Human Resources and Operations Management in the Cannabis Industry	Overview of the human, facilities and capital management of the cannabis industry. Includes workforce development trends and best practices unique to the cannabis industry.	Prerequisites: A grade of C or better in CAN101.	LEC 1.0 1.0 1.0
CAN120	Legal and Regulatory Environment in the Cannabis Industry	Study of cannabis industry laws, policies, regulations and ethics in non-use, medicinal-use, and adult-use U.S. states and territories.	Prerequisites: A grade of C or better in CAN101.	LEC 3.0 3.0 3.0
CAN125	Supply Chain Management in the Cannabis Industry	Management of cannabis supply chain stages including: growing, extracting, laboratory testing, product development and manufacturing, shipping and distributing, and dispensary and retailing across all legislative environments (federal, medicinal-use, and adult-use in U.S. states and territories).	Prerequisites: A grade of C or better in CAN101.	LEC 2.0 2.0 2.0
CAP120	Introduction to Counseling	Introduction to the field of counseling with a focus on skills and competencies needed as a mental health practitioner. Foundations of counseling including counseling theories, ethical considerations, prevention and intervention topics, and multicultural counseling practices.	Prerequisites: None.	LEC 3.0 3.0 3.0
CAP220	The Counselor in a Multicultural Society	Current theories and research on culture, race and ethnicity, gender and other aspects of cultural diversity in a multicultural society through the lens of counseling. Focus on personal perspectives, will explore themes, theories, topics and research related to power, privilege and oppression in the United States as applied to counseling discipline.	Prerequisites: None.	LEC 3.0 3.0 3.0
CAP240	Introduction to Counseling Skills	Introduction to basic skills and techniques used in the counseling field. Focuses on active listening, self-awareness, and other related skills.	Prerequisites: A grade of C or better in CAP120.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CAP260	Career and Professional Preparation for the Helping Professions	Overview of the process of career and life planning through self-awareness for students interested in helping fields. Focus on current occupational trends and outlook, the learning models of the individual, the world of work, and decision-making. Emphasis on individual application and workplace diversity. Design materials for use in the professional world such as resumes, online presence, career portfolio.	Prerequisites: A grade of C or better in ENG101.	LEC 3.0 3.0 3.0
CCS101	Chicana and Chicano Studies	Introduction to the wealth and diversity of Chicana and Chicano Studies research from a variety of disciplinary perspectives through the use of a series of historical and social scientific studies, novels, testimonios, and films	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
CCS202	Ethnic Relations in the United States	Basic concepts and processes, including historic overview, of interethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to interethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world.	Prerequisites: None.	LEC 3.0 3.0 3.0
CCS210	Multicultural Representation in the History of STEM	Aims to fill a gap by exploring the perspectives, experiences, and contributions of individuals from various cultural backgrounds in the study of science, technology, engineering, and mathematics (STEM). Analyzes and synthesizes how different cultures have shaped scientific knowledge, examining the impact of diversity on innovation and problem-solving, and addressing barriers faced by underrepresented groups in STEM fields.	Prerequisites: None.	LEC 3.0 3.0 3.0
CCS212	The Mexican American Novel	A study of the social, historical, and cultural backgrounds as well as the form and content of the Mexican American novel.	Prerequisites: None. ENG101 and ENH112 suggested but not required.	LEC 3.0 3.0 3.0
CET102	Surveying II	Surveying principles including triangulation, municiple and land surveys, topographic surveys, earthwork, state plane coordinate systems, stadia methods, practical astronomy, highway curves, superelevations and construction.	Prerequisites: A grade of C or better in CON241 or permission of Department or Division.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
CET103	Construction Methods	Modern construction techniques: planning methods, critical path method (CPM), excavation and earthmoving practices, estimating and work scheduling, concrete design and placement practices. Includes reinforced concrete, prestressed concrete, carpentry, asphalt characteristics, proper proportioning of aggregate and important safety methods. Introduction to heavy construction equipment use	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CET104	Community Planning and Development	Provides a comprehensive overview of the urban planning and development process. Introduces planning theories, methodologies, and strategies with practical applications from local and other urban communities. Topics include municipal planning, land use and zoning, circulation, water and waste water management, storm drainage and public utility services. Examines the economic development process, environmental and legal issues and focuses on the interdependent nature of development	Prerequisites: None.	LEC 3.0 3.0 3.0
CET105	Highway Technology	Economics of highway locations, rights-of-way, curves, drainage problems, bridge structures, road building equipment, highway financing, and administrative problems at the state, county and city levels	Prerequisites: None.	LEC 3.0 3.0 3.0
CET150	Introduction to Geodesy and Map Projections	Coordinate frames used in geodesy, photogrammetry, surveying, and mapping. Cartesian, spherical, and ellipsoidal coordinates. Introduction to kinematics, gravity field, and size and shape of earth. Positioning in three dimensions. Introduction to map projections and associated coordinate systems. Theory and application of the plane coordinate systems with emphasis on Arizona. Development of projections from Global Positioning System (GPS) observations.	Prerequisites: A grade of C or better in (CET102 and MAT182) or permission of Department or Division.	LEC 3.0 3.0 3.0
CET171	Construction Contracts	Legal aspects of construction contracts, writing and interpretation of specifications, prequalifications, and use of performance bonds	Prerequisites: None.	LEC 3.0 3.0 3.0
CET201	Boundary Control and Legal Principles	Principles of land surveying, boundary controls, ethical and legal principles, and office practices.	Prerequisites: A grade of C or better in CON241 or permission of Department or Division.	LEC 3.0 3.0 3.0
CET202	Writing Legal Descriptions	Application of principles to actual case studies. Emphasis on proper form and clarity in legal description writing. Procedure for filing subdivision plats and preparation for land surveyors' registration examinations.	Prerequisites: A grade of C or better in CON241 or permission of Department or Division.	LEC 3.0 3.0 3.0
CET205	Photogrammetry	An introduction to the study of aerial cameras, equipment, flight procedures, and interpretation of aerial photographs, including stereoscopic principles used in planimetric and topographic maps, map projections, grids, and forms. Practical applications of principles stressed	Prerequisites: A grade of C or better in CET102 or permission of Department or Division.	LEC 3.0 3.0 3.0
CET211	Strength of Materials	A study of strength and application of the materials of engineering construction, including the mechanics of beams, shafts, and bolted and welded connections under various loading conditions.	Prerequisites: A grade of C or better in DFT107 or ELT102 or (MAT151 and MAT182) or (MAT187 or MAT188) or equivalent or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CET241	Fundamentals of Traffic Engineering	Basic study of traffic movement, ordinances, mechanical controls, planning, street and highway design, parking, and traffic engineering organization. Training for personnel as civil engineer technicians.	Prerequisites: None.	LEC 3.0 3.0 3.0
CET250	Public Land Survey System	Overview of unique requirements to determine land boundaries according to the Manual of Instructions for the Survey of Public Lands of the United States, including history of the system, lotted sections, proportioning, subdividing, and evidence analysis. Emphasis on rules in order to perform any boundary survey, particularly for Arizona	Prerequisites: A grade of C or better in CET102 and CET201.	LEC 3.0 3.0 3.0
CET257	Route and Construction Surveying	Principles and field practice of route and construction surveying, including route control surveys, construction control, topographic mapping, highway curves, and computations for roadways, utilities, bridges, buildings, small commercial sites, and subdivisions	Prerequisites: A grade of C or better in CET102 or permission of Department or Division.	L+L 3.0 5.0 5.0
CET296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
CET296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CET296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
CET296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
CET298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CET298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CET298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CFS101AH	Visual Art Experiences for Young Children	The creative use of visual art media and techniques with children between the ages of birth and age eight.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS101AJ	Music Activities for the Young Child	Experiences with music in singing, rhythm instruments, creative movements, and games, as well as the development of music appreciation and basic listening skills.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS101AP	Science Activities for the Young Child	Interpreting the study of science in early childhood education as a part of a dynamic growth process offered by the child's daily life experiences.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS101AR	Learning With Toys	Use of creative imagination with toys to enable the child alone or with others to explore the world. Includes evaluating proper use of toys and appropriate developmental skills.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS106	Stress Management in the Family	Impact of stress factors on the family. Managing time and stress in the home. Options for coping with anxiety.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS107	Men and Children: Strengthening the Bond	Overview of the relationship between fathers or significant male figures and children from the role perspective of the involved, nurturing male. Strategies for assessing and organizing successful male involvement programs examined.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS109	Parent/Child Communication	Communication between parents and children. Developing self-esteem, responsibility and empathic listening. Pitfalls to communication	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS111	Relationships to Promote Learning in Young Children: Birth to Age Three	Overview of the relationship between the teacher/caregiver and child from the perspective of a reflective teacher. Students will learn the importance of assessing, understanding, and enhancing the development of emotional skills of young children to help guide and develop a child's self-image. Student will also be able to monitor, reflect, and plan self-care so they become effective teachers.	Prerequisites: None. CFS/ECH176 recommended. Xref: CFS176	LEC 1.0 1.0 1.0
CFS112	Personal Growth and Family Relations	Personal development as related to the individual, the family, and their relations. Emphasis on interpersonal family relationships. Skills and techniques to facilitate and strengthen the individual and family relationships.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS114	Working with the Hyperactive Child	Causes of hyperactivity in children; focus on the family's role in identification, treatment and school/community support.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CFS116	Discipline and Guidance	Age appropriate principles for disciplining and guiding young children's behavior in child care settings, including interpersonal and environmental strategies. Observational opportunities provided.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS120	Contemporary Issues In Early Childhood	Designed to develop understanding of a broad range of contemporary issues that impact the child in today's society. Course directed at pre-service and in-service professionals.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS121AA	Single Parent Family-Adjustment	Overview of issues facing single parent families. Examination of adjustment issues with emphasis on relationships. Methods of adapting family life to meet the needs and variations of one-parent families.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS123	Health and Nutrition In Early Childhood Settings	Creating and maintaining healthy environments and practices in programs serving young children. Emphasis on assessing the child's health status, nutrition and food service, communicable disease recognition, transmission, and prevention, infection control, regulations and regulatory agencies, current topics, resources, and innovative practices.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS125	Safety in Early Childhood Settings	Fundamental concepts of promoting a safe, but challenging learning environments. Establishing and maintaining safety procedures in the early childhood setting. Emphasis on indoor and outdoor equipment and activities, risk analysis, accident, evacuation, and emergency plans, regulations, regulatory agencies and resources, current topics, and innovative practices.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS130	Demystifying Adolescence	A holistic overview of the physical, social, and emotional development of adolescents. Emphasis on effective skills necessary for working with adolescents and their families.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS140	Special Topics: Child and Family Studies	Explores special topics related to child and family studies. Topics vary and include concepts relevant to those pursuing careers in or employed in early childhood care or to those working with families in programs, agencies, organizations, and resource centers that provide services to families.	Prerequisites: None.	LEC 0.5 0.5 0.5
CFS157	Marriage and Family Life	Study of marriage and the family as a social system, including models of family analysis, intrapersonal and interpersonal relations, including intimacy, sexuality, and cross-cultural and historical patterns.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS159	The Modern Family	An examination of the modern American family. An emphasis on the changing functions and roles of individuals within today's society and an analysis of the basic challenges confronting the family, including alternative family styles.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CFS160	Using Music, Speech, and Movement with Children's Literature	Using elements of music, speech, and movement with children's literature, including rhymes, chants, songs, and books to enhance children's social, physical, cognitive, and emotional development.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS163	Family Child Care: Introduction to Business Management	Emphasis on small business management and effective policies and procedures for family child care providers. Licensing, legal, and regulatory issues in a home setting are examined	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS164	Family Child Care: Curriculum and Environment	Family child care planning for multi-age groupings of children through age eight. Role of the environment as well as various curriculum programs will be explored and evaluated. Exploration of culturally rich, inclusive and child-centered environment in his/her own child care setting. Issues of professionalism, family partnerships, observation, guidance, and health/safety practices are examined	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS164AA	Family Child Care: The Environment	Family child care environments for multi-age groupings of children through age eight. Exploration of culturally rich, inclusive, and child-centered environment in his/her own child care setting. Issues of health/safety practices are examined	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS164AB	Family Child Care: Programming, Guidance and Observation	Family child care programming for multi-age groupings of children through age eight. Various curriculum programs will be explored and evaluated. Issues of observation and guidance are examined	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS164AC	Family Child Care: Family Partnerships and Professionalism	Issues of professionalism, family partnerships, communication, and ethical practices are examined	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS167	School-Age Child Care Provider	Issues related to school-age child care. Past, current, and future trends; regulations, insurance liabilities and coverage, shared facilities, and community resources. Techniques for managing/administering services and personnel, communicating with parents, and evaluating the care/program. Planning and scheduling the school-age program. Includes overview of child growth and development, types of routines and activity schedules.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS176	Child Development	Study of the science of human development from conception through adolescence. Includes observation skills, parent and adult roles in the lives of children, and contemporary issues.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS177	Parent-Child Relationships	Methods to strengthen relationships and negotiate conflicts with children. Focus on effective interpersonal skills and guidance techniques.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CFS178	Survey of Early Childhood Education	Orientation to basic concepts of day care and nursery programs. History and philosophy of child care services including state regulations governing those services. Observation opportunities provided.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS179	Child Care: A Multifaceted Career	Overview of the child care field. Focus on enhancing children's self esteem, providing for children's nutritional needs, and developing adequate safety and sanitation practices	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS181	Enhancing Infant and Toddler Development	Principles of development in children from birth through 30 months. Emphasis on individuality of child and the adult role in providing a safe and stimulating environment for the development of the child.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS182	Parenting the Early Adolescent: Ages Ten to Fourteen	Emphasis on the early adolescent developmental period, ages ten to fourteen, and the importance of the parent-child relationship, as well as strategies to ensure successful teen years.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS183	Contemporary Issues in Adolescence	Current issues that impact adolescent development and behavior explored. Comprehensive and specific strategies for addressing these issues as parents or professionals working with teens emphasized. Issues related to adolescent sexuality, abuse, mental health, violence, and risk behaviors included.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS190	Home-Based Visitation	Emphasis on development of skills needed to successfully complete home-based client visitation. Opportunities for field-based observations provided.	Prerequisites: None.	L+L 3.0 4.0 4.0
CFS192	Child Care Center Staff Development	Presents strategies to administrators and supervisors in child care centers for developing the personal and professional growth of child care staff.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS193	Financial Management in Child Care Centers	Provides strategies for financial management and administration of finances in a child care center. Specific concerns of participants addressed.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS194AA	Early Childhood Program Management: Staffing and Managing	Methods and techniques for recruiting, staffing, and managing in early childhood programs.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS194AB	Early Childhood Program Management: Human Relations	Basic human relations in early childhood organizations and the influence of the individual's personal needs on the overall needs and objectives of the organization.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS194AC	Early Childhood Program Management: Organizational Structure	Provides a broad perspective of the organizational life of an early childhood environment.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS195	Early Childhood Personnel Supervision	Covers supervision concepts and applications for early childhood programs.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CFS196	Ethics and the Early Childhood Educator	Ethical issues in the early childhood field.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS197	Leadership in Early Childhood Education	Provides concepts for understanding and managing leadership roles and responsibilities in the early childhood field.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS204	Reflective Supervision	Reflective supervisory processes to enhance learning and professional development. Includes professional development stages to provide supervisors with tools to support professional growth. Also covers challenges and barriers to the supervisor and employee/practitioner relationship.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS205	Human Development	Explores the growth and development process over the human life span. Research and theoretical approaches; physical, cognitive, social, and personality development from birth through adulthood and death.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS206	Child and Family Organizations: Management and Administration	Examination of management and administration of community-based child and family organizations within the context of organizational behaviors. Focus on attributes of effective organizations: the impact of organizational culture and learning, work-place diversity and employee motivation.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS207	Organization and Community Leadership in Child and Family Organizations	Examination of organization and community leadership as it applies to the management and administration of community- based child and family services organizations. Provides overview of leadership styles and function.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS208	Child and Family Organizations: Fiscal Management and Grant Writing	Examination of fiscal accountability and resource development as it applies to the management and administration of community-based child and family social service organizations. Provides overview of grant development processes beginning with research into governmental and private funding sources through fiscal and grant audit processes. Includes budget development, risk management, and cost control issues.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS209	Child and Family Organizations: Project Management	Focuses on concepts and strategies associated with effective project management in community-based child and family organizations. Emphasis on planning, evaluation and project management models.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS210	Family Life Education	Provides an overview of the professional work within the field of family life education. Emphasis on developing flexible, culturally sensitive, and effective professional skills.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS220	Introduction to Parenting and Family Development	Overview of the field of family and parent development. Focuses on parenthood as a developmental process and cultural influences on child rearing. A family systems perspective introduced and applied to understanding families with children	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CFS225	Foundations of Parent Education	Professional development as related to work with parents. Emphasis on developing effective skills with parents, professionals and paraprofessionals involved with the child. Skills and techniques to facilitate and strengthen the individual and family relationships.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS235	Developing Child: Theory into Practice, Prenatal to Age Eight	Understanding and working with young children, birth through age eight. Analysis of young children's physical, social, emotional, cognitive and linguistic development within their home, school, and cultural contexts. Typical and atypical development. Implications for teachers and parents. Emphasis on observations and planning curriculum based on theories, research, and child-specific data.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS240	Human Behavior in Context	Considers the influences of physical and social environments in which human behavior occurs. Includes multiple roles and perspectives of the individual, the family, society and the professional.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS242	Curriculum Planning for Diversity	Practical early childhood classroom applications for a diverse population, including integration of cultures, generations, genders, and races into the classroom, facilitation of second language acquisition, and practical teaching strategies which are also developmentally appropriate.	Prerequisites: A grade of C or better in CFS/ECH176. Xref: CFS176	LEC 3.0 3.0 3.0
CFS243	Cross-Cultural Parenting	Focus on the study of parents and children from a cross-cultural position. Emphasis on parenting styles and practices from a cultural directive and expectation perspective. Course designed for those seeking careers in Family Studies, Parent Education, Psychology, Social Work/Human Services	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS247	Family Ties and Aging	Identification and examination of facets of family relationships and aging. Emphasis on study of central family connections for older people, unique family situations, and implications of family transitions. Course designed for those seeking careers in Family Studies, Parent Education, Psychology, Social Work/Human Services	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS249	Transition to Adulthood	Emphasis on major elements of the transition to adulthood and key links to changes in family relationships. Focus on the realignment of intergenerational relationships and reassessment of family priorities. Course designed for those seeking careers in Family Studies, Parent Education, Psychology, Social Work/Human Services	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS250	Social Policy and Families	Examines the impact of social policy on family systems and the implications for professional roles and practice.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CFS251	Transitions: Work to Retirement	Explores the work to retirement transitional issues that impact individuals and families. Emphasis on physical, cognitive and psychosocial dimensions of retirement.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS252	Contemporary Issues in Aging	Current issues that impact aging development and behavior explored. Comprehensive and specific strategies for addressing these issues for professionals working with aging adults emphasized.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS256	Management in the Family	Management as a means to the realization of individual and family values and goals; creation, allocation, and use of resources. Focus on decision making	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS257	Working with Families with Diverse Needs	A collaborative approach to working with families with diverse needs. Examines the effect of specific challenges on the family system. Presents techniques for those working with families to facilitate stress management, conflict resolution, and utilization of community and personal resources to aid in the strengthening of the family unit.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS258	Families in Society	Areas of concentration include family transition, diversity in structure and culture faced by contemporary families, problems, crisis and change affecting the stress on families as our society progresses into a more complicated future. The study of change as an integral part of all family's day-to-day experiences while recognizing that family ancestral and cultural dimensions are fundamental for all family groupings. Course designed for those seeking careers in Family Studies, Parent Education, Psychology, Social Work/Human Services	Prerequisites: A grade of C or better in CFS157 and CFS259 or permission of Instructor.	LEC 3.0 3.0 3.0
CFS259	Sexuality over the Life Span	Examination of the physical, psychological, social, and cultural contributions to human sexuality. Emphasis on family life and cultural variation. Examination of facts and myths, current literature, and changing mores regarding human sexuality. Sexuality of males and females in contemporary society; impact of sexual trends on society; home/school issues in sexuality education.	Prerequisites: Permission of Department or Division. Student must be 18 years or older.	LEC 3.0 3.0 3.0
CFS263	Child and Family Studies Seminar	Classroom portion of Child and Family Studies Internship. Emphasizes the blend of job-related activities including career exploration, employment procedures, human relations, and on-the-job problems.	Prerequisites: Permission of Department or Division. Corequisites: CFS264AA or CFS264AB or CFS264AC initial enrollment in internship module.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CFS264AA	Child and Family Studies Internship	Laboratory portion of Child and Family Studies Seminar. Five hours of work weekly. Supervision and evaluation by a coordinator.	Prerequisites: Permission of Department or Division Corequisites: CFS263 when initially enrolled in CFS264AA or CFS264AB or CFS264AC module.	LAB 1.0 5.0 0.0
CFS264AB	Child and Family Studies Internship	Laboratory portion of Child and Family Studies Seminar. Ten hours of work weekly. Supervision and evaluation by a coordinator.	Prerequisites: Permission of Department or Division Corequisites: CFS263 when initially enrolled in CFS264AA or CFS264AB or CFS264AC module.	LAB 2.0 10.0 0.0
CFS264AC	Child and Family Studies Internship	Laboratory portion of Child and Family Studies Seminar. Fifteen hours of work weekly. Supervision and evaluation by a coordinator.	Prerequisites: Permission of Department or Division Corequisites: CFS263 when initially enrolled in CFS264AA or CFS264AB or CFS264AC module.	LAB 3.0 15.0 0.0
CFS269	Early Childhood Education Seminar	Emphasizes professional experiences including employment procedures, human relations, employment related issues, and career exploration.	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
CFS271	Arranging the Environment	Exploration of the influence of the environment on the behavior and development of young children. Considers indoor and outdoor spaces from the perspective of safety, age-related needs, spatial requirements, and usage.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS277	Adult-Adolescent Interaction	Prepares social service workers, teachers, and parents to interact effectively with teenagers. Develops understanding of the interaction between adolescents and their families. Teaches practical strategies to deal with specific problem areas.	Prerequisites: None.	LEC 3.0 3.0 3.0
CFS281	Adolescent School Success	An overview of factors that contribute to adolescent school success, including family-school interactions, special needs adolescents, and problem areas. Emphasis on strategies and resources to facilitate school success.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS282	Inclusion of Young Children with Special Needs	An exploration of the educational, social, and behavioral concerns involved in the successful inclusion of children with special needs into typical preschool classrooms. Includes discussion of strategies for adaptations and modifications of the environment and accessing existing resources in the community.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CFS283	Multicultural Early Child Education	Practical early childhood classroom applications for a diverse ethnic population, including integration of multiculturalism into the classroom, facilitation of second language acquisition, and practical teaching strategies which are also developmentally appropriate.	Prerequisites: A grade of C or better in CFS/ECH176. Xref: CFS176	LEC 1.0 1.0 1.0
CFS284AA	Early Childhood Teaching Internship	Work experience in child care centers. 80 hours of designated work per credit.	Prerequisites: A grade of C or better in CFS/ECH176 and permission of Department or Division. Xref: CFS176	L+L 1.0 1.0 0.0
CFS284AB	Early Childhood Teaching Internship	Work experience in early care and education settings centers. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 3.0 3.0 0.0
CFS285	Family-School Interaction	Interaction among parents, teachers and the school. Emphasis on methods used cooperatively by parents and teachers to provide for education and developmental needs.	Prerequisites: A grade of C or better in CFS/ECH176 or CFS278 or permission of Instructor. Xref: CFS176	LEC 3.0 3.0 3.0
CFS285AA	Family-School Interaction: Preschool	Interaction among parents, teachers and the preschool. Emphasis on methods used cooperatively by parents and preschool teachers to provide for education and developmental needs.	Prerequisites: A grade of C or better in CFS/ECH176 or CFS278 or permission of Instructor. Xref: CFS176	LEC 1.0 1.0 1.0
CFS287	Professional Development in Early Childhood Education	Emerging professionalism within the field of early childhood education. Consideration of job responsibilities, rewards, ethics and current issues facing practitioners. Includes assessment and career planning.	Prerequisites: None.	LEC 1.0 1.0 1.0
CFS290AA	Child Abuse: Identification and Reporting in Child Care Settings	Identification, recording, and reporting by child care providers of sexual abuse, physical abuse, or neglect of young children.	Prerequisites: None.	LEC 1.0 1.0 1.0
CHA104	Community Health Work	Preparation of Community Health workers for outreach health prevention, advocacy, education, referral, and intervention working with individuals, communities and families. Includes history of community health work programs, community systems, and resources for clients and families often in disparity.	Prerequisites: None.	LEC 3.0 3.0 3.0
CHI101	Elementary Chinese (Mandarin) I	Introduction to the basic grammar, pronunciation and vocabulary of the Mandarin Chinese language. Includes the study of Chinese culture, practice of listening, speaking, reading, and writing skills	Prerequisites: None.	L+L 5.0 6.0 6.0
CHI102	Elementary Chinese (Mandarin) II	Study of grammar and vocabulary along with the study of Chinese culture. Emphasis on pronunciation and speaking skills.	Prerequisites: A grade of C or better in CHI101 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 5.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CHI115	Beginning Chinese Conversation I	Introduction to Chinese sound system, basic grammar, and vocabulary necessary to develop speaking ability in Mandarin Chinese. Designed for students seeking speaking and listening ability with little emphasis on writing and reading Chinese characters	Prerequisites: None.	LEC 3.0 3.0 3.0
CHI116	Beginning Chinese Conversation II	Continued development of speaking and listening skills for effective communication in Mandarin Chinese. Includes elements of Chinese culture	Prerequisites: A grade of C or better in CHI115 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
CHI201	Intermediate Chinese I	Continued development of speaking, reading, and writing proficiency in Mandarin Chinese through building vocabulary, phrases, idioms, and grammatical patterns. Includes study of Chinese culture	Prerequisites: A grade of C or better in CHI102 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 5.0 6.0 6.0
CHI202	Intermediate Chinese II	Advanced development of speaking, reading, and writing skills in Mandarin Chinese, and continued exploration of Chinese culture	Prerequisites: A grade of C or better in CHI201 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 5.0 6.0 6.0
CHI225	Intermediate Chinese Conversation I	Continued development of oral and aural skills for effective communication in Mandarin Chinese	Prerequisites: A grade of C or better in CHI116 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
CHI226	Intermediate Chinese Conversation II	A continuation of conversational skills for effective communication in Mandarin Chinese	Prerequisites: A grade of C or better in CHI225 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
CHM100	Preparation for Fundamental Chemistry	A preparatory course designed to review fundamental math and chemistry principles for students inexperienced or insecure with these concepts. Stresses individualized instruction. Designed to prepare students for CHM130.	Prerequisites: None.	LEC 1.0 1.0 1.0
CHM107	Chemistry and Society	A survey of chemistry and its impact on society and the environment.	Prerequisites: None.	LEC 3.0 3.0 3.0
CHM107LL	Chemistry and Society Laboratory	Laboratory experience in support of CHM107.	Prerequisites: A grade of C or better in CHM107 or Corequisites: CHM107.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CHM130	Fundamental Chemistry	A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry.	Prerequisites: A grade of C or better in [(CHM100 or high school algebra, or MAT140 or higher or an EdReady-Quantitative Reasoning, Algebra and Statistics score of 70 or higher or an EdReady-College Algebra score of 80 or higher) and (RDG100 or RDG100LL or higher or eligibility for CRE101 as indicated by appropriate reading placement)] or permission of Instructor or Department or Division Chair.	LEC 3.0 3.0 3.0
CHM130AA	Fundamental Chemistry with Lab	A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry.	Prerequisites: A grade of C or better in [(CHM100, or high school algebra, or MAT140 or higher, or an EdReady-Quantitative Reasoning, Algebra and Statistics score of 70 or higher, or an EdReady-College Algebra score of 80 or higher) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)] or permission of Instructor or Department or Division Chair.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
CHM130LL	Fundamental Chemistry Laboratory	Laboratory experience in support of CHM130.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM130.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CHM138	Chemistry for Allied Health	Elements of fundamental and organic chemistry. Includes the general chemical behavior of inorganic matter and the structure of organic and biochemical systems. Course designed for specific allied health programs at MCCCD. May not be applicable to other allied health programs or transferable.	Prerequisites: A grade of C or better in [CHM100 or MAT090 or MAT091 or MAT092 or (MAT103AA and MAT103AB) or higher or satisfactory score on math placement exam] or one year of high school chemistry taken within the last five years with a grade of C or better or permission of Instructor or Department or Division Chair.	LEC 3.0 3.0 3.0
CHM138LL	Chemistry for Allied Health Laboratory	Laboratory experience in support of CHM138, Chemistry for Allied Health.	Prerequisites: None. Corequisites: CHM138.	LAB 1.0 3.0 3.0
CHM140AA	General Chemistry for Engineers with Lab	Generalized study of the principles of chemistry as they relate to fields of engineering.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of Instructor, or Department or Division Chair. Completion of prerequisites within the last two years is recommended.	L+L 6.0 9.0 9.0
CHM150	General Chemistry I	Detailed study of principles of chemistry for science majors and students in pre-professional curricula.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL) or CHM130AA or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course or satisfactory placement) or permission of Instructor or Department or Division Chair.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CHM150AA	General Chemistry I with Lab	Detailed study of principles of chemistry for science majors and students in pre-professional curricula.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL) or CHM130AA or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course or satisfactory placement) or permission of Instructor or Department or Division Chair.	LEC 5.0 4.0 4.0 LAB 0.0 3.0 3.0
CHM151	General Chemistry I	Detailed study of principles of chemistry for science majors and students in pre-professional curricula.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL) or CHM130AA or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course or satisfactory placement) or permission of Instructor or Department or Division Chair.	LEC 3.0 3.0 3.0
CHM151AA	General Chemistry I with Lab	Detailed study of principles of chemistry for science majors and students in pre-professional curricula.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course or satisfactory placement) or permission of Instructor or Department or Division Chair.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
CHM151LL	General Chemistry I Laboratory	Laboratory experience in support of CHM150 or CHM151.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM150 or CHM151.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CHM152	General Chemistry II	A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics.	Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL] or CHM150AA or CHM151AA or permission of Instructor or Department or Division Chair.	LEC 3.0 3.0 3.0
CHM152AA	General Chemistry II with Lab	A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics.	Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL] or CHM150AA or CHM151AA or permission of Instructor or Department or Division Chair.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
CHM152LL	General Chemistry II Laboratory	Laboratory experience in support of CHM152.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM152.	LAB 1.0 3.0 3.0
CHM230	Fundamental Organic Chemistry	Chemistry of representative groups of organic compounds, emphasizing biological applications.	Prerequisites: A grade of C or better in (CHM130 and CHM130LL) or [(CHM150 or CHM151) and CHM151LL], or permission of Instructor, or Department or Division Chair.	LEC 3.0 3.0 3.0
CHM230AA	Fundamental Organic Chemistry with Lab	Chemistry of representative groups of organic compounds, emphasizing biological applications.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA], or [((CHM150 or CHM151) and CHM151LL), or CHM151AA)], or permission of Instructor, or Department, or Division Chair.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
CHM230LL	Fundamental Organic Chemistry Laboratory	Laboratory experience in support of CHM230.	Prerequisites: A grade of C or better in CHM130LL or CHM151LL or equivalent or Corequisites: CHM230.	LAB 1.0 3.0 3.0
CHM235	General Organic Chemistry I	Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized.	Prerequisites: A grade of C or better in (CHM152 and CHM152LL), or CHM152AA, or permission of the Instructor, or Department or Division Chair.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CHM235AA	General Organic Chemistry I with Lab	Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized.	Prerequisites: A grade of C or better in (CHM152 and CHM152LL), or CHM152AA, or permission of the Instructor, or Department or Division Chair.	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0
CHM235LL	General Organic Chemistry I Laboratory	Laboratory experience in support of CHM235.	Prerequisites: A grade of C or better in CHM235 or Corequisites: CHM235. Completion of prerequisites within the last two years	LAB 1.0 4.0 4.0
CHM236	General Organic Chemistry II	Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized.	Prerequisites: A grade of C or better in (CHM235 and CHM235LL) or CHM235AA, or permission of the Instructor, or Department or Division Chair.	LEC 3.0 3.0 3.0
CHM236AA	General Organic Chemistry II with Lab	Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized.	Prerequisites: A grade of C or better in (CHM235 and CHM235LL) or CHM235AA, or permission of the Instructor, or Department or Division Chair.	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0
CHM236LL	General Organic Chemistry II Laboratory	Laboratory experience in support of CHM236.	Prerequisites: A grade of C or better in CHM236 or Corequisites: CHM236. Completion of prerequisites within the last two years	LAB 1.0 4.0 4.0
CHM260	Fundamental Biochemistry	Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates and lipids; the utilization and synthesis of these materials by living systems and the relationship of the processes to energy production and utilization.	Prerequisites: A grade of C or better in [(CHM230 and CHM230LL) or CHM230AA] or [(CHM235 and CHM235LL) or CHM235AA] or permission of Instructor or Department or Division Chair.	LEC 3.0 3.0 3.0
CHM260LL	Fundamental Biochemistry Laboratory	Laboratory experience in support of CHM260.	Prerequisites: A grade of C or better in CHM260 or Corequisites: CHM260. Completion of prerequisites within the last two years	LAB 1.0 3.0 3.0
CHM282AA	Service-Learning Experience in Chemistry	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CHM282AB	Service-Learning Experience in Chemistry	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
CHM282AC	Service-Learning Experience in Chemistry	Unpaid Service-Learning experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
CHM295AA	Special Topics in Chemistry	Specialized chemistry-related content not represented in the main curriculum.	Prerequisites: None.	L+L 1.0 1.0 1.0
CHM295AB	Special Topics in Chemistry	Specialized chemistry-related content not represented in the main curriculum.	Prerequisites: None.	L+L 2.0 2.0 2.0
CHM295AC	Special Topics in Chemistry	Specialized chemistry-related content not represented in the main curriculum.	Prerequisites: None.	L+L 3.0 3.0 3.0
CHM296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
CHM296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CHM296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0
CHM296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
CHM298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CHM298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CHM298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CHS104	Hair Essentials I	Introduction to the basic theory and procedures in cosmetology hair essentials.	Prerequisites: Admission to the Cosmetologist (High School) program.	230
CHS106	Hair Essentials II	Hair-shaping techniques and chemical application procedures in cosmetology hair essentials.	Prerequisites: CHS104 or Program Manager's permission.	165
CHS114	Student Salon I	Continuation of cosmetology theory and practical concepts at an intermediate level. Theory will be focusing on professional development, salon ecology, anatomy and hair decisions. Practical skills will be demonstrated daily on clients and manikins. Rubrics on procedures are done monthly. One day a month on Arizona Barbering and Cosmetology Board (BCB) state licensure focus.	Prerequisites: A grade of C or better in CHS106, or permission of Program Manager.	225
CHS116	Student Salon II	Apply concepts learned in the classroom and the student salon to develop real life scenarios while servicing a client and/or becoming a future business owner in the beauty industry.	Prerequisites: CHS114 or Program Manager's permission.	130
CHS119	Nail Essentials	Introduction to nail services in the beauty industry.	Prerequisites: CHS116 or Program Manager's permission.	230
CHS212	Skin Essentials	Introduction to skin services in the beauty industry.	Prerequisites: CHS119 or Program Manager's permission.	165
CHS214	Student Salon III	Prepares cosmetology students to be industry ready and prepared to perform services in their chosen field of expertise after licensure with the Arizona Barbering and Cosmetology Board (BCB).	Prerequisites: CHS212 or Program Manager's permission.	225
CHS218	Cosmetology State Licensure Focus	This course is designed to prepare cosmetology students for the written and practical examinations for Arizona Barbering and Cosmetology Board licensure.	Prerequisites: CHS214 or Program Manager's permission.	130
CIS101	Technician IT Fundamentals	Survey of computer fundamentals. Focus on basic knowledge and skills, including components and hardware, word processing, presentations, spreadsheets, and email. Helps prepare students for the CompTIA ITF+ examination.	Prerequisites: None.	L+L 3.0 3.0 3.0
CIS102	Interpersonal and Customer Service Skills for IT Professionals	Examines behaviors necessary to develop and support an effective client service organization. Focuses on methods of increasing the effectiveness of help-desk professionals when responding to a range of customer conditions	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS102DA	IT Customer Support	Examines skills, tools and strategies necessary for becoming a computer help-desk or end-user support professional.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS103	Introduction to Social Media	Identify and explain social media and Web 2.0 technologies for personal, academic, professional, and business applications. Create and maintain accounts on various sites to socialize, write, and share multimedia, while understanding the related ethics, privacy and security issues.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS105	Survey of Computer Information Systems	Overview of computer technology, concepts, terminology, and the role of computers in business and society. Discussion of social and ethical issues related to computers. Use of word processing, spreadsheet, database, and presentation software. Includes uses of application software and the Internet for efficient and effective problem solving. Exploration of relevant emerging technologies.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS107	The Electronic Game Industry	Introduction to the electronic game industry, including history, market, distribution and publishing channels, business models, team roles, and career landscape. Technical topics covered include software engineering, artificial intelligence, game physics, computer graphics, and networking.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS108	Electronic Portfolio Development	Compile, reflect on, and select prior learning experiences and artifacts. Design, produce, and publish an online portfolio that documents prior learning. Includes techniques for presenting the electronic portfolio for evaluation.	Prerequisites: A grade of C or better in (CIS105 or BPC110) or permission of Instructor.	L+L 1.0 2.0 2.0
CIS111	Ethics in Information Technology	Ethical issues that arise as a result of increasing use of computers, and the responsibilities of those who work with computers, either as computer science professionals or end users. Critical inquiry and review of ethical challenges in information technology business, including professional and corporate responsibility, government regulation, fiduciary responsibilities of information, infringement of intellectual property, security risk assessment, Internet crime, identity theft, employee surveillance, privacy, compliance, social networking, and the ethics of IT corporations.	Prerequisites: None.	LEC 3.0 3.0 3.0
CIS113AE	Microsoft Word: Word Processing Level I	Using word processing software to create, name and manage files, edit text, and do basic formatting of documents.	Prerequisites: None.	L+L 1.0 2.0 2.0
CIS113BE	Microsoft Word: Word Processing Level II	Using more advanced features of word processing software to format documents, create lists, mail-merged documents, and documents with themes and styles.	Prerequisites: A grade of C or better in CIS113AE or permission of Instructor.	L+L 1.0 1.0 1.0
CIS113CE	Microsoft Word: Word Processing Level III	Utilizing more advanced features of word processing software to incorporate style and theme elements, use desktop publishing capabilities, and insert tables.	Prerequisites: A grade of C or better in CIS113BE or permission of Instructor.	L+L 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS113DE	Microsoft Word: Word Processing	Using word processing software to create, name and manage files, edit text, format, apply themes and styles, create and modify tables, apply desktop publishing features, and print a variety of types of documents.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS114AE	Excel: Level I	Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, and projections.	Prerequisites: None.	L+L 1.0 2.0 2.0
CIS114BE	Excel: Level II	Additional Excel spreadsheet techniques, including macro programming, database searching, extraction, and linking to obtain prescribed reports and graphs.	Prerequisites: A grade of C or better in CIS114AE or permission of Instructor.	L+L 1.0 1.0 1.0
CIS114CE	Excel: Level III	Additional Excel spreadsheet techniques, including complex macros, statistics, and matrix manipulation. Project design using multiple, integrated spreadsheets	Prerequisites: A grade of C or better in CIS114BE or permission of Instructor.	LEC 1.0 1.0 1.0
CIS114DE	Excel Spreadsheet	Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, projections, macro programming, database searching, extraction, linking, statistics, and matrix manipulation. Production of graphs and reports. Project design using multiple, integrated spreadsheets.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS116	Computer Graphics: Introduction to Microsoft Visio	Introduction to use of Visio graphics software to create and edit drawings using predefined shapes and templates. Use of Visio tools to create simple drawings with text, symbols and labels.	Prerequisites: None.	L+L 1.0 2.0 2.0
CIS117DM	Microsoft Access: Database Management	Introduction to Microsoft Access. Emphasis on features, design, and database management.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS118AB	PowerPoint: Level I	Use of PowerPoint software to produce professional-quality presentation visuals	Prerequisites: None.	L+L 1.0 2.0 2.0
CIS118BB	PowerPoint: Level II	Use of PowerPoint software to add movement and sound to desktop presentations to enhance audience attention.	Prerequisites: A grade of C or better in CIS118AB.	L+L 1.0 1.0 1.0
CIS118DB	Desktop Presentation: PowerPoint	Use of PowerPoint to produce professional-quality presentation visuals with animation and sound.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS119DO	Introduction to Oracle: SQL	Use of Oracle tools and methodologies to fulfill real-world business information requirements. Hands-on exercises for designing, creating, and maintaining database structures to store, retrieve, update, and display data in a relational database using the SQL programming language. Creating and maintaining database objects. Advanced retrieval techniques.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS119DP	Oracle: Database Administration	Basic administrative tasks performed by a database administrator (DBA). Conceptual understanding and hands-on applications of the Oracle database architecture and interaction of its components.	Prerequisites: A grade of C or better in CIS119DO, or permission of Instructor. CIS126++ or CIS121++ is recommended.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS120DA	Introduction to Adobe Premiere	Foundations of video import, export, and editing. Includes parts and function of a video camera, preproduction and production, incorporating photographs, titles, graphics, animation and audio, capturing, editing, rendering and outputting digital video. Prepares students for the Adobe Certifications related to Adobe Premiere.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS120DB	Introduction to Adobe Illustrator	Provides students with the knowledge and skills to use Adobe Illustrator graphics software on a computer. Basic foundation course in the use of electronic techniques to create, manipulate, and edit images, text, abstract art, graphics design, color graphics and business charts; determine file formats appropriate for web and print; utilize tools to optimize graphics and create a PDF file.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS120DC	Introduction to Adobe Animate	Focuses on entry-level skill expectations for digital animation using Adobe Animate. Covers basic animation techniques used in the creation, manipulation, and editing of animation graphics. Prepares students for the Adobe certifications related to Adobe Animate.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS120DF	Introduction to Adobe Photoshop	Focuses on entry-level skills and knowledge for digital imaging using Adobe Photoshop. Prepares students for the Adobe Certifications related to Photoshop.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS120DK	Introduction to Digital Video Editing	Introduction to digital video editing comprises of a foundation for video import, export, and editing functions. Includes parts and function of a video camera, preproduction and production, incorporating photographs, titles, graphics, animation and audio, capturing, editing, rendering and outputting digital video.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS120DL	Introduction to Adobe After Effects	Includes creating visual effects for video projects. Explores techniques and methodologies used to create shots for big budget special effects. Topics include color and light matching, keying, motion tracking, rotoscoping and working with film.	Prerequisites: A grade of C or better in CIS120DA or CIS120DK, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS120DO	Introduction to Adobe Audition	Introduction to editing audio files in a multitrack editing environment using Adobe Audition. Includes the import of files in a variety of formats that were generated using other software and how to export files.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS121AB	Microsoft Command Line Operations	Use of the Microsoft command line interface: basic concepts, internal and external commands, subdirectories, and editor.	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS121AE	Windows Operating System: Level I	Specific topics include Windows basics, navigating and customizing the desktop, maintaining hardware and software, improving performance, configurations, securing your computer, taskbar, organizing, searching and managing folders and files, installing and uninstalling applications, Internet Explorer fine tuning, security, and searching, including advanced search techniques, keyboard shortcuts, and current topics.	Prerequisites: None.	L+L 1.0 2.0 2.0
CIS121AH	Microsoft PowerShell/Command Line Operations	Day-to-day command line administration tasks of Microsoft Windows. PowerShell used to create scripts to administer Microsoft windows environment.	Prerequisites: None. MST150++ suggested but not required.	L+L 3.0 4.0 4.0
CIS121AI	Mac Operating System	Specific topics include getting started with Mac OS; working with disks, folders, and files; installing and using applications; setting system preferences; printing, faxing, and scanning; getting and living online; using iLife; sharing a Mac with other users; creating a home network; and maintaining the Mac.	Prerequisites: None.	L+L 1.0 2.0 2.0
CIS122AE	Windows Operating System: Level II	Additional capabilities of the Windows program that configure devices and customize the presentation of the operating system. System tools, control panel utilities, the My Computer, Network Neighborhood, and Microsoft Exchange desktop icons. Other helpful utilities presented.	Prerequisites: A grade of C or better in CIS121AE or permission of Instructor.	L+L 1.0 2.0 2.0
CIS124AA	Project Management Software: Level I	Utilization of project management software packages by managers and advanced business students to solve critical management planning tasks. Evaluation of management opportunities utilizing software packages to monitor project progress and resource allocation. Includes "what-if" analyses, and preparation of management reports	Prerequisites: None.	L+L 1.0 1.7 1.7
CIS124BA	Project Management Software: Level II	Advanced use of project management software. Covers features and functions to solve critical management planning tasks. Project communications, scheduling, resource allocation, tracking processes and importing and exporting data also covered. Project consolidation emphasized.	Prerequisites: A grade of C or better in CIS124AA or permission of Instructor.	L+L 1.0 1.7 1.7
CIS126DL	Linux Operating System	Introduction to the Linux Operating system. Develop knowledge and skills required to install, configure and troubleshoot a Linux-based workstation including basic network functions. Learn basic command line and Graphical User Interface (GUI) desktop environment utilities and applications. Fundamental abilities to achieve the entry-level industry certification covered.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS126RH	Red Hat System Administration I	Introduction to core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps prepare for the Red Hat certification exams using a hands-on, task-focused curriculum.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS130DA	3D Studio Max: Modeling	Introduction to 3D modeling using 3D Studio Max. Emphasis will be placed on Polygonal, Solid, and Surface modeling tools. Students will also understand concepts such as modifiers, sub-object editing, extruding, Booleans, lofting, lathing and compound object modeling. Introduction to basic lighting, texturing and rendering techniques.	Prerequisites: A grade of C or better in CIS105.	L+L 3.0 4.0 4.0
CIS130DB	3D Studio Max: Animation	Introduction to three-dimensional animation tools and principles, with an emphasis on character construction and animation. 3D Studio Max will be the primary application for use in this class.	Prerequisites: A grade of C or better in CIS105.	L+L 3.0 4.0 4.0
CIS131AA	Doing Business on the Internet	Overview of different ways businesses are taking advantage of and using the Internet. Includes how companies are selling items and services over the Internet; techniques used to expand customer contacts; marketing strategies; availability of government and financial information; future potential and disadvantages; using the Internet for customer service; establishing a World Wide Web site. Some previous computer experience preferred	Prerequisites: None.	LEC 1.0 1.0 1.0
CIS132	HTML/CSS	Overview of foundational HyperText Markup Language (HTML) and Cascading Style Sheets (CSS) coding. Create web pages and sites that adhere to web standards and best practices using current web coding standards.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS133AA	Internet/Web Development Level I-A	Overview of the Internet and its resources. Hands-on experience with various Internet communication tools	Prerequisites: None.	L+L 1.0 2.0 2.0
CIS133DA	Internet/Web Development Level I	Overview of the Internet/World Wide Web (WWW) and its resources. Hands-on experience with various Internet/WWW resource discovery, information retrieval, and social media tools. Design and Development of multi-page websites using current Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS) standards..	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS136	Content Management Systems: WordPress	Overview of WordPress Content Management System. Includes hands-on design and creation of web pages and blogs for the World Wide Web. Designed to cover best practices for web site/blog creation.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS138DA	Desktop Design and Publishing Using Adobe InDesign	Use of Adobe InDesign to compose and print textual and graphic materials of high quality. Includes word processing of copy, use of graphics programs, layout of design elements, printing alternatives, and file formats.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS140	Survey of Multimedia Technology	Introduction to multimedia technology and its uses. Overview of the various hardware and software used in developing and delivering multimedia. Emphasis on how multimedia is used in education and training. Provides a basic understanding of the process used to define and develop multimedia applications.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 2.0 3.0 3.0
CIS143	Introduction to Critical Infrastructure Protection	History and overview of critical infrastructure protection and its ties within the Department of Homeland Security prior to and after September 11, 2001. Focus on risk management associated with sectors specific industries and provides an overview of the public and private partnerships, along with laws and standards developed to protect critical infrastructures.	Prerequisites: None.	LEC 3.0 3.0 3.0
CIS150	Programming Fundamentals	Structured program design and logic tools. Use of computer problems to demonstrate and teach concepts using appropriate programming language.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS150AB	Object-Oriented Programming Fundamentals	Structured and Object-Oriented design and logic tools. Use of computer problems to demonstrate and teach concepts using an appropriate programming language.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS151	Computer Game Development -Level I	Introduction to object-oriented game development, game design, and game theory. Use of computer software to demonstrate and teach concepts using an appropriate game development platform to model real-time simulations and create computer games using object oriented tools. Introduction to developing PC games, educational software, and training software using windows based object oriented developments tools.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS154	Database Modeling and Design	Top-down, systematic approach to defining a database design based on analysis of business information and requirements. Identifying and evaluating standard data model and design patterns. Developing an entity-relationship (ER) diagram that accurately reflects the business. Mapping the ER diagram to an initial database design and revising for complex entities, attributes, and relationships.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS156	Python Programming: Level I	Introduction to Python programming. Includes general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS159	Visual Basic Programming I	Use of the Visual Basic programming language to solve problems using suitable examples from business or other disciplines	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS162	C Programming I	Beginning C programming. Includes features needed to construct programs, functions, pointers, input and output options, data types, structures, and unions, and disk file operations.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS162AB	C++: Level I	Introduction to C++ programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS162AD	C#: Level I	Introduction to C# programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS162RS	Rust Programming	Beginning Rust programming. Includes features needed to construct programs, functions, pointers, input and output options, data types, structures, unions, and disk file operations.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS163AA	Java Programming: Level I	Introduction to Java programming. Includes features needed to construct Java Applets, Java Applications, control structures, methods, arrays, character and string manipulation, graphics, and object-oriented programming	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS164AB	Oracle: PL/SQL Programming	Writing PL/SQL procedures, functions, and packages. Creating and managing PL/SQL program units and database triggers in Oracle development environment. Managing dependencies and manipulating large objects	Prerequisites: A grade of C or better in CIS119DO or permission of Instructor.	L+L 3.0 4.0 4.0
CIS165	Introduction to IOS Application Development	Introduction to iOS device programming utilizing appropriate software, programming languages, and iOS frameworks. Understand iOS hardware and feature basics. Go through the entire design process from concept to final product delivery.	Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS165DA	Introduction to Android Application Development	Beginning with an overview of Android features, this class explores the required software tools and programming techniques for developing Android device applications from creating the user interface, working with activities, intents and views, to using databases, providing data persistence, accessing device services, to debugging and publishing applications.	Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS165DB	C#/VB.NET: Windows 8 App Development	Building upon desktop application development with Visual Studio using VB.NET or C# languages, developing apps for Windows 8 utilizes Extensible Application Markup Language (XAML) for interface design. Windows 8 utilizes UI design standards that are unique from previous versions. Develop apps for Windows 8 smartphones and tablets that utilize touch input methods, translate into different resolutions, states, and orientations, and can tap into mobile features such as location and acceleration sensors. Includes working with external data and packaging for Windows Store distribution.	Prerequisites: A grade of C or better in CIS159 or CIS162AD or permission of Instructor.	L+L 3.0 4.0 4.0
CIS165DC	Xamarin/C# Cross-Platform Development	Develop cross-platform mobile apps for iOS, Android, and Windows devices using the Xamarin.Forms Platform and C#, utilizing the Visual Studio IDE. Focusing on Xamarin.Forms projects, the course includes PCL and SAP approaches to shared code, developing interfaces with XAML or in C# code, emulator testing, data binding, backgrounding, packaging for deployment. Coding techniques include Layouts and shared controls (views), MVVM pattern, LINQ, SQLite, and Dependency Injection for platform specific coding.	Prerequisites: A grade of C or better in CIS162AD, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS166AA	Introduction to JavaScript	Introduction to basic JavaScript programming concepts including syntax. Covers Hypertext Markup Language (HTML), programming logic and debugging, as well as forms manipulation and animation.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.	L+L 3.0 4.0 4.0
CIS166AC	Web Scripting with Active Server Pages (ASP).NET	Introduction to web scripting using Microsoft's ASP.Net (Active Server Pages). Web application development using Hypertext Markup Language (HTML), ASP.Net Web Forms, programming logic, and Structured Query Language (SQL).	Prerequisites: A grade of C or better in CIS133DA and (CIS159 or CIS162AD) or permission of Instructor.	L+L 3.0 4.0 4.0
CIS166AE	Web Scripting with PHP: Hypertext Preprocessor (PHP)	Introduction to web scripting with PHP (PHP: Hypertext Preprocessor). Web application development using Hypertext Markup Language (HTML), PHP, programming logic, and Structured Query Language (SQL).	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.	L+L 3.0 4.0 4.0
CIS171	Survey of Blockchain Technology	This survey class will introduce you to the exciting world of distributed ledger technology (i.e. the blockchain), cryptocurrencies such as Bitcoin and Ether as well as smart contracts. The emphasis is on the blockchain's role in revolutionizing business. Basic knowledge of computer operation and the ability to browse the Internet are recommended.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS190	Introduction to Networking	Overview of networks. Emphasis on the elements of a network, current issues and products, and use of a network. Includes terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Helps prepare students for the CompTIA Network+ examination.	Prerequisites: None. Corequisites: CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS201	Introduction to Operational Technology	Differences between Operational Technology (OT) and Information Technology (IT). Focus on the components and their uses within an OT system. Addresses the inherent threats, physical and cyber related, to an OT system when connected to an IT system needed to be addressed in order to maintain security and resilience.	Prerequisites: A grade of C or better in CIS270, or ITS110, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS202	Introduction to Smart Grid Security	Focus on differences between control systems, used to control physical and computer information systems, used to process data, in the Power and Utility industry. Power Systems industry, system elements, functions and security risks are covered.	Prerequisites: A grade of C or better in CIS270 or ITS110, or permission of Instructor.	LEC 3.0 3.0 3.0
CIS203	Principles of the Risk Management Framework	History and overview of the Federal Information Security Modernization Act (FISMA) and its effect on cybersecurity management and oversight. Focuses on the National Institute of Standards and Technology (NIST) Risk Management Framework (RMF) and its use in the process of authorizing information systems to operate under the FISMA guidelines.	Prerequisites: A grade of C or better in CIS270 or ITS110, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS213DE	Advanced Microsoft Word: Word Processing	Using advanced word processing software features to perform tasks such as mail merge, collaboration, web pages, math functions, macros, photo enhancements, graphics, tables, forms and manage long documents.	Prerequisites: A grade of C or better in CIS113DE or (CIS113AE and CIS113BE and CIS113CE) or permission of Instructor.	L+L 3.0 4.0 4.0
CIS214DA	Advanced Excel for Data Analytics	Advanced Excel spreadsheet features for data analytics including advanced functions, PivotTables, Data Modelling, Dashboard creation and forecasting for Business Intelligence (BI). Includes capstone project of an interactive dashboard using a multi-table Excel Data Model.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [CIS114DE and (CIS117DM or CIS276DA or CIS276DB)], or permission of Instructor.	L+L 3.0 4.0 4.0
CIS214DE	Advanced Excel Spreadsheet: Level II	Advanced Excel spreadsheet features including formatting techniques, macros and Visual Basic for applications. Templates, built-in functions and lists as well as analysis tools including Pivot Tables and Goal Seek covered. Import and export data, workgroup collaboration and Internet features of Excel emphasized.	Prerequisites: A grade of C or better in CIS114DE or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS215	Foundations of Data Analytics and Programming	Overview of data analytics and programming, concepts, terminology, and how analytics and programming are used professionally in business. Use of office application software, dashboards and Integrated Development Environments (IDEs). Includes exploration of relevant emergent technologies.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS216	Data Governance, Management, and Quality	Overview of data governance, data management, and data quality concepts and terminology, and the roles of individuals and businesses with respect to data governance, data management and data quality in analytics. Use of word processing, spreadsheet, database and presentation software. Will demonstrate and use data governance, data management and data quality frameworks and models.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS215 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS217AM	Advanced Microsoft Access: Database Management	Advanced database concepts including database design, primary and secondary key selection and relationships between tables. Queries, sub forms, macros, events, Visual Basic modules and Access Internet features also covered.	Prerequisites: A grade of C or better in CIS117DM.	L+L 3.0 4.0 4.0
CIS220DF	Adobe Photoshop Level II: Advanced Digital Imaging	Goes beyond the basic use of palettes, selections, layers, menus, and tool options, and focuses on using Photoshop software's advanced features to manipulate and correct digital and digitally produced images.	Prerequisites: A grade of C or better in CIS120DF or permission of Instructor.	L+L 3.0 4.0 4.0
CIS224	Project Management Microsoft Project for Windows	Introduction to project management concepts while working with MS Project to solve complex project management networks, including creating Gantt and PERT charts, tracking project progress, planning for restrictions, and integrating MS Project with other software packages such as Excel, Word, Powerpoint, and cc Mail.	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS225AB	Object-Oriented Analysis and Design	Methodologies and notations for fundamental object-oriented analysis and design including use cases, objects, classes, stereotypes, and relationships. Object-oriented iterative process for system development. A continuous application development exercise for applying the analysis and design concepts.	Prerequisites: Any programming language or permission of Instructor.	L+L 3.0 4.0 4.0
CIS227	Assembly Language	Concepts and use of the Assembly programming language, including basic arithmetic operations, flow control, and memory management.	Prerequisites: A grade of C or better in CIS162++ or permission of Instructor.	L+L 3.0 4.0 4.0
CIS230DA	3D Studio Max: Materials	Emphasis on creating and applying materials and textures to three-dimensional environments. Techniques for creating skins, surfaces, and shading types for objects, environments and characters will be explored. Original textures, both life-like and imaginary, will be created using 3D Studio Max and a 2D computer graphics software application.	Prerequisites: A grade of C or better in CIS130DA or CIS120DF or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS230DB	3D Studio Max: Lighting and Rendering	Emphasis on lighting and rendering for three-dimensional environments. Techniques for illuminating scenes and characters will be explored. Prepare scenes for rendering to video, film and real-time rendering using 3D Studio Max.	Prerequisites: A grade of C or better in CIS130DA or permission of instructor.	L+L 3.0 4.0 4.0
CIS233DA	Internet/Web Development Level II	Plan, design and create web sites using HTML and Advanced Cascading Style Sheets (CSS). Expedite the development process using CSS frameworks and libraries. Enhance user experience and web site functionality using supporting technologies. Exploration of User Interface (UI) and User Experience (UX), best practices, accessibility, strategies, and careers in web design and development.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.	L+L 3.0 4.0 4.0
CIS235	e-Commerce	Introduction to Electronic Commerce on the Internet. Designing an electronic storefront including web page content and development, e-commerce site marketing, advertisement, legal and security considerations, credit card and other debit transaction covered. Also includes current issues in e-commerce.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.	L+L 3.0 4.0 4.0
CIS238DL	Linux System Administration	Managing Linux Operating Systems including sophisticated manipulation of file structures, backup systems, printing processes, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, kernel customization, and system resource control. Preparation for industry certifications such as the CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1).	Prerequisites: A grade of C or better in CIS126DL or CIS126RH or permission of Instructor.	L+L 3.0 4.0 4.0
CIS238RH	Red Hat System Administration II	Continue to develop core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps to prepare students for the Red Hat certification exams using a hands-on, task-focused curriculum.	Prerequisites: A grade of C or better in CIS126RH, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS239DL	Linux Shell Scripting	Linux Shell Scripting syntax and methods including the automation of system tasks as well as interpreted user-level programming. Course includes the Linux Borne Again Shell (BASH) as well as a variety of industry competitors.	Prerequisites: A grade of C or better in CIS238DL or CIS238RH or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS240DL	Linux Network Administration	In depth networking based on Linux servers and the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite. Integrating Linux servers and workstations into a network environment with multi-platform network operating systems including a variety of open-standard and proprietary protocols. Preparation for industry certifications such as the CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1).	Prerequisites: A grade of C or better in CIS238DL or permission of Instructor.	L+L 3.0 4.0 4.0
CIS240RH	Red Hat System Administration III	Provides solid understanding of how to automate services on a Linux system. Covers use of Ansible to automate provisioning, configuration, application deployment, and orchestration on Red Hat Enterprise Linux 8. Content aligns with the Red Hat Certified Engineer (RHCE - EX294) exam, a professional certification.	Prerequisites: A grade of C or better in CIS238RH or permission of Instructor.	L+L 3.0 4.0 4.0
CIS243	Internet/Web Development Level III	Development of interactive websites with graphics, video, and sound using advanced web design techniques and tools. Design theory for maximizing web readership, interactive and multimedia elements, speed and accessibility optimization, and intuitive user interfaces	Prerequisites: A grade of C or better in CIS233DA or permission of Instructor.	L+L 3.0 4.0 4.0
CIS250	Management of Information Systems	The study of business information systems and its management, communication, e-business strategies, emerging technologies, database concepts, and project management. Overview of systems analysis and design. Learn about the competitive and strategic uses of information systems and how they are transforming organizations and their management.	Prerequisites: A grade of C or better in CIS105.	L+L 3.0 4.0 4.0
CIS251	Computer Game Development -Level II	Advanced object-oriented game development, advanced game design, and advanced game theory. Use of game development software tools to demonstrate advanced concepts for modeling real-time simulations and creating computer games using object oriented development tools. In depth coverage of game programming (scripting) techniques, and decision logic using object oriented techniques.	Prerequisites: A grade of C or better in CIS151 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS252	Introduction to Kubernetes Administration	Provides students skills and knowledge to perform the responsibilities of a Kubernetes administrator. Includes covering the cluster architecture, installation, configuration, workloads, scheduling, services, networking, storage and troubleshooting. Helps students prepare for the Certified Kubernetes Administrator (CKA) certification.	Prerequisites: A grade of C or better in CIS238DL or CIS238RH or permission of Instructor.	L+L 4.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS254	Introduction to Kubernetes Application Development	Provides students skills and knowledge to perform the responsibilities of a Kubernetes application developer. Helps students prepare for the Certified Kubernetes Application Developer (CKAD) certificate.	Prerequisites: A grade of C or better in CIS126DL or CIS126RH or permission of Instructor.	L+L 3.0 4.0 4.0
CIS255	Introduction to Kubernetes Security	Provide students with skills and knowledge on a broad range of best practices for securing container-based applications and Kubernetes platforms during build, deployment, and runtime. Helps students prepare for Kubernetes Security Specialist (CKS) Certification.	Prerequisites: A grade of C or better in CIS252 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS256	Python Programming Level II	Advanced Python object-oriented programming concepts and applications. Emphasis on code documenting, versioning, unit testing strategies, and security practices for Python project/package development. Includes Python applications for data analysis, networking, database manipulation, and web application development.	Prerequisites: A grade of C or better in CIS156 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS256CN	Python for Cybersecurity and Networking	Focus on practical applications of Python frameworks and libraries to support offensive and defensive cybersecurity operations and the management of network devices.	Prerequisites: A grade of C or better in (CIS156 and CNT140AB), or permission of Instructor.	L+L 3.0 4.0 4.0
CIS256DA	Python for Data Analysis	Introduction to data analysis concepts using Python's rich set of tools, libraries, and packages. Includes basic data analysis, creation of meaningful data visualizations, and advanced topics such as supervised and unsupervised machine learning techniques.	Prerequisites: A grade of C or better in CIS156 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS259	Visual Basic Programming II	Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines.	Prerequisites: A grade of C or better in CIS159 or permission of Instructor.	LEC 3.0 4.0 3.7
CIS260BI	Data Visualization: Power Business Intelligence (BI)	This data visualization course covers the graphic representation of data and how to effectively and efficiently communicate it from singular and disparate data sources using Power Business Intelligence (BI). Helps students prepare for the Microsoft Power BI Data Analyst certification.	Prerequisites: A grade of C or better in CIS114DE and (CIS215 or CIS214DA) and (CIS276DA or CIS276DB) or permission of Instructor.	L+L 3.0 4.0 4.0
CIS260TB	Data Visualization: Tableau	This data visualization course covers the graphic representation of data and how to effectively and efficiently communicate it from singular and disparate data sources using Tableau. Helps students prepare for the Tableau Certified Data Analyst certification.	Prerequisites: A grade of C or better in CIS114DE and (CIS215 or CIS214DA) and (CIS276DA or CIS276DB) or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS262AD	C# Level II	Advanced C# programming with emphasis on data structures, dynamic memory allocation, object-oriented programming, user interfaces, and database processing. Overview of web applications, network programming, and reporting tools	Prerequisites: A grade of C or better in CIS162AD or permission of Instructor.	L+L 3.0 4.0 4.0
CIS263AA	Java Programming: Level II	Intermediate Java programming. Includes features needed to construct object-oriented programming, multithreading, multimedia, files, streams and data structure	Prerequisites: A grade of C or better in CIS163AA or permission of Instructor.	L+L 3.0 4.0 4.0
CIS265	Advanced iOS Application Development	Advanced iOS device programming utilizing the Swift/XCode application, and the programming languages Objective-C and/or Swift, utilizing various iOS frameworks. Understand iOS hardware and feature basics. Go through entire design process from concept to final product delivery.	Prerequisites: A grade of C or better in CIS150++ and CIS165, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS265DA	Advanced Android Application Development	Advanced Android device programming utilizing an Android Integrated Development Environment, and an Android-focused programming language such as Java or Kotlin, utilizing various advanced activity layouts, views, and intents. Covers advanced Object Oriented Programming (OOP) practices, local and cloud-based database backends, threading, incorporating device features and sensors, and unit testing.	Prerequisites: A grade of C or better in CIS165DA or permission of Instructor.	L+L 3.0 4.0 4.0
CIS266	Network Integration Capstone	Application of project management, installation and troubleshooting to integrate multiple operating systems. Topics include: diagnostic and troubleshooting procedures, security vulnerability and penetration software to installation.	Prerequisites: A grade of C or better in [(CIS238DL or CIS238RH) and (CIS240DL or CIS240RH)], or CNT160AB, or [(MST155DC and MST157DC) and (CIS270 or CIS271DL or CIS271RH or CNT205)], or associated industry certifications, or permission of Instructor.	L+L 4.0 5.0 5.0
CIS267	Pega System Architect Essentials	An overview of the Pegasystems low-code platform for Artificial Intelligence (AI)-powered decisioning and workflow automation. Topics covered will include case management, data and integration, security, Dev-Ops, the user experience, application development, reporting, and mobility. The course will prepare you to take the Certified Pega System Architect (CPSA) exam. Completing the CPSA exam is a requirement to pass the course.	Prerequisites: A grade of C or better in (CIS126DL or CIS126RH), CIS133DA, CIS263AA, and CIS276DA or permission of Instructor.	L+L 4.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS270	Essentials of Network and Information Security	The intent of the Essentials of Network and Information Security is to provide students with a basic understanding of the fundamental concepts of cybersecurity and security design. Students will explore the threats to security of information systems; responsibilities and basic tools for information security, including communication security, infrastructure security, organizational security and basic cryptography. Introduces the language of network security and hardware, software and firmware components of an information security system for local, metropolitan, enterprise, and wide area networks. Assists in preparation for the CompTIA Security+ exam, or equivalent.	Prerequisites: A grade of C or better in BPC270 or BPC274 or CIS126++ or MST150++, and CIS190 or CNT140++, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS271DL	Linux Security	Implementing in-depth security methods and techniques in a Linux-based network environment. Utilize programs, utilities and configuration techniques to provide user-level, file system, and network security. Gain knowledge in a variety of security cracking techniques and how to guard against them. In all aspects of security, the standard of practicing professional ethics seriously emphasized. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC	Prerequisites: A grade of C or better in CIS240DL or Permission of Instructor.	L+L 3.0 4.0 4.0
CIS271RH	Red Hat System Administration IV	Provides solid understanding on containers, containerized applications, and orchestration of containers using Kubernetes and Red Hat OpenShift on Red Hat Enterprise Linux.	Prerequisites: A grade of C or better in CIS238RH or permission of Instructor.	L+L 3.0 4.0 4.0
CIS275DL	Linux Capstone	The Linux Capstone course aggregates the skills, knowledge, communication, and critical thinking skills from the Linux Program. This course is to emulate a production environment that prepares students to work as a Linux Systems Administrator. The course helps to prepare students for Linux Industry certification exams.	Prerequisites: A grade of C or better in CIS240DL, or CIS240RH, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS276DA	MySQL Database	A broad overview of the MySQL database. Includes Structured Query Language (SQL) instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install MySQL, model and create new databases, manage users, authentication, and stored procedures, and develop backup/restore strategies.	Prerequisites: A grade of C or better in CIS105, or CIS117DM, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS276DB	SQL Server Database	A broad overview of the Microsoft Structured Query Language (SQL) Server database. Includes SQL instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install SQL Server, model and create new databases, manage users, authentication, and stored procedures, and develop backup/restore strategies.	Prerequisites: A grade of C or better in CIS105, or CIS117DM, or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS276DC	NoSQL	A broad overview of Not Only SQL (NoSQL) databases. Contrast NoSQL databases to the Structured Query Language (SQL) databases. Includes NoSQL instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install NoSQL Servers, model and create NoSQL databases, manage users, authentication, and stored procedures equivalents, and develop backup/restore strategies.	Prerequisites: A grade of C or better in CIS215 and (CIS276DA or CIS276DB), or permission of Instructor.	L+L 3.0 4.0 4.0
CIS280	Current Topics in Computing	Critical inquiry of current topics in computing. Application of industry trends to solve problems and/or investigate issues	Prerequisites: None.	L+L 3.0 4.0 4.0
CIS280AA	Current Topics in Computing	Critical inquiry of current topics in computing. Application of industry trends to solve problems and/or investigate issues	Prerequisites: None.	L+L 1.0 2.0 2.0
CIS280AB	Current Topics in Computing	Critical inquiry of current topics in computing. Application of industry trends to solve problems and/or investigate issues	Prerequisites: None.	L+L 2.0 3.0 3.0
CIS285	Computer Information Systems Capstone Project	Students will create a capstone project with opportunities for individualized research and application of aggregate technology and professional knowledge and skills obtained throughout the student's program of study. Focus on communication, problem solving, critical thinking, and project management skills.	Prerequisites: Permission of Program Director or Instructor.	L+L 3.0 4.0 0.0
CIS286	Technology Team Peer Mentorship	Students will have an opportunity to mentor other students and work as a team to develop and support a technology project related to their program of study paralleled by professional expertise and guidance from team members, faculty, and/or industry mentor. Focus on application of technology knowledge to the development of a team project to solve real world technology problems/needs with an innovative technology focus. Focus on the team experience and project and workforce development, management and research, as well as mentoring and collaborative professional behaviors needed to facilitate innovations for profitable commercial feasibility.	Prerequisites: A grade of C or better in EPS151. Corequisites: CIS285.	L+L 3.0 4.0 4.0
CIS288	Digital Design Portfolio	Procedures for compiling, evaluating, and selecting prior learning experiences and artifacts for a digital portfolio. Covers techniques for the design, production, and publishing of an online portfolio documenting prior learning. Includes techniques for presenting the digital portfolio for evaluation.	Prerequisites: A grade of C or better in CIS133DA and (CIS120DB or CIS120DF or CIS138DA) or permission of Instructor.	L+L 2.0 3.0 3.0
CIS290AA	Computer Information Systems Internship	Work experience in business or industry	Prerequisites: Permission of Instructor.	LAB 1.0 6.0 0.0
CIS290AB	Computer Information Systems Internship	Work experience in business or industry	Prerequisites: Permission of Instructor.	LAB 2.0 12.0 0.0
CIS290AC	Computer Information Systems Internship	Work experience in business or industry	Prerequisites: Permission of Instructor.	LAB 3.0 18.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS293	VMware ESXI Server Enterprise	Introduction to vSphere, vCenter and VMware ESXI server in the enterprise. Covers many aspects of virtualization for VMware ESXI server administration. Designed to develop knowledge and skills required to install, configure, and troubleshoot a VMware ESXI Server (vSphere) including basic network functions. Helps prepare you for the VMware Certified Professional - Datacenter Virtualization (VCP-DCV) exam.	Prerequisites: A grade of C or better in BPC270, or CIS126DL, or CIS126RH, or CIS190, or CNT140AB, or MST150++, or permission of Instructor.	L+L 4.0 5.0 5.0
CIS294	VMware vSphere Operate, Scale and Secure	Designed for experienced VMware vSphere users. Teaches advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure. Addresses advanced features of vSphere and vCenter infrastructure.	Prerequisites: A grade of C or better in CIS293, or permission of Instructor.	L+L 4.0 5.0 5.0
CIS295	VMware NSX: Install, Configure, Manage	Focuses on installing, configuring, and managing VMware NSX. Covers NSX as a part of software-defined networking and implementation of NSX features and functionality. Uses accompanying lecture and hands-on lab activities.	Prerequisites: A grade of C or better in CIS293, or permission of Instructor.	L+L 4.0 5.0 5.0
CIS296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
CIS296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CIS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
CIS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CIS314	Data Privacy and Integrity	Overview of data privacy and data integrity, history, concepts, and terminology, and the importance of each in the analytics and programming professions. Discussion of international, national, state and local regulations and guidelines pertaining to data privacy and data integrity. Use of office application software and current technology. Exploration of relevant and emerging regulations, guidelines, and technologies.	Prerequisites: A grade of C or better in CIS215 or permission of Instructor.	L+L 3.0 4.0 4.0
CIS315	Data Protection	Overview of data protection concepts and terminology, and the roles of individuals and businesses with respect to the safeguarding of data and the mitigation of data corruption, data compromise and data loss. Use of word processing, spreadsheet, database and presentation software. Will demonstrate and use data protection frameworks, models and relevant tools.	Prerequisites: A grade of C or better in CIS156, CIS162AD, CIS215, and (CIS276DA or CIS276DB), or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS316	Descriptive Analytics	Study of descriptive analytics and how to apply statistical tools and methods on historical and current datasets and multi-domain cases. Interpret current data, identify changes, trends and commonalities in data, and how to ascertain differences in performance over time while preparing data for advanced analysis.	Prerequisites: A grade of C or better in CIS114DE, CIS215, CIS256DA, and (CIS276DA or CIS276DB), or permission of Instructor. Prerequisites or Corequisites: CIS214DA or permission of Instructor.	L+L 3.0 4.0 4.0
CIS317	Data Complexity	Intricacies of enterprise data and how to apply knowledge (background, concepts and experiences from prior courses) and skills (Integrated Development Environment (IDE) tools, and programming languages) on complex integrated and non-integrated disparate datasets, by testing, designing, and creating algorithms that lead to improved decision making.	Prerequisites: A grade of C or better in CIS214DA, CIS215, CIS256DA, CIS260BI, CIS260TB, CIS262AD, and (CIS276DA or CIS276DB), or permission of Instructor.	L+L 3.0 4.0 4.0
CIS318	Predictive Analytics	Study of predictive analytics and how to apply statistical tools and methods on historical and current datasets and multi-domain cases previously analyzed for the purposes of yielding accurate inferential and predictive analytic results. Apply advanced and emergent statistical tools and methods, while modeling practices and processes, that facilitate the maturation of organizational analytic capabilities toward a desired future state. Predict analytical outcomes that are repeatable, and consistent with hypotheses, which lead to improved business decisions.	Prerequisites: A grade of C or better in CIS215, CIS256, CIS256DA, CIS316 and GBS220, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS324	Information Technology Project Management	Covers the general aspects of project management and emphasizes the important special considerations which apply to information technology projects. Covers principles for managing multiple IT projects and project portfolios, including use of waterfall and agile methodologies. Explores best practices for project management in information technology departments. Includes analysis of budgets, risk management, and cost estimation / justification techniques.	Prerequisites: A grade of C or better in CIS224.	LEC 3.0 3.0 3.0
CIS350	Advanced Information Technology Management	Course expands upon fundamental concepts and focuses on management of information technology systems in organizations. Explores management processes and procedures for planning, implementation, and operation of information systems with an emphasis on operational management. Examines real world successes and failures of technology management. Equips students with knowledge of current information technology management and decision support systems.	Prerequisites: A grade of C or better in CIS250.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS360	Data Analysis	Introduces processes of obtaining, preparing, analyzing and presenting visualized data using appropriate software. Provides an understanding of data interpretation and its practical application in a business. Introduces data governance strategies ensuring data quality throughout the complete lifecycle of the data. Covers data analytics and mining techniques within the context of supporting data-driven decision making.	Prerequisites: A grade of C or better in CIS156, CIS215, and ((MAT140 or MAT141 or MAT142 or MAT145 or MAT146), or higher level mathematics course, or appropriate district placement).	LEC 4.0 4.0 4.0
CIS376	Database Management and Security	Overview of the functional areas, concepts and techniques of database management and security. Topics include business and regulatory requirements, database architecture and design, access control, retrieval concepts, data auditing, incident response and optimal database system performance, security and availability. Explores new directions in database management and security.	Prerequisites: A grade of C or better in CIS119DO, or CIS276DA, or CIS276DB.	LEC 4.0 4.0 4.0
CIS390	Network Management	Course explores principles of network management architecture within the Information Technology (IT) life cycle, including network management principles; network design and optimal performance; network maintenance, common problems and solutions; business practices in network management; and effective stakeholder communication. Students will work individually and in teams to evaluate and design network systems and solutions to address business problems and end user needs.	Prerequisites: A grade of C or better in CIS105, and (CNT140AB or CIS190).	LEC 4.0 4.0 4.0
CIS411	Ethics, Regulations, and Legal Issues in Information Technology	Covers ethical and regulatory issues in information technology (IT) and creates a foundation for analyzing and addressing evolving legal concerns. Provides an overview of laws concerning computer and network security, business policy, and legal boundaries for systems authorization. Examines ethical, legal, and professional ramifications on leadership practices in an organization's technology environment.	Prerequisites: A grade of C or better in CIS111 or ITS120.	LEC 3.0 3.0 3.0
CIS415	Big Data	Study of the fundamentals and characteristics of Big Data. Evaluation of existing Big Data processing platforms and tools. Developing skills to handle and implement Big Data projects, including machine learning concepts.	Prerequisites: A grade of C or better in CIS256, CIS256DA, CIS262AD and CIS318, or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CIS416	Presentation of Analytics and Programming Results and Solutions	Use of data analytic tools, programming methods, nominal (components/elements), and ordered steps to proficiently and effectively deliver comprehensive results and understanding, ranging from simple to complex data. Guide technical and non-technical audiences in understanding data and establish opportunities for the audience to believe it. Mitigate the problems that can be caused by poor decision making due to mis-understandings, mis-interpretations, mis-representations and disconnections among organizational members with respect to the meaning of results.	Prerequisites: A grade of C or better in CIS256, CIS260BI, CIS260TB, CIS262AD, (CIS276DA or CIS276DB), CIS317, and CIS318, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS470	Enterprise Cyber Security	Provides overview of various concepts and principles in information technology (IT) security and the management of IT security plans to mitigate information security (IS/IT) related security risks. Covers evaluation of cybersecurity plans and policies and the impact of laws, regulations, and codes of professional behavior with respect to cybersecurity. Includes preparation of responses to cybersecurity incidents and overview of various concepts of IT security.	Prerequisites: A grade of C or better in CIS270.	LEC 4.0 4.0 4.0
CIS475	Emerging Trends in Information Technology	Course focuses on identification of and research in the emerging trends in Information Technology (IT). Selected topics could be within the areas of Kubernetes, Edge Computing, Ethics in Artificial Intelligence (AI), Blockchain, Automation and AI, Telehealth Solutions, Internet of Things (IoT), Augmented Reality, Hyperautomation, Development Operations (DevOp), 5G, and/or other emerging issues. Course includes discussion of contemporary topics, research in selected areas, and course projects related to student interests.	Prerequisites: A grade of C or better in (CIS190 or CNT140AB) and CIS270.	LEC 4.0 4.0 4.0
CIS480	Data Analytics and Programming Capstone	Capstone project with opportunities for individualized research and application of aggregate technology and professional knowledge and skills obtained throughout the student's program of study. Focus on communication, problem solving, critical thinking, and project management skills.	Prerequisites: A grade of C or better in CLD120, CIS216, CIS224, CIS256, CIS262AD, CIS260BI, CIS260TB, (CIS276DA or CIS276DB), CIS315, CIS317, and CIS318, or permission of Instructor.	L+L 3.0 4.0 4.0
CIS490	Applied Data Analytics and Programming Internship	Work experience in business or industry with an emphasis on data analytics and programming for business, not-for-profit, or industry. Application and aggregate of technical knowledge, communication, problem solving, and critical thinking with a data analytics and programming focus.	Prerequisites: Enrollment in final semester before award completion and permission of Department/Division Chair, or Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CLD110	Amazon Web Services Cloud Foundations	Provides a detailed overview of cloud concepts, Amazon Web Services (AWS) core services, security, architecture, pricing, and support. Intended for students who seek an overall understanding of cloud computing concepts, independent of specific technical roles. Helps to prepare students for the AWS Certified Cloud Practitioner exam.	Prerequisites: None. CIS105 suggested but not required.	L+L 3.0 4.0 4.0
CLD120	Amazon Web Services Cloud Architect Associate	Fundamentals of building IT infrastructure on Amazon Web Services (AWS). Focus on how to optimize use of the AWS Cloud by understanding AWS services and best practices for the AWS Cloud and how they fit into cloud-based solutions. Covers design patterns for architecting optimal IT solutions on AWS, as well as strategies and services implemented on AWS.	Prerequisites: A grade of C or better in CLD110 or permission of Instructor.	L+L 3.0 4.0 4.0
CLD130	Amazon Web Services Cloud Developing	Designed to provide technical knowledge and skills in cloud technology that can be developed with Amazon Web Services (AWS) software development kit (SDK). Focus on best practices for building and deploying secure applications in the AWS Cloud. Helps to prepare students for the AWS Certified Developer - Associate examination.	Prerequisites: A grade of C or better in CLD120 or equivalent AAWS Certified Solutions Architect - Associate certification. CLD110 and CNT140AB recommended.	L+L 3.0 4.0 4.0
CLD140	Amazon Web Services Cloud Operations	Designed to provide technical information and skills required to implement automatable and repeatable deployments of networks and systems on Amazon Web Services (AWS). Describes specific AWS features and tools related to configuration and deployment. Emphasis on best practices in the AWS Cloud and recommended design patterns, problem-solving and troubleshooting. Helps prepare students for the AWS Certified SysOps Administrator - Associate exam.	Prerequisites: A grade of C or better in CLD120 or equivalent AAWS Certified Solutions Architect - Associate certification. CLD110 and CNT140AB recommended.	L+L 3.0 4.0 4.0
CLD417	Cloud Analytics	Conduct cloud analysis with practical, real-world examples. Analyze data sets and create visual representation of that data, using a case-study approach. Hands-on experience working with cloud data at scale.	Prerequisites: A grade of C or better in CLD120, CIS215, CIS156, CIS162AD, CIS260BI, CIS260TB, and (CIS276DA or CIS276DB), or permission of Instructor.	L+L 3.0 4.0 4.0
CNS102	Foundations for Apprenticeship	The demographics and industry projections of the building and construction trades. Structure and purpose of registered apprenticeship. Apprenticeship roles and responsibilities. Overview of fluctuation in employment and finances inherent to the construction trades. Emphasis on preparation for periods of high and low employment debt management within registered apprenticeship.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CNS110	Green Construction Overview	Overview of 'green construction'. Green energy vs. green building, U.S. Green Building Council (USGBC) and the building life cycle, five main areas of green building standards, Leadership in Energy and Environmental Design (LEED) accreditation, and LEED certification.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 0.5 0.5 0.5
CNS182	Construction Estimating and Print Reading	Analysis and interpretation of construction drawings (blueprint reading); interpretation of symbols, annotations, conventions, and terms of trade. Emphasizes learning quantities of material, equipment, and labor for a construction project. Includes a focus on procedures used to apply timely unit costs. Covers Occupational Safety and Health Administration (OSHA) Safety Standards and their impact on construction cost.	Prerequisites: None.	LEC 3.0 3.0 3.0
CNS200	Construction Management: Field Operation	Procedures and methods used by construction contractors to manage field operation during various phases of a project. Includes project team, job scheduling, personnel relations, use of the construction documentation on site, inspection techniques, safety issues, scope and supervision of the overall construction process.	Prerequisites: A grade of C or better in CON181 and CON244, or permission of Department or Division.	LEC 3.0 3.0 3.0
CNS201	Construction Management: Office Operation	Skills and techniques required to manage construction office operations. Includes establishing and financing the business, marketing, office operations, and maintaining relationships with other construction industry entities through a systematic planning approach.	Prerequisites: A grade of C or better in (CON130, CON181, and CON244), or permission of Department or Division.	LEC 3.0 3.0 3.0
CNS205	Sustainable Construction/LEED Certification	Fundamentals of major components of sustainable design and construction, including energy, health care facilities, cultural and natural resources, and other environmental and economic issues of sustainable built environments. Importance of a collaborative team effort with owner, developers, architects, engineers, and constructors will be integrated into the course. Issues impacting schedule and budgets of sustainable construction projects will be analyzed. Prepares student for the Leadership in Energy and Environmental Design (LEED) Certification Exam.	Prerequisites: None.	LEC 3.0 3.0 3.0
CNS230	Computer Aided Design and Drafting (CADD) 3D for Construction & Architecture (CADD II)	Design, construction, and annotation of three-dimensional objects for construction and architecture industries using AutoCAD software.	Prerequisites: A grade of C or better in COM130 or permission of Department or Division.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CNS240	Advanced Computer Aided Design and Drafting (CADD) for Construction & Architecture (CADD III)	Use of advanced AutoCAD two- and three-dimensional commands along with various customization codes and techniques specific to architecture and construction industries	Prerequisites: A grade of C or better in CNS230 or permission of Department or Division.	L+L 3.0 6.0 6.0
CNS250	Civil Drafting I: Civil 3D	Application of civil drafting software (Civil 3D) for civil drafting and surveying. Use of coordinating geometry and survey point databases to create topographical maps. Interpreting and delineating topographical data and maps for site and route work. Applying the basics of coordinate geometry (COGO) to surveying language.	Prerequisites: A grade of C or better in CON130 or permission of Department or Division.	L+L 3.0 6.0 6.0
CNS251	Civil Drafting II: Civil 3D	Advanced knowledge and skill in using civil drafting software (Civil 3D) in right-of-way improvement. Use of base maps in utility and street improvement; use of street improvements in creation of maps and profiles; use of map and profiles in utility improvements.	Prerequisites: A grade of C or better in CNS250, or permission of Department or Division.	L+L 3.0 6.0 6.0
CNS252	Civil Drafting III: Civil 3D	Use of civil drafting software (Civil 3D) for site development. Includes use of engineering and surveying software in analysis and computation of earthwork and creation of site drawings.	Prerequisites: A grade of C or better in CNS251, or permission of Department or Division.	L+L 3.0 6.0 6.0
CNS271	Home Inspection Structure	Home inspection practices for foundation, footings, roof, and framework, including floor, wall, and ceiling. Covers structural considerations and reporting practices.	Prerequisites: A grade of C or better in (CON244 and CON262) or permission of Department or Division.	LEC 3.0 3.0 3.0
CNS272	Home Inspection Plumbing, Electrical and HVAC	Home inspection practices for plumbing, electrical, heating, cooling, and air conditioning, and defects of exposed parts of these systems in a house structure. Includes components of systems and reporting practices.	Prerequisites: A grade of C or better in CON244 and CON262, or permission of Department or Division.	LEC 3.0 3.0 3.0
CNS273	Home Inspection: Insulation and Interiors	Home inspection practices for insulation and interiors, including walls, ceilings, floors, windows, and doors, and their possible defects. Covers reporting practices.	Prerequisites: A grade of C or better in CON244 and CON272, or permission of Department or Division.	LEC 3.0 3.0 3.0
CNS274	Home Inspection: Roofing and Exteriors	Home inspection practices for roofing and exteriors of a house, and their defects. Covers reporting practices.	Prerequisites: A grade of C or better in (CON244 and CON262) or permission of Department or Division.	LEC 3.0 3.0 3.0
CNS282AA	Volunteerism for Construction: A Service Learning Experience	Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	LAB 1.0 1.0 0.0
CNS282AB	Volunteerism for Construction: A Service Learning Experience	Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CNS282AC	Volunteerism for Construction: A Service Learning Experience	Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	LAB 3.0 3.0 0.0
CNS285	Introduction to Residential Plan Review	Application of international model code (building, mechanical, plumbing, and electrical) to contract documents for one- and two-family dwelling residential construction.	Prerequisites: A grade of C or better in (CON244 and CON262) or permission of Department or Division.	LEC 3.0 3.0 3.0
CNS286	Introduction to Commercial Plan Review	Application of international model codes (building, mechanical, plumbing, and electrical) to contract documents for commercial construction.	Prerequisites: A grade of C or better in (CON244 and CON263) or permission of Department or Division.	LEC 3.0 3.0 3.0
CNS290AA	Construction Internship	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Eighty (80) hours of designated work experience.	Prerequisites: Permission of Department or Division.	LAB 1.0 6.0 0.0
CNS290AB	Construction Internship	Construction internship office/field experience with private/public agencies or citizen volunteer groups. One hundred and sixty (160) hours of designated work experience.	Prerequisites: Permission of Department or Division.	LAB 2.0 12.0 0.0
CNS290AC	Construction Internship	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Two hundred and forty (240) hours of designated work.	Prerequisites: Permission of Department or Division.	LAB 3.0 18.0 0.0
CNS290AE	Construction Internship	Construction internship office/field experience with private / public agencies or citizen volunteer groups.	Prerequisites: Permission of Department or Division.	LAB 5.0 25.0 0.0
CNS296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and ability to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CNS296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and ability to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
CNS296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and ability to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
CNS296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and ability to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CNS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CNS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
CNS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CNT140AB	Introduction to Networks	Focus on the architecture, structure, functions, components, and models of the Internet and other computer networks. Principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Students will build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Preparation for Cisco certification examination.	Prerequisites: None.	L+L 4.0 6.0 6.0
CNT150AB	Switching, Routing, and Wireless Essentials	Focus on configuring switches and routers for use in small and medium size networks. Including Virtual Local Area Networks (VLANs), VLAN trunking, Inter-VLAN routing, Spanning Tree Protocol (STP), EtherChannel, Dynamic Host Configuration Protocol (DHCP), First Hop Redundancy, Local area Network (LAN) and Switch security, and Static routing. Knowledge and skills needed to implement a Wireless Local Area Network (WLAN) is also covered. Preparation for Cisco certification examination.	Prerequisites: A grade of C or better in CNT140AB or permission of Instructor.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CNT160AB	Enterprise Networking, Security, and Automation	Focus on the configuration of routers and switches within small and medium size networks for advanced functionality including Open Shortest Path First (OSPF), Network security, Access Control Lists (ACLs), Network Address Translation (NAT), Wide Area Network (WAN) concepts, Virtual Private Networks (VPNs), Quality of Service (QOS), network management, design, troubleshooting, virtualization, and automation. Preparation for Cisco certification examination.	Prerequisites: A grade of C or better in CNT150AB or permission of Instructor.	L+L 4.0 6.0 6.0
CNT168	CCNA Discovery - Designing and Supporting Computer Networks	Networking design and customer support including gathering requirements, designing basic networks, establishing proof- of-concept, and performing project management tasks. Lifecycle services, including upgrades, competitive analyses, and system integration, in the context of pre-sale support	Prerequisites: A grade of C or better in CNT158.	L+L 4.0 6.0 6.0
CNT171	CCNA Exam Prep	Preparation for renewal of CCNA certification by reviewing the Open Systems Interconnection (OSI) model and industry standards including network topologies, IP addressing, subnet masks, access control list, basic network design and cable installation. Practice the skills to configure, customize, maintain and troubleshoot Cisco routers and switches for Local Areas Networks (LANs) and Wide Area Networks (WANs) using Cisco IOS command set. Review any new material introduced since the last CCNA exam version.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) certification, or permission of Instructor.	L+L 1.0 2.0 2.0
CNT202	Cisco Secure Firewall Appliance Configuration	Applications of Cisco Networking technologies in designing and implementing security solutions to reduce risk of revenue loss and vulnerability. Hands-on experience and skills in security policy design and management, security technologies, products and solutions, secure firewall design, installation, configuration and maintenance, Authentication, Authorization, and Accounting (AAA), Failover, and Virtual Private Network (VPN) implementation using firewalls.	Prerequisites: A grade of C or better in CNT160AB or permission of Instructor.	L+L 4.0 5.0 5.0
CNT203	CCNA Cybersecurity Operations	Uses virtual environments to simulate real-world cybersecurity threat scenarios and create opportunities for practice with ethical hacking, security monitoring, analysis and resolution. Introduces current technical concepts, such as classification of network attacks, monitoring, analysis of network intrusion data, cryptography, prevention and mitigation of network attacks and application of incident response models to manage network security incidents.	Prerequisites: A grade of C or better in CNT150AB or permission of Instructor.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CNT205	Cisco Certified Network Associate Security	Associate-level knowledge and skills required to secure Cisco networks. Development of a security infrastructure, identification of threats and vulnerabilities to networks. Mitigation of security threats. Core security technologies. Installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Competency in the technologies that Cisco uses in its security structure.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) certification, or permission of Instructor.	L+L 4.0 6.0 6.0
CNT206	Cisco Certified Network Associate Wireless	Associate-level knowledge and skills required in Cisco wireless networks. Includes comprehensive hands-on labs to design, plan, implement, operate, secure, and troubleshoot wireless networks.	Prerequisites: A grade of C or better in CNT160AB or permission of Instructor.	L+L 4.0 6.0 6.0
CNT240	Cisco Certified Network Professional: Enterprise Core	Provides Cisco Certified Network Professional (CCNP) Enterprise knowledge and skills needed for professional-level networking technologies and architecture. Topics include virtualization, network assurance, security, and automation. Helps to prepare students to take the Cisco Enterprise Network Core Technologies (ENCOR) certification exam aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core certifications.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) industry certification, or permission of Instructor.	L+L 8.0 12.0 12.0
CNT240AA	Cisco Certified Network Professional: Enterprise Core I	Provides Cisco Certified Network Professional (CCNP) Enterprise knowledge and skills needed for professional-level networking technologies and architecture. Topics include virtualization, network assurance, security, and automation. Helps to prepare students to take the Cisco Enterprise Network Core Technologies (ENCOR) certification exam aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core certifications.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) industry certification, or permission of Instructor.	L+L 4.0 6.0 6.0
CNT240AB	Cisco Certified Network Professional: Enterprise Core II	Provides Cisco Certified Network Professional (CCNP) Enterprise knowledge and skills needed for professional-level networking technologies and architecture. Topics include virtualization, network assurance, security, and automation. Helps to prepare students to take the Cisco Enterprise Network Core Technologies (ENCOR) certification exam aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core certifications.	Prerequisites: A grade of C or better in CNT240AA.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CNT250	Cisco Certified Network Professional: Enterprise Advanced Routing and Services	Provides Cisco Certified Network Professional (CCNP) Enterprise advanced knowledge and skills needed for professional-level networking technologies and architecture. Covers the implementation and troubleshooting of advanced routing technologies and services including Layer 3 VPN services, infrastructure security, and infrastructure services. Helps to prepare students to take the Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) certification exam aligned with the CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) industry certification, or permission of Instructor.	L+L 8.0 12.0 12.0
CNT250AA	Cisco Certified Network Professional: Enterprise Advanced Routing and Services I	Provides Cisco Certified Network Professional (CCNP) Enterprise advanced knowledge and skills needed for professional-level networking technologies and architecture. Covers the implementation and troubleshooting of advanced routing technologies and services including Layer 3 VPN services, infrastructure security, and infrastructure services. Helps to prepare students to take the Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) certification exam aligned with the CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) industry certification, or permission of Instructor.	L+L 4.0 6.0 6.0
CNT250AB	Cisco Certified Network Professional: Enterprise Advanced Routing and Services II	Provides Cisco Certified Network Professional (CCNP) Enterprise advanced knowledge and skills needed for professional-level networking technologies and architecture. Covers the implementation and troubleshooting of advanced routing technologies and services including Layer 3 VPN services, infrastructure security, and infrastructure services. Helps to prepare students to take the Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) certification exam aligned with the CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications.	Prerequisites: A grade of C or better in CNT250AA.	L+L 4.0 6.0 6.0
COM080	Conversation Circles	Practice in conversing in English for non-native speakers. Emphasis in developing conversational techniques to facilitate building and maintaining relationships.	Prerequisites: None.	LEC 3.0 3.0 3.0
COM095	Basic Oral Communication Skills	Listening, speaking, and related academic performance skills, including note taking. Emphasis on activities designed to improve and synthesize these skills	Prerequisites: None.	LEC 3.0 3.0 3.0
COM100	Introduction to Human Communication	Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
COM100AA	Introduction to Human Communication Part I	Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication.	Prerequisites: None.	LEC 1.0 1.0 1.0
COM100AB	Introduction to Human Communication Part II	Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication.	Prerequisites: None.	LEC 1.0 1.0 1.0
COM100AC	Introduction to Human Communication Part III	Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication.	Prerequisites: None.	LEC 1.0 1.0 1.0
COM101	Interpersonal Communication in the Workplace	Elements and functions of communication; perception of self and others; verbal and nonverbal communication; listening skills; effective verbal responses; communicating ideas and feelings; role of communication in relationships with others.	Prerequisites: None.	LEC 1.0 1.0 1.0
COM102	Group Discussion in the Workplace	Concept of a decision-making group; role requirements in group discussion; characteristics and responsibilities of small-group leaders; tools for problem solving in a group; presenting proposals to management.	Prerequisites: None.	LEC 1.0 1.0 1.0
COM105	Relational Communication/ Senior Adults	Communication skills as they apply to personal relationships of older adults. Student's assessment of their individual communication skills in relations with family members, social and business acquaintances, and friends	Prerequisites: None.	LEC 1.0 1.0 1.0
COM110	Interpersonal Communication	Theory and practice of interpersonal communication skills which affect day-to-day social interactions with other persons. May include using verbal and nonverbal symbols, active listening, resolving interpersonal conflict, understanding cultural perspectives, and developing and maintaining personal and professional relationships.	Prerequisites: None.	LEC 3.0 3.0 3.0
COM110AA	Interpersonal Communication Part I	Theory and practice of interpersonal communication skills which affect day-to-day social interactions with other persons. May include using verbal and nonverbal symbols, active listening, resolving interpersonal conflict, understanding cultural perspectives, and developing and maintaining personal and professional relationships.	Prerequisites: None.	LEC 1.0 1.0 1.0
COM110AB	Interpersonal Communication Part II	Theory and practice of interpersonal communication skills which affect day-to-day social interactions with other persons. May include using verbal and nonverbal symbols, active listening, resolving interpersonal conflict, understanding cultural perspectives, and developing and maintaining personal and professional relationships.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
COM110AC	Interpersonal Communication Part III	Theory and practice of interpersonal communication skills which affect day-to-day social interactions with other persons. May include using verbal and nonverbal symbols, active listening, resolving interpersonal conflict, understanding cultural perspectives, and developing and maintaining personal and professional relationships.	Prerequisites: None.	LEC 1.0 1.0 1.0
COM120	Articulation and Pronunciation for Effective Communication	Analysis of speech production problems due to misarticulated speech sounds, critical listening to sound production, understanding speech patterns, practicing idioms and expressions, applying dialectic considerations, and preparing and delivering group and individual speech presentations.	Prerequisites: None.	LEC 3.0 3.0 3.0
COM125	Presentational Speaking	Techniques for developing oral presentations which include visual media. Principles of verbal message development and related visual design stressed. Techniques of managing the presentational environment including question and answer periods and the operation of common equipment	Prerequisites: None.	LEC 3.0 3.0 3.0
COM150	Communicating Through Digital Narratives	Focuses on the intersection of communication theory and personal narrative. Leveraging digital tools to enhance human communication and human experience to create, edit, produce, and preserve digital narratives.	Prerequisites: None.	L+L 3.0 3.0 3.0
COM163	Intercultural Communication in Everyday Life	Provides knowledge to promote greater understanding and application of intercultural communication in social and organizational interactions. For advanced non-native English speakers.	Prerequisites: Appropriate English placement test score at the ENG101 or ENG107 level or a grade of C or better in ESL097 or permission of Instructor.	LEC 3.0 3.0 3.0
COM177	Experiential Group Activities Facilitation	Communication skills, tools, and strategies used to lead experiential learning activities. Designed to enhance the student's ability to facilitate experiential group learning activities.	Prerequisites: None.	LEC 3.0 3.0 3.0
COM181	Conflict Mediation	Develop communication skills necessary to conduct mediation in formal and informal settings. Applies principles and theories of message production and responding, listening, questioning, source and receiver factors, and emotion to conflict management communication. Emphasis on respecting diversity and empowering joint problem solving throughout	Prerequisites: None.	LEC 3.0 3.0 3.0
COM207	Introduction to Communication Inquiry	Overview of theory and methodological practice in communication with particular attention to scholarly writing skills. Emphasis on development of critical thinking skills through active participation in the research process.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent and COM100 or equivalent or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
COM215	Listening	Emphasis on diagnosis of individual listening, corrective procedures, and reinforcement of improved habits through normal and speeded listening drills. Includes everyday communication experiences	Prerequisites: None.	LEC 3.0 3.0 3.0
COM221	Oral Fluency in American Speech	Designed for English Language Learner (ELL) students to develop greater oral fluency in spontaneous speaking contexts and presentational speaking. Emphasis on development of speech, language, and vocal clarity; basic skills in presentational speaking; and use of English to interact spontaneously with others.	Prerequisites: A grade of C or better in COM120 or permission of Instructor.	LEC 3.0 3.0 3.0
COM222	Argumentation	Discussion and practice of the use of evidence, applied reasoning, recognition of fallacies, selection of arguments, and methods of analyzing issues	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
COM225	Public Speaking	Designed to enhance the student's ability to present public speeches confidently and competently. Also designed to improve information literacy and critical thinking skills	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
COM230	Small Group Communication	Principles and processes of small groups and development of skills for participation and leadership in small group settings. Practice in problem solving, decision making, and information sharing.	Prerequisites: None.	LEC 3.0 3.0 3.0
COM241	Oral Interpretation of Literature	The study, analysis, and preparation for performance of prose, poetry, and dramatic literature. Preparation of material for public audiences.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
COM250	Introduction to Organizational Communication	Introduction to the study of communication in organizations including identification of variables, roles and patterns influencing communication in organizations	Prerequisites: None.	LEC 3.0 3.0 3.0
COM251	Interviewing	Principles and techniques of interviewing, including practice through real and simulated interviews in informational, persuasive, and employee-related situations	Prerequisites: None.	LEC 3.0 3.0 3.0
COM259	Communication in Business and Professions	Interpersonal, organizational, intercultural, group, and public communication in business and professional organizations. Emphasis on oral communication and the effective use of technology and new media.	Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.	LEC 3.0 3.0 3.0
COM263	Elements of Intercultural Communication	Diverse cultural contexts are explored through basic concepts, principles, and theories of intercultural communication. Discovering effective interaction and appropriate communication in a global community is emphasized.	Prerequisites: None.	LEC 3.0 3.0 3.0
COM270	Health Communication	Theory and practice of interpersonal, intercultural, public, and team communication skills in a healthcare setting.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
COM271	Voice and Diction	Exercises and techniques to free the voice and improve projection, resonance, and articulation. Covers international phonetic alphabet and standard stage speech	Prerequisites: None.	LEC 3.0 3.0 3.0
COM275	Nonverbal Communication	Effects of space, time, body movements, environment, objects, and voice quality on human communication and interaction	Prerequisites: None.	LEC 3.0 3.0 3.0
COM277	Group Facilitation Theory and Practice	Theory and practice of group facilitation skills. Emphasis on leading organizational groups in problem solving and decision-making.	Prerequisites: Associates degree or equivalent or 3 to 5 years work experience or permission of Instructor.	LEC 2.0 2.0 2.0
COM281	Communication Activities	Designed to provide students with competence and confidence in a variety of speech situations beyond the classroom setting. May include presentations at speech competitions or at community organizations.	Prerequisites: None.	L+L 3.0 3.0 3.0
COM281AA	Communication Activities	Designed to provide students with competence and confidence in a variety of speech situations beyond the classroom setting. May include presentations at speech competitions or at community organizations.	Prerequisites: None.	L+L 1.0 1.0 1.0
COM281AB	Communication Activities	Designed to provide students with competence and confidence in a variety of speech situations beyond the classroom setting. May include presentations at speech competitions or at community organizations.	Prerequisites: None.	L+L 2.0 2.0 2.0
COM282AA	Service-Learning Experience in Communication	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
COM282AB	Service-Learning Experience in Communication	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
COM282AC	Service-Learning Experience in Communication	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
COM296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
COM296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
COM296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
COM296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
COM298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
COM298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
COM298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CON100	Introduction to Construction	Introduces students to all aspects of the construction industry such as how projects are delivered, reviewing the procurement process and how they are estimated, scheduled, and contracted. Introduces students to the individual roles that constructors fill in the delivery of a construction project.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON101	Construction and Culture	The cultural context of construction, emphasizing the evolution and expansion of constructed environments as expressions of ethical and historical value systems.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON102	Foundations of Construction Trades	Introduction to construction trades with an overview of standard practices in the construction profession, including safety, construction drawings, tools, and material handling. Includes workspace maintenance according to professional standards and basic calculation skills in the construction environment, including primary operations. Examines the United States standard and metric units of measurement, orthographic figures, and area and volume calculations for two and three-dimensional objects. Provides students with the information and skills to read and understand construction drawing. Includes basic rigging and material handling procedures.	Prerequisites: None.	LEC 6.0 6.0 6.0
CON102AA	Foundations of Construction Trades: Tools, Equipment, and Workspace	Introduction to construction trades with an overview of common practices in the construction profession including safety, reading blueprints, tools and equipment. Includes maintenance of workspace according to professional standards and basic calculation skills in the construction environment including the primary operations. Examines the United States standard and metric units of measurement, orthographic figures, and area and volume calculations for two and three-dimensional objects. Provides students with the information and skills needed to read and understand construction drawings.	Prerequisites: None.	LEC 2.0 2.0 2.0
CON102AB	Foundations of Construction Trades: Construction Calculations	Introduction to construction trades with an overview of common practices in the construction profession including maintenance of workspace according to professional standards and basic calculation skills in the construction environment including the primary operations. Examines the United States standard and metric units of measurement, orthographic figures, and area and volume calculations for two and three-dimensional objects.	Prerequisites: None.	LEC 2.0 2.0 2.0
CON102AC	Foundations of Construction Trades: Construction Drawings and Materials	Introduction to construction trades with an overview of standard practices in the construction profession including safety, reading blueprints, tools and equipment. Provides students with the information and skills needed to read and understand construction drawings. Includes basic rigging and material handling procedures.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON103	Foundation of Construction Safety	Occupational Safety and Health Act (OSHA). Common causes for accidents and fatalities in construction. Abatement techniques for construction-specific hazards. Use of personal protection and lifesaving equipment. Specific types of health hazards related to the construction industry. Proper methods for handling hazardous materials.	Prerequisites: None.	L+L 1.0 1.0 1.0
CON104	Hand and Power Tools, Equipment, and Workspace	Overview of the selection, use, maintenance and safety procedures for common hand tools, power tools and equipment used in the construction industry. Overview of the maintenance of workspace according to professional standards.	Prerequisites: None.	L+L 1.5 1.5 1.5
CON105	Construction Calculations	Introduction to basic calculation skills in the construction environment including the four primary operations. United States standard and metric units of measure, geometric figures, and area and volume calculations for two and three-dimensional objects.	Prerequisites: None.	L+L 1.5 1.5 1.5
CON106	Foundations of Concrete	Examines the effects of concrete-making materials (aggregates, cements, admixtures, etc.) on the properties of fresh and hardened concrete. Concrete mixture proportioning is discussed along with the calculations and statistical analysis of strength testing.	Prerequisites: None.	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0
CON107	Construction Drawings Introduction	Provides students with the information and skills needed to read and understand construction drawings.	Prerequisites: None.	L+L 1.0 1.0 1.0
CON110	Construction: Carpentry	Examines the layout and construction procedures for floor systems, including: interpretation of construction drawings and specifications, selection of appropriate types of floor and wall system components; and application of floor and wall system materials. Provides an overview of ceiling and roof construction methods, the different types of roofs used in residential construction and materials, and the use of trusses and conventional roof framing. Includes estimation of materials.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 9.0 12.0 12.0
CON110AA	Construction: Carpentry/Floor Systems	Examines the layout and construction procedures for floor systems, including: interpretation of construction drawings and specifications, selection of appropriate types of floor system components and application of floor system materials. Includes estimation of materials.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON110AB	Construction: Carpentry/Wall Systems	Examines the layout and construction procedures for wall systems, including: interpretation of construction drawings and specifications, selection of appropriate types of wall system components; and application of wall system materials. Includes estimation of materials.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor	L+L 3.0 4.0 4.0
CON110AC	Construction: Carpentry/Ceiling and Roof Systems	Examines the layout and construction procedures for roof and ceiling systems, including: interpretation of construction drawings and specifications, selection of appropriate types of roof and ceiling system components; and application of roof and ceiling system materials. Provides an overview of ceiling and roof construction methods, the different types of roofs used in residential construction and materials, and the use of trusses and conventional roof framing. Includes estimation of materials.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor	L+L 3.0 4.0 4.0
CON111	Carpentry: Wall Systems	Examines the layout and construction procedures for wall systems, including: interpretation of construction drawings and specifications; selection of appropriate types of wall system components; and application of wall system materials. Emphasis of the estimation of the amount of materials needed for a wall assembly and some common alternative wall systems.	Prerequisites: None.	L+L 3.5 4.0 4.0
CON112	Carpentry Ceiling Joist and Roof Framing	Covers the layout and construction procedures for roof systems, including interpretation of construction drawings and specifications. Provides an overview of ceiling and roof construction methods, the different types of roofs used in residential construction, materials, estimation of materials, and the use of trusses in basic roof framing.	Prerequisites: None.	L+L 4.0 5.0 5.0
CON117	Interpersonal Skills, Issues and Resolutions in Construction	Information about communication and human relations skills, the expectations of today's diverse workforce, and relationships with stakeholders. Leadership style, interview techniques, and professional development plans. Management skills in problem solving and negotiating.	Prerequisites: None.	LEC 2.0 2.0 2.0
CON122	Construction: Plumbing	Introduces students to materials, hardware, and systems related to the plumbing profession. Provides instruction in drain, waste, and vent (DWV) systems as well as installation, maintenance, and repair of plumbing systems, fixtures and appliances.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 9.0 12.0 12.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON122AA	Construction: Plumbing/Pipes and Fittings	Introduces students to materials, hardware, and systems related to the plumbing profession. Provides instruction in installation, maintenance, and repair of plumbing systems, fixtures and appliances.	Prerequisites: None. Corequisites: (CON103 OR CON271) and CON102 OR (CON102AA AND CON102AB AND CON102AC) or Permission of Instructor.	L+L 3.0 4.0 4.0
CON122AB	Construction: Plumbing/Drain, Waste and Vent	Introduces students to materials, hardware, and systems related to the plumbing profession. Provides instruction in drain, waste, and vent (DWV) systems as well as installation, maintenance, and repair.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0
CON122AC	Construction: Plumbing/Fixtures, Faucets and Water Distribution Systems	Introduces students to materials, hardware, and systems related to the plumbing profession. Provides instruction in water distribution systems as well as installation, maintenance, and repair of fixtures and appliances.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0
CON124	Plumbing: Pipes and Fittings	Introduces the various types of plumbing materials, pipe schedules and material properties, and applications of piping. Trainees will learn how to determine the appropriate types of fittings, valves, hangers, and supports needed for piping jobs. Trainees will learn to properly measure, cut, prep, and join piping.	Prerequisites: None.	L+L 3.5 4.0 4.0
CON125	Plumbing: Fixtures	Introduces commonly used fixtures in plumbing systems. Select and operate each type of fixture for a variety of installations. Provides an overview of plumbing system installation, maintenance and water heating systems.	Prerequisites: None.	L+L 2.0 3.0 3.0
CON126	Plumbing: Drain, Waste, and Vent	Examine the drainage, waste movement and ventilation for construction application. Provides instruction in locating, installing, connecting, and testing a complete drain, waste, and vent (DWV) system.	Prerequisites: None.	L+L 3.5 4.0 4.0
CON127	Plumbing: Water Distribution Systems	Discuss the processes through which potable water is distributed. Examine the identification of the components and functions of a water distribution system and explains the relationships among the components. Includes installation and testing of water distribution systems.	Prerequisites: None.	L+L 2.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON130	Computer Aided Design and Drafting	Fundamental drafting and documentation topics and techniques related to construction, using both board and computer as tools. Concentration on various methods of two-dimensional and three-dimensional drawing, sketching, scaling, and dimensioning with computer and board.	Prerequisites: None.	L+L 3.0 6.0 6.0
CON131	Electrical Systems	Electricity related to residential and light commercial applications, to include common electrical components, AC and DC circuits, and electrical safety. Provides an introduction to reading, interpreting, and creating wiring diagrams and the application of electrical power. Operation and use of specific meters, tools, and an introduction to National Electrical Code (NEC).	Prerequisites: None.	L+L 3.5 4.0 4.0
CON132	Construction: Electrical Systems	An overview of electricity related to residential, commercial, and aspects of industrial applications. Introduction to reading and interpreting construction drawings and wiring diagrams and tools specific to the electrical trade. Use of appropriate wire sizes and material to install electrical distribution systems, raceways, and terminations.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 9.0 12.0 12.0
CON132AA	Construction: Electrical Systems/Introduction to Electrical	An overview of electricity related to residential, commercial, and aspects of industrial applications. Introduction to reading and interpreting construction drawings specific to the electrical trade.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0
CON132AB	Construction: Electrical Systems/Electrical Power Generation	An overview of electricity related to residential, commercial, and aspects of industrial applications. Introduction to wiring diagrams and tools specific to the electrical trade.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0
CON132AC	Construction: Electrical Systems/Raceways and Wireways	An overview of electricity related to residential, commercial, and aspects of industrial applications. Use of appropriate wire sizes and material to install electrical distribution systems, raceways, and terminations.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON133	Conduit, Raceways, and Termination in Electrical Systems	Termination and implementation of electricity in a facility. Considers topics related to box capacities, raceways, conduit sizes, termination practices, wire trays, and finish wiring.	Prerequisites: None.	L+L 4.0 5.0 5.0
CON138	Introduction to Project Management and Resource Control	Technical and management skills such as preconstruction planning, cost and risk control and policy development. Criteria for project layout purchasing, subcontractor management, project layout. Preparation process for project start up, close out and alternate project delivery methods. Major factors which affect production control and production control standards. Project manager's role.	Prerequisites: None.	LEC 1.0 1.0 1.0
CON140	Construction Trades: Introduction to Masonry	Fundamentals of masonry including materials, tools, and techniques. Topics include mortar hand tools, power tools, and masonry vertical and horizontal work.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 9.0 12.0 12.0
CON140AA	Construction Trades: Masonry Fundamentals	Fundamentals of masonry including materials, tools, and techniques. Topics include mortar hand tools, power tools, and masonry calculations.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 4.5 6.0 6.0
CON140AB	Construction Trades: Masonry Systems	Fundamentals of masonry including materials, tools, and techniques. Topics include mortar hand tools, power tools, and masonry vertical and horizontal work.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 4.5 6.0 6.0
CON150	Construction Trades: Solar Energy Technology	Examination of solar energy technology including thermal energy, electrical energy, and energy storage.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 9.0 12.0 12.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON150AA	Construction Trades: Introduction to Solar Energy Systems	Fundamentals of solar energy technology including thermal energy, electrical energy, and energy storage.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0
CON150AB	Construction Trades: Solar System Design, Maintenance and Troubleshooting	Fundamentals of solar energy technology including thermal energy, electrical energy, and energy storage. Includes maintenance and troubleshooting of solar systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0
CON150AC	Construction Trades: Solar Energy System Installation and Inspection	Examination of solar energy technology including thermal energy, electrical energy, and energy storage. Includes inspection and installation of solar systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0
CON170	Construction Trades: H.V.A.C.r	Introduction to major components and functions of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, including heat flow and basic electrical concepts. Introduction to installation of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems. Includes startup and verification of proper equipment operation. Includes installations, diagnostics, preventative and predictive maintenance, and customer service. Introduction to troubleshooting the components of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems to ensure proper equipment operation. Examines federal laws, standards, and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 9.0 12.0 12.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON170AA	Construction Trades: Introduction to H.V.A.C.r for Residential Systems	Introduction to major components and functions of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, to include heat flow and basic electrical concepts. Examines federal laws, standards and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0
CON170AB	Construction Trades: H.V.A.C.r Installation	Installation of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems. Includes startup and verification of proper equipment operation. Includes installations, diagnostics, preventative and predictive maintenance, and customer service.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 4.0 3.0 3.0
CON170AC	Construction Trades: H.V.A.C.r Troubleshooting	Introduction to troubleshooting the components of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, to assure proper equipment operation.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 4.0 3.0 3.0
CON181	Cost Estimating	Determining quantities of material, equipment, and labor for a construction project. Includes procedures used to apply unit costs to these items in a minimum of time. Occupational Safety and Health Administration Safety Standards and their impact on construction cost.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON210	Carpentry: Commercial and Residential	Safety, codes, layout, and construction procedures for carpentry commercial and residential aspects. Includes commercial drawings, steel framing, exterior and interior finishes, roofing applications, door hardware installation, drywall, drywall finishing, suspended ceilings, window, door, floor, and ceiling trim. Students construct, erect, install, and repair structures and fixtures made from wood and other materials.	Prerequisites: A grade of C or better in CON110, or (CON110AA, CON110AB, and CON110AC), or permission of Instructor.	L+L 9.0 12.0 12.0
CON213	Carpentry: Steel Framing	The layout and construction procedures for steel framing, including: interpretation of construction drawings and specifications; selection of appropriate types of steel framing components; and application of materials. Includes estimation of the amount of materials needed for a steel assembly.	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON214	Carpentry: Roof Systems and Building Envelopes	Safety, codes, and construction procedures for roof systems and building envelopes, including interpretation of construction drawings and specifications. Students construct conventional roof structures and ceilings, and install exterior finish materials.	Prerequisites: None.	L+L 3.0 4.0 4.0
CON215	Carpentry: Interior Finishes	The layout and construction procedures for interior finishes such as: drywall, trim, doors, cabinetry and stairs, including interpretation of construction drawings and specifications. Provides an overview of construction methods, the different types of materials, and estimation of materials.	Prerequisites: None.	L+L 4.0 5.0 5.0
CON216	Carpentry: Concrete Forms	Safety, codes, and construction procedures for layout and construction of concrete footers and post-tensioned slabs, wall forms, and columns. Includes interpretation of construction drawings and estimation of materials.	Prerequisites: None.	L+L 3.0 4.0 4.0
CON220	Statics Application for Construction	Emphasis on response of bodies to the action of forces. Elementary analytical and practical approach to the principles and physical concepts of statics. Focus on mastery of basic principles of trigonometry, application of vectors and forces, and moments, with analysis of basic structures and structural components, and statics application to construction.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON221	Applied Statics	Emphasis on response of bodies to the action of forces. Elementary analytical and practical approach to the principles and physical concepts of statics, focuses on mastery of basic principles of trigonometry, application of vectors and forces, and moments, with analysis of basic structures and structural components, trusses, shear and moment diagrams, centroids, and moments of inertia.	Prerequisites: A grade of C or better in MAT15+, (MAT182 OR MAT187 or MAT188) and PHY111.	LEC 3.0 3.0 3.0
CON222	Construction: Advanced Plumbing	Examines the safety, codes, components, installation, and repair of fixtures, appliances, and gas piping. Introduces water supply and distribution, drain, waste, and vent (DWV), and energy efficient water devices.	Prerequisites: A grade of C or better in CON122, or (CON122AA, CON122AB, and CON122AC), or permission of Instructor.	L+L 9.0 12.0 12.0
CON223	Strength of Materials	Strength and application of materials of construction, including mechanics of beams, shafts, and bolted and welded connections under various loading conditions. Construction behavior of various materials externally and internally.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON224	Plumbing: Pipe Systems and Controls	Examines applied calculations to determine size, types and service of pipe systems. Discusses the application of drawings, codes, and specifications for assembly and installation of gas, air, and water systems.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON225	Plumbing: Water Disposal Systems	Examines water disposal and drainage systems, to include the types, components, functions, codes, safety, design, installation and repair.	Prerequisites: None.	L+L 4.0 5.0 5.0
CON226	Plumbing: Fixtures and Appliances	Examines the safety, codes, installation, maintenance, and repair of appliances, fixtures, and gas piping.	Prerequisites: None.	L+L 3.0 4.0 4.0
CON227	Plumbing: Water Resource Solutions	Introduces water supply disinfection, filtration systems, and sustainable water practices.	Prerequisites: None.	L+L 2.0 2.0 2.0
CON232	Construction: Advanced Electrical	Overview of residential, commercial, and industrial electrical advanced applications and components such as power distribution and transmission, motors and motor controls, and wiring applications. Includes testing and troubleshooting methods for electrical systems.	Prerequisites: A grade of C or better in CON132, or (CON132AA, CON132AB, and CON132AC), or permission of Instructor.	L+L 9.0 12.0 12.0
CON234	Electric Power Distribution	Theory and applications of distribution of power from utilities to residential and commercial sites, including transformers and commercial electrical distribution equipment and services. Includes safety, codes, and interpretation of construction drawings and specifications.	Prerequisites: None.	L+L 3.0 4.0 4.0
CON235	Motors: Theory and Application	Describes motor and motor controls in electricity. Explains how to select and install relays and troubleshoot control circuits. Distinctions between AC and DC motors, motor speed control, and design and operation characteristics, connections and terminal markings.	Prerequisites: None.	L+L 4.0 5.0 5.0
CON236	Industrial Wiring Applications	A broad variety of electrical wiring applications, including healthcare facility, heating, ventilation and air conditioning (HVAC), standby, emergency, and fire alarm systems.	Prerequisites: None.	L+L 3.0 3.0 3.0
CON241	Surveying I	Fundamental surveying principles including theory and field work using the level and transit, horizontal measurement by tape or stadia, benchmark and profile leveling traverse surveys and computations, establishment of line and grade. Designed to develop semi-professional personnel working for private or government engineering agencies.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
CON243	Heavy Construction Equipment, Methods, and Materials	Fundamentals of machine selection and production estimating, using computer-generated data to develop programs that speed the decision process or allow easy analysis of multiple options used in the heavy construction industry. Applications of engineering principles in analyzing economical approaches for heavy construction. Covers fleet operation, methods, maintenance, and programs for construction of dams, tunnels, roads, and excavations of buildings.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON244	Working Drawing Analysis: Blueprint Reading	Detailed analysis and interpretation of construction drawings (blueprint reading); interpretation of symbols, annotations, conventions, terms of trade; and understanding of drawing, dimensioning, plan organization, and specifications.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON251	Microcomputers for Constructors	Effective application of computers in support of construction management, administration, and technical aspects of the construction industry. Uses of the computer as a problem-solving tool, including multimedia software, information management, and spreadsheet applications in construction.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON252	Building Construction Methods, Materials, and Equipment	Comprehensive study of construction methods, materials, codes, and equipment used in building construction.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON262	Introduction International Residential Code (IRC)	Covers International Residential Code for various trades, including building, mechanical, plumbing and electric, for one and two family residential construction. Preparation for voluntary certification (IRC building inspection).	Prerequisites: None.	LEC 3.0 3.0 3.0
CON263	Building Codes	Designed specifically to acquaint students with safety principles of building construction under the International Building Code (IBC), including structural requirements for wood, masonry and concrete, fire resistance of building construction, fire resistant materials, and ratings and occupancy requirements.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON271	Construction Safety	Overview of safety methods and procedures for accident prevention and equipment used by construction workers to maximize field safety during various phases of a construction project, including requirements and regulations for construction safety set by Occupational Safety and Health Administration (OSHA) standards along with biological aspects of construction safety.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON273	Electrical Construction Fundamentals	General knowledge of electrical work related to construction management, administration, and technical aspects of the construction industry. Covers circuits and machinery, power transmission, and electrical distribution with emphasis on secondary distribution systems as well as measurement and instrumentation, Ohm's Law, low voltage, high voltage, temporary power, generators, service, systems, circuits, motors, transformers, electrical installations, codes, cogeneration, energy conservation, estimating, safety and related blueprint readings.	Prerequisites: None.	LEC 3.0 3.0 3.0
CON290AA	Construction Internship	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Eighty (80) hours of designated work experience.	Prerequisites: Permission of Department or Division.	LAB 1.0 6.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CON290AB	Construction Internship	Construction internship office/field experience with private/public agencies or citizen volunteer groups. One hundred and sixty (160) hours of designated work experience.	Prerequisites: Permission of Department or Division.	LAB 2.0 12.0 0.0
CON290AC	Construction Internship	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Two hundred and forty (240) hours of designated work.	Prerequisites: Permission of Department or Division.	LAB 3.0 18.0 0.0
CON298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CON298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
CON298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
COS104	Hair Essentials I	Introduction to the basic theory and procedures in cosmetology hair essentials.	Prerequisites: Admission to the Cosmetologist (32 Hours Per Week) program or the Hair Stylist (32 Hours Per Week) program.	200
COS106	Hair Essentials II	Hair-shaping techniques and chemical application procedures in cosmetology hair essentials.	Prerequisites: COS104 with a grade of 80% or better, or Program Manager's approval.	200
COS114	Student Salon I	Continuation of cosmetology theory and practical concepts at an intermediate level. Theory will be focusing on professional development, salon ecology, anatomy and hair decisions. Practical skills will be demonstrated daily on clients and manikins. Rubrics on procedures are done monthly. One day a month on Arizona state board licensure focus.	Prerequisites: COS112 or COS106 with a grade of 80% or better, or Program Manager's approval.	200

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
COS116	Student Salon II	Apply concepts learned in the classroom and the student salon to develop real life scenarios while servicing a client and/or becoming a future business owner in the beauty industry.	Prerequisites: COS114 with a grade of 80% or better, or Program Manager's permission.	200
COS118	Hair Stylist State Licensure Focus	This course is designed to prepare students for the written and practical examinations for the Arizona Barbering and Cosmetology Board (BCB) HAIRSTYLIST licensure only.	Prerequisites: COS116 with a grade of 80% or better, or Program Manager's approval.	200
COS119	Nail Essentials	Introduction to nail services in the beauty industry.	Prerequisites: COS116 with a grade of 80% or better, or Program Manager's permission.	200
COS212	Skin Essentials	Introduction to skin services in the beauty industry.	Prerequisites: COS119 with a grade of 80% or better, or Program Manager's approval.	200
COS214	Student Salon III	Prepares cosmetology students to be industry ready and prepared to perform services in their chosen field of expertise after licensure with the Arizona Barbering and Cosmetology Board.	Prerequisites: COS212 with a grade of 80% or better, or Program Manager's permission.	200
COS218	Cosmetology State Licensure Focus	This course is designed to prepare cosmetology students for the written and practical examinations for Arizona Barbering and Cosmetology Board (BCB) Cosmetology licensure.	Prerequisites: COS214 with a grade of 80% or better, or Program Manager`s permission.	100
COS250	Instructor in Training Orientation	Students will be introduced to the Arizona Barbering and Cosmetology Board instructor safety and sanitation, rules and regulations. This class is to prepare a student to become an instructor in their licensed field.	Prerequisites: 1. Must hold current Arizona Barbering and Cosmetology Board license in good standing, in the appropriate field. 2. Must have one year of industry work	80
COS251	Instructor in Training I	Students will train to become an instructor in their certified field of cosmetology, aesthetics, or nail technology. Students will learn the fundamentals of becoming an instructor by completing assigned work, shadowing instructors, creating lesson plans, coaching students and working hands-on with students and clients.	Prerequisites: COS250.	135
COS252	Instructor in Training II	Students will continue to train to become an instructor in their certified field of cosmetology, aesthetics, or nail technology. Student will learn the fundamentals of becoming an instructor by completing assigned work, shadowing instructors, creating lesson plans, coaching students and working hands-on with students and clients. State board preparation for licensing.	Prerequisites: COS251.	135
COV110	The Seven Habits of Highly Effective People	Development of interpersonal habits that are used by successful people in their personal and professional lives. Seven Habits of Highly Effective People. Video-based lecture course.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
COV112	Great Leaders, Great Teams, Great Results	Overview of foundational characteristics of great teams and organizations. Process oriented approach to creating strategies for inspiring trust and building credibility, defining a purpose, aligning systems of success, and unleashing talents of teams.	Prerequisites: None.	LEC 2.0 2.0 2.0
CPD101	Personal Development	Designed to assist students in developing confidence in making personal, social, and educational decisions. Examination and assessment of individual needs, interests, abilities and values to develop and strengthen interpersonal communication, enhance transitional skills and identify realistic life planning goals	Prerequisites: None.	LEC 2.0 2.0 2.0
CPD102AB	Career Exploration	Designed to assist students make informed career decisions. Focuses on current occupational trends and outlook. Explores career-related interests, values, needs, preferences, skills, and strengths with the use of various assessments. Aids in the development of individualized educational/career goals and action plan.	Prerequisites: None.	LEC 2.0 2.0 2.0
CPD102AC	Creative Job Hunting	Assists students in gaining skills and confidence necessary to compete in the job market. Emphasis on job search techniques and strategies, resume and cover letter writing, interviewing skills and professional etiquette.	Prerequisites: None.	LEC 2.0 2.0 2.0
CPD102AD	Growth and Transformation Strategies	Designed to help students adopt a growth mindset within a holistic framework in order to transform patterns that prevent them from achieving their goals.	Prerequisites: None.	LEC 2.0 2.0 2.0
CPD102AH	Stress Management	Reviews the sources of stress, the physiological effects and the psychological impact of stress on the individual. Provides strategies to manage and reduce stress. Helps students develop and understand behaviors to create a healthy balance in their lives by studying the biological, psychological, physiological, and social aspects of stress and wellness.	Prerequisites: None.	LEC 3.0 3.0 3.0
CPD102AJ	Personal Spiritual Development	Designed to encourage exploration of human spirituality. Focus on personal values and individual belief systems. Emphasis on developing an integrated concept of spirituality and applying it to one's own life	Prerequisites: None.	LEC 2.0 2.0 2.0
CPD102AS	Conflict Resolution	Developing new skills for dealing effectively with everyday conflict and improving quality of one's own life. Opportunity to discuss issues and seek cooperative resolutions	Prerequisites: None.	LEC 2.0 2.0 2.0
CPD103BA	Women In Transition	Designed to assist and support women who are experiencing life transitions. Emphasis on assessing self-potential, increasing self-confidence, managing life change, and exploring education/career/life options in terms of the realities of roles for women today.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CPD103BE	Native American Cultural Pride and Awareness	Develop an awareness of cultural roots, history, and traditions with emphasis on the shaping of personal identity, social, career, and educational decisions	Prerequisites: None.	LEC 2.0 2.0 2.0
CPD104	Career and Personal Development	An overview of the holistic process of career/life planning through self-awareness and understanding of the world of work. Exploration and application of behavioral, social, and cultural factors leading to college, career, and personal success with emphasis on assessment, applied behavior management, motivation, self-care, and career development.	Prerequisites: None.	LEC 3.0 3.0 3.0
CPD108	Personal Money Management for College Students	Designed to assist students in examining values related to spending, borrowing and saving money. Identify financial priorities and responsibilities associated with debt. Develop and follow a personal budget plan and learn strategies for maintaining a financially balanced personal life	Prerequisites: None.	LEC 1.0 1.0 1.0
CPD115	Creating College Success	Strategies to create success in college. Methods for selecting and developing effective academic strategies, increasing self-awareness and developing self-management strategies. Elements of college resources and relationships with others explored in support of students' educational experience	Prerequisites: None.	LEC 1.0 1.0 1.0
CPD150	Strategies for College Success	Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning.	Prerequisites: None.	LEC 3.0 3.0 3.0
CPD150AA	College Orientation and Personal Growth	Emphasis on increasing student success through college orientation, identification of learning style and the use of time management, goal-setting, and interpersonal communication strategies	Prerequisites: None.	LEC 1.0 1.0 1.0
CPD150AB	Study Skills Development	Emphasis on increasing student success through the use of study strategies including materials organization, note-taking, reading, test-taking, memory, and critical and creative thinking	Prerequisites: None.	LEC 1.0 1.0 1.0
CPD150AC	Educational and Career Planning	Emphasis on increasing student success through educational and career planning.	Prerequisites: None.	LEC 1.0 1.0 1.0
CPD160	Introduction to Multiculturalism	Examination of the multiple cultures and subcultures within the contemporary United States. Personal exploration of awareness and appreciation of multiculturalism. Activities for experiencing diverse cultural perspectives. Critical thinking skills for recognizing, analyzing, and mediating cultural and psychological factors impacting conflict and accord between diverse cultures through written and oral discourse.	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CPD180	Human Resilience: Cognitive, Emotional, and Behavioral Applications	Exploration of human resilience and well-being within the context of personal, academic, and career life. Focus on enhancing quality of life, and improving academic performance and career success through awareness of behavior, cognition, and emotion as well as the practice of self-regulation. Topics include mindfulness, positive psychology, motivation, effective thinking, applied neuroscience, mental and emotional health and self-care.	Prerequisites: None.	LEC 3.0 3.0 3.0
CPD195AB	Special Topics: Counseling and Personal Development	Introduction to current topics and contemporary issues related to promoting personal development. Focuses on a variety of techniques and strategies to improve personal and interpersonal effectiveness	Prerequisites: None.	LEC 1.0 1.0 1.0
CPD250	Peer Mentor Training	Development and application of beginning skills and knowledge required to establish and maintain effective peer helping relationships in a college setting. Focus on the role, function, and responsibilities of the peer mentor; verbal and nonverbal communication skills; problem solving; and strategies and resources for first-year student success. Includes on-campus service-learning component.	Prerequisites: Completion of 24 credit hours (100-level or above) with a B grade point average or better and permission of Instructor.	L+L 3.0 4.0 4.0
CPD282AA	Volunteerism for Counseling and Personal Development: A Service Learning Experience	Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
CPD282AB	Volunteerism for Counseling and Personal Development: A Service Learning Experience	Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
CPD282AC	Volunteerism for Counseling and Personal Development: A Service Learning Experience	Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
CPD298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CPD298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CPT110	Carpentry: Floor Systems	Course covers the layout and construction procedures for floor systems, including: interpretation of construction drawings and specifications; selection of appropriate types of floor system components; and application of floor system materials. Course also includes estimation of the amount of materials needed for a floor assembly and some common alternative floor systems.	Prerequisites: None.	81
CPT111	Carpentry: Wall Systems	Course covers the layout and construction procedures for wall systems, including: interpretation of construction drawings and specifications; selection of appropriate types of wall system components; and application of wall system materials. Course also includes estimation of the amount of materials needed for a wall assembly and some common alternative wall systems.	Prerequisites: None.	81
CPT112	Carpentry Ceiling Joist and Roof Framing	Covers the layout and construction procedures for roof systems, including interpretation of construction drawings and specifications. Provides an overview of ceiling and roof construction methods, the different types of roofs used in residential construction, materials, estimation of materials, and the use of trusses in basic roof framing.	Prerequisites: None.	102
CPT213	Carpentry: Steel Framing	Course covers the layout and construction procedures for steel framing, including: interpretation of construction drawings and specifications; selection of appropriate types of steel framing components; and application of materials. Course also includes estimation of the amount of materials needed for a steel assembly.	Prerequisites: None.	41
CPT214	Roof Systems and Building Envelopes	Course covers the safety, codes, and construction procedures for roof systems and building envelopes, including interpretation of construction drawings and specifications. Students construct conventional roof structures and ceilings, and install exterior finish materials.	Prerequisites: None.	81
CPT215	Carpentry: Interior Finishes	Course covers the layout and construction procedures for interior finishes such as: drywall, trim, doors, cabinetry and stairs, including interpretation of construction drawings and specifications. Provides an overview of construction methods, the different types of materials, and estimation of materials.	Prerequisites: None.	102

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CPT216	Carpentry: Concrete Forms	Course covers the safety, codes, and construction procedures for layout and construction of concrete footers and post-tensioned slabs, wall forms, and columns. Includes interpretation of construction drawings and estimation of materials.	Prerequisites: None.	81
CRC101	Introduction to Clinical Research	Introduction to the clinical research process. History, development and basic study designs in varied health, biomedical and biotechnical settings. Clinical trial development phases and regulatory protection for human subjects. Roles and responsibilities of the clinical research team and research organization. Good Clinical Practice (GCP) and International Committee on Harmonization (ICH) guidelines. Functions, research terminology, and general research funding of the Institutional Review Board (IRB) and Ethics Review Committee.	Prerequisites: None.	LEC 4.0 4.0 4.0
CRC102	Clinical Research Regulations	Overview of legal and regulatory research compliance. Federal and international regulations, Good Clinical Practice (GCP) and International Council on Harmonization (ICH) guidelines. Roles, responsibilities and related regulations of Institutional Review Boards (IRB), Data Monitoring Boards and research organizations. Required forms, human subject protection, research integrity, ethical considerations, Health Insurance Portability and Accountability Act (HIPAA) and conflict of interest issues.	Prerequisites: None.	LEC 4.0 4.0 4.0
CRC103	Research Design and Data Management	Major research design methodologies and data management. Interpretation of research design, organization of study charts and data, participant eligibility, and maintenance of screening/visit logs. Submission of adverse event forms. Overview of database structures, electronic data collection methods, and effective presentation of data in required reports. Tracking of investigational agents and preparation for audits and site visits by sponsors and/or regulators. Federal regulations governing clinical trials electronic data submissions and transmissions.	Prerequisites: None.	LEC 4.0 4.0 4.0
CRC151	Introduction to Medical Devices in Clinical Evaluation	Introduction to the role of the Clinical Research Coordinator (CRC) in medical device research. Overview of medical device regulatory requirements, the role of the Institutional Review Board (IRB), and classification of medical devices including Humanitarian Device Exemptions. Special emphasis on conduct of an investigational study and roles of the investigator, CRC, and the IRB.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRC152	Research Ethics	History of human experimentation and bioethics. Fundamentals of ethical principles including autonomy, beneficence, nonmaleficence and justice. Practical application of moral sensitivity, moral reasoning, moral commitment and perseverance, and moral implementation. Overview of ethical issues arising from biomedical research including informed consent, vulnerable populations, using children and animals for research, and placebos and sham surgery in research. Includes Institutional Review Board (IRB`s), conflict of interest, plagiarism and data fabrication.	Prerequisites: None.	LEC 3.0 3.0 3.0
CRC153	Institutional Review Board in Clinical Research	Examines the historical development, regulatory roles, responsibilities and functions of Institutional Review Board (IRB) membership and related stakeholder relationships. Comparisons of different IRB organizational and operational designs in relation to emerging technologies and implications for future research will be reviewed. Special emphasis on developing an understanding of the complexity of IRB roles, the implementation of state, national and international regulations and guidelines, and potential conflicts associated with the conduct of human research. Includes IRB functions, related regulations, ethical issues, current and future operational trends.	Prerequisites: None.	LEC 3.0 3.0 3.0
CRC160	Clinical Research Site Management	Clinical research site organization, operation and management. Office setup, study initiation process, site maintenance, essential documentation requirements and binders, site evaluation and site closure. Understanding Institutional Review Boards (IRB) timeliness for submission, approval and study maintenance. Budget and contract negotiation, and sponsor and regulatory audit components and preparation. Coordination with sponsors and related research entities; investigative staff training. Organization of process flow and effective interactions with IRB, Contract Research Organizations, sponsors, regulators, investigators, and community.	Prerequisites: None.	LEC 4.0 4.0 4.0
CRE101	College Critical Reading and Critical Thinking	Develop and apply critical thinking skills through critically reading varied and challenging materials. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRE101AT	College Critical Reading and Critical Thinking in Applied Technology	Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in applied technology. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.	LEC 3.0 3.0 3.0
CRE101BM	College Critical Reading and Critical Thinking in Business, Entrepreneurialism and Management	Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in business, entrepreneurialism and management. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.	LEC 3.0 3.0 3.0
CRE101BS	College Critical Reading and Critical Thinking in Behavioral Sciences and Human Services	Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in behavioral sciences and human services. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.	LEC 3.0 3.0 3.0
CRE101CS	College Critical Reading and Critical Thinking in Culture and Society	Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in culture and society. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.	LEC 3.0 3.0 3.0
CRE101CT	College Critical Reading and Critical Thinking in Computer Information Technology	Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in computer information technology. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRE101ED	College Critical Reading and Critical Thinking in Education	Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in education. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.	LEC 3.0 3.0 3.0
CRE101HS	College Critical Reading and Critical Thinking in Health Sciences	Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in health sciences. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor	LEC 3.0 3.0 3.0
CRE101SM	College Critical Reading and Critical Thinking in STEM	Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in science, technology, engineering, and mathematics (STEM). Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.	LEC 3.0 3.0 3.0
CRE101VA	College Critical Reading and Critical Thinking in Visual and Performing Arts	Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in visual and performing arts. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.	LEC 3.0 3.0 3.0
CRE201	Critical Reading and Writing in a Global Society	Critical evaluation of writings of authors from a variety of countries and cultures in order to gain a more global perspective of both universal and contemporary issues. Analysis, synthesis, and evaluation of various contemporary cultural viewpoints through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (CRE101 or exemption by score on the reading placement test).	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRE298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CRP101	Orientation - Carpenter Apprenticeship	Fundamental trade skills, employee-employer roles and responsibilities, and safe work practices needed for entry level performance in the construction industry. Emphasis on attaining standard industry safety credentials, practical experience using construction terminology, math and basic measuring techniques. Training for job site hazard recognition, accident prevention, safe tool and equipment operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP102	Safety/Health Certifications for Carpentry - Carpenter Apprenticeship	Promotes hand/power tool and equipment skill development for various construction applications. Scaffold building and equipment operating procedures will also be covered. Financial and life skills will be presented to help survive in the construction industry. Upon successful completion, students will be issued United Brotherhood of Carpenters (UBC) Scaffold Erector-Welded Frame Qualification Card.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP102AI	Concrete Formwork: Concrete Stair Forms	Building stair forms from shop drawings; basic terminology related to stair form construction	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.5 1.5
CRP102AJ	Tilt-Up Construction I - Carpenter Apprenticeship	Building a form for a tilt-up slab for commercial structures complete with all necessary inserts and block-outs for openings.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 1.0 1.5 1.5
CRP102AN	Concrete Formwork: Culverts, Headwall and Wingwalls	Box culvert design, form systems, areas, volumes and pressures. Culvert headwall, side walls and wingwall forms using a single and double whaler assembly. Concrete industry nomenclature.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 2.0 2.0 2.0
CRP102AP	Concrete Formwork: Gang Forms	Building and plumbing a section of gang form using a standard whaler system complete with all the necessary components and hardware	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.5 1.5
CRP103	Tool and Equipment Applications - Carpenter Apprenticeship	Safe and appropriate use of fall protection and emergency response procedures. Tool applications presented in this training will provide opportunities for tool skill mastery and equipment operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP103AI	Framing: Wood Stairs	Building a set of stairs consisting of two flights and a landing from a given set of working drawings	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.5 1.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP104	Basic Wall Framing - Carpenter Apprenticeship	Theory, methods, and procedures required to frame basic walls. Hands-on practice using proper tool techniques and appropriate materials. Introduction to print reading, basic wall layout, plating procedures, framing assembly and bracing.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP105AC	Interior Finish: Running Trim	Building a small frame trimmed out with a variety of moldings according to a set of shop drawings	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.5 1.5
CRP105AG	Interior Finish: Door Hardware	Installation of door hardware including knob, latch, strike plate, hinge butts, and door closer.	Prerequisites: Registered Apprentice Status and a grade of C or better in CRP105AA or permission of the Apprenticeship Coordinator.	L+L 1.0 1.5 1.5
CRP105AI	Interior Finish: Metal Partitions	Assembling metal partition unit complete with all panels and hardware	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.5 1.5
CRP105AJ	Interior Finish: Soffit Panel	Building a soffit panel with trim and detailed projections as shown on a set of shop drawings	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.5 1.5
CRP106AA	Interior Systems: Metal Frame Walls	Tools, materials, components and erection procedures of metal frame walls and soffits as shown per shop drawings	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.5 1.5
CRP106AB	Interior Systems: Dry Wall Application	Tools, materials and installation procedures for dry wall application.	Prerequisites: Registered Apprentice Status and a grade of C or better in CRP106AA or permission of the Apprenticeship Coordinator.	L+L 1.0 1.5 1.5
CRP106AH	Interior Systems: Dry Wall Estimation of Material	Reading and interpreting blueprints and shop drawings to estimate the amount of material needed for a dry wall project	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 1.0 1.5 1.5
CRP106AK	Interior Systems: Suspended Lay-In Ceilings - Carpenter Apprenticeship	Tools, materials, components, and erection procedures for suspended lay-in ceilings	Prerequisites: Registered Apprentice status or permission of the Apprenticeship Coordinator.	L+L 1.0 1.5 1.5
CRP108	Moldings and Trim - Carpenter Apprenticeship	Course covers how moldings and trims are utilized to finish exterior and interior construction design features.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP110AA	Introduction to Carpentry I: History and Tools	History, significance and benefits of labor unions. Successful and efficient labor relations. Carpentry in relation to other construction trades. Building trades organizations. Components of lumber. Hand and power tools used in carpentry.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP110AB	Introduction to Carpentry II: OSHA Safety	Safe and proper use of hand and power tools. Safe work habits, first aid, and cardiopulmonary resuscitation (CPR) according to Occupational Safety and Health Administration (OSHA) regulations.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP113	Basic Roof Framing - Carpenter Apprenticeship	Introduction to basic gable roof framing, terminology, characteristics, and construction methods. Interpretation of print views and drawing elevations for job planning, rafter systems, and layout details. Review of basic rise, run, rafter angles, and length calculations. Framed wall construction to facilitate gable roof assembly techniques.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP114AA	Blueprint Reading for Carpenters I	Types of blueprints and basic print reading. Symbols for materials. Construction details, standards, and specifications for brick veneer. Steel supports of plans for stores and apartments.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP116AA	Concrete Formwork I	Construction and installation techniques. Building site and layout factors. Parts of forms and related hardware. Function of concrete form work in walls, columns, beams, decks and retaining walls. Wall forms and prefabricated walls. Residential foundations.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP116AB	Concrete Formwork II	Construction and installation techniques. Elements of flatwork construction	Prerequisites: A grade of C or better in CRP116AA.	LEC 2.0 2.0 2.0
CRP121	Print Reading for Carpenters - Carpenter Apprenticeship	Introduction to print reading skills for carpenters. Developing ability to interpret two-dimensional views, standard drawing methods, pictorial elements, visual and verbal communication cues. Recognizing parts of drawings, locating building and insulation features, calculating dimensions, and using views to determine construction methods.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP123	Wall Forming - Carpenter Apprenticeship	Skills and procedures for forming reinforced concrete walls using single and double waler systems. Characteristics and application of built-in-place, prefabricated and specialty forms, wall forming, calculating layout dimensions and estimating. Overview of wall panel forming reinforcement methods, material preparation and hardware installation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP124	Foundations and Flatwork - Carpenter Apprenticeship	Design and function of several types of foundations and concrete flatwork. Overview of methods, techniques and procedures for formwork layout, elevation, and construction including jobsite safety, print interpretation, material identification and basic use of builders' level.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP130	Basic Commercial Framing - Carpenter Apprenticeship	Introduction to basic rake wall framing theory and commercial construction techniques and materials.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
CRP131	Commercial Floor Framing - Carpenter Apprenticeship	Course covers floor joist construction and the various installation techniques used in the commercial industry.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP150	Acoustical Ceilings - Carpenter Apprenticeship	Introduction to basic acoustical ceiling installation in accordance with industry standards and utilizing proper techniques and procedures. Acoustical engineering and applicable building and seismic code requirements.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP151	Standard Acoustical Grids - Carpenter Apprenticeship	Grid patterns considered standard for acoustical ceilings in the interior system construction industry. Methods and procedures used to form patterns. Students install several standard acoustical grid patterns to print specifications using proper techniques and procedures.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP152	Acoustical Soffits - Carpenter Apprenticeship	Construction of acoustical soffits in various configurations. Square and slant-faced, tapered, concealed, drywall suspension, and sloped soffits methods. Students complete selected acoustical soffit installation.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP153	Concealed Glue-Up/Staple-Up System - Carpenter Apprenticeship	Concealed and semi-concealed ceilings and soffits, glue-up and staple-up systems, and their design flexibility. Students employ glue-up/staple-up techniques to install a concealed grid ceiling system.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP154	Metal Pan and Security Systems - Carpenter Apprenticeship	Design, function, and installation of metal pan and security systems incorporated into construction of suspended ceilings. Students install components to create a monolithic appearance in a suspension ceiling grid system.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP160	Basic Lathing - Carpenter Apprenticeship	Advanced methods and application techniques for lath and trim products. Basic framing and lathing methods used for exterior/interior installations. Exterior waterproofing, lath, and trim installation procedures. Students complete an exterior lathing project.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP163	Framing Ceilings and Soffits - Carpenter Apprenticeship	Materials and their application for various types of fire-rated walls, ceilings, and soffits. Methods and procedures used for layout and template development. Drywall and trim applications. Types of tools and their associated safety, applied math, and print reading fundamentals. Students complete a ceiling and soffit project.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP164	Basic Hand Finishing - Carpenter Apprenticeship	Basic hand finishing skills using correct tools and materials. Terminology and description of finishing levels, hand tool manipulation techniques, material identification, and selection criteria. Manufacturer's guidelines for environmental conditions, proper mixture preparation, and use. Typical finish issues, causes, and solutions frequently employed. Tool techniques and application sequence explained and demonstrated. Importance of mixture consistency and proper coating sequence during level four hand finishing exercises.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP165	Framing Curves and Arches - Carpenter Apprenticeship	Framing methods for curves and arches and their related structural limitations. Various wall and ceiling types, layout principles, and materials used for each. Lath applications and trim. Students complete a framing project including curves and arches.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP166	Automatic Finishing Tools - Carpenter Apprenticeship	Basic automatic tool techniques and finish schedule interpretation. Hands-on instruction with machine tools and the importance of proper use, assembly, and breakdown. Basic maintenance and repair techniques and safe handling demonstration. Sanding selections will be reviewed.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP167	Exterior Insulation Finish Systems - Carpenter Apprenticeship	Introduction to exterior insulation finish systems including terminology, definitions, specifications, and properties. Reinforcing mesh installation and application of insulation board. Application methods and techniques for primers and finishes. Students complete an exterior insulation finishing system (EIFS) installation project.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP202	Basic Stairs - Carpenter Apprenticeship	Introduction to stair framing theory, terminology, and construction techniques.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP207	Solar Installer Level I - Carpenter Apprenticeship	Design and installation of several types of solar panel systems. Methods, sequences, and procedures for layout, assembly, mounting, and elevating/positioning for solar array construction will be presented. Upon successful completion, students will receive a United Brotherhood of Carpenters (UBC) Solar Installer Level 1 Qualification Card.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
CRP210AA	Basic Framing I	Construction and installation techniques. Floor framing and layout plate for specific spacing.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP210AB	Basic Framing II	Construction and installation techniques. Factors of weight, stress, tension, and compression. Truss connectors, bracing, and anchors. Gable, gambrel, hip, and shed roofs. Dormers.Intersecting roof. Roof trusses. Exterior deck. Fasteners, and connectors, and foundations	Prerequisites: A grade of C or better in CRP210AA.	LEC 2.0 2.0 2.0
CRP211	Storefront Installations - Carpenter Apprenticeship	Installation process from constructing storefront openings to putting glass components into commercial storefront metal framing. An emphasis will be placed on print interpretation, window and door schedules, symbols, and material recognition.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP212AA	Scaffolding for Carpenters	Occupational Safety and Health Administration (OSHA) regulations for system scaffolding. Terminology, assembly procedures, platform safety and access, and dismantling of scaffolding. Scaffolding framework to include braces, tie-ins, and guylines.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP212AB	Level, Transit and Layout	Terminology, types, parts, handling, set up, care, storage, transport, and use of leveling instruments. Leveling rods, leveling operations, vernier scales, linear and angular measurement. Conventional system of measurement. Builder's level and transit level. Simulated fieldwork exercises.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP212AC	Rigging - Carpenter Apprenticeship	Lifting theory and practical rigging methods and procedures. Rigging attachment procedures, lifting equipment, limits of operation, and communication practices will be covered.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP214AA	Drywall Applications - Carpenter Apprenticeship	History, advantages, and applications of drywall and wall framing. Drywall products and wall framing for interior partition work. Safe tool use and jobsite safety. Blueprints, specifications, and layout. Standard framing for partitions. Drywall installation on metal framework. Suspended ceiling systems. Commercial and residential installation for fire resistance, sound control, and safety.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP214AC	Interior Finish: Door Installation and Hardware	Terms, tools, types of doors and door hardware. Installation procedures for doors and door hardware. Fabrication and installation of jam and trip components.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP214AD	Cabinets and Tops	Fundamentals, terms, tools, safety. Types of wood and glue. Case construction: joints, layout, cutting, assembly. Hardware, plastic laminates, completed cabinets, completed tops. Installation procedures.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
CRP215	Drywall/Acoustical Ceilings - Carpenter Apprenticeship	Materials and methods used for acoustical ceilings combined with drywall installation. Seismic codes, materials, and construction requirements reviewed. Green building rating systems applied to selected acoustical and drywall materials. Installation for various grid systems. Students complete a drywall acoustical ceiling project.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP216	Designer and Specialty Trims - Carpenter Apprenticeship	Specialty skills to produce a professionally finished edge for designer ceiling installations. Techniques used to produce multiple ceiling variations using the Compasso trim system.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP217	Drywall Installation/Finish Trims - Carpenter Apprenticeship	Introduction to drywall handling methods, applications, and recommended levels of drywall finish to achieve desired aesthetics. Emphasis placed on trim attachment and finishing techniques. Identification of various types of finish trim. Students demonstrate proficiency in the proper use of automatic taping tools.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP221	Advanced Print Reading - Carpenter Apprenticeship	Analyze multi-view drawings to determine construction type. Locate benchmark and building elements. Review codes, references, and perform calculations for construction/insulation planning.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
CRP222	Bridge Construction - Carpenter Apprenticeship	Overview of basic bridge construction including exterior and interior girders, edge forms, bulkheads, and hinge forms. Job-built and precast formwork methods, panel construction, assembly, and hardware installation tasks. Review of related safety, math, and print reading.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP226	Air, Moisture, and Thermal Barriers - Carpenter Apprenticeship	Increasing building envelope energy efficiency using correctly installed air, moisture, and thermal barrier systems. Hands-on installation exercises using building sealing products.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP227	Green Building and Weatherization - Carpenter Apprenticeship	Explanation of building envelope science. Audit procedures, discuss testing and reporting mechanisms used to measure inefficiencies. Course provides novice workers with fundamental skills to properly install the beneficial "green" and cost-effective, energy-efficient retrofits for residential buildings.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
CRP228	Water Treatment Facilities - Carpenter Apprenticeship	Instruction in the detailing, layout, and construction of concrete formwork and waterstop used in water treatment facilities.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP232	Stair and Ramp Forming - Carpenter Apprenticeship	Methods, procedures and practices used to form stair and ramp structures including configuration and dimensions. Review of Stinger riser and stair thread calculations, state and federal building codes.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP233	Basic Metal Framing - Carpenter Apprenticeship	Overview of residential metal framing theory and construction techniques. Interpretation of prints for job planning and estimation of materials. Layout and detail of wall plates, measuring techniques, calculating principles, wall and roof assembly and installation techniques.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP234	Transit Level/Laser - Carpenter Apprenticeship	Detailing, layout and construction of abutments used in the heavy highway industry. Overview of assembly components, key terms and abutment anatomy; footings; piers and retaining walls. Techniques for laying out keyway centerline and footing formwork construction.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP235	Advanced Metal Framing - Carpenter Apprenticeship	Review of basic metal framing. Detailed procedures for framing curved, serpentine, and elliptical non-load-bearing partitions. Use of standard light gage components and other materials. Project emphasizing advanced techniques to expedite work processes.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP241	Gang Forms/Columns	Formwork types, applications and construction methods for gang and column forms using built and manufactured forming systems. Heavy timber gang forms and use of taper ties, bracing, and bulkhead tables.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP242	Doors/Door Hardware - Carpenter Apprenticeship	Installation process for several types of security and exit door hardware. Print interpretation, codes, door schedules, symbols, and hardware recognition.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP243	Scaffold Erector Qualification	Safety and terminology related to scaffold built applications, elevated platform use, span and loading criteria, access and egress, stability, and structural connections and inspections. Project drawing review for locating dimensions, determining layout and scaffold material requirements. Erection/dismantling sequence for the development of job planning, preparation skills and applied math.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP244	Cabinet Installation - Carpenter Apprenticeship	Cabinet installation from establishing the design layout to attaching countertops. Print interpretation, job planning, scribing techniques, and proper installation sequence.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
CRP250	Prefab/Sound Panels - Carpenter Apprenticeship	Basic description of acoustical effectiveness of prefabricated sound panels. Planning, location, and installation of ceiling and wall panels.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP251	Advanced Acoustical Ceilings Layout - Carpenter Apprenticeship	Advanced layout methods used to complete accent acoustical ceiling installations. Seismic codes and hanger requirements. Layout techniques for establishing geometric designs. Students complete acoustical ceiling layout projects.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP252	Advanced Acoustical Ceiling Installations - Carpenter Apprenticeship	Identifying materials and methods used for the advanced installation of acoustical ceilings. Installation for custom and intricate grid systems. Green building rating systems applied to selected acoustical materials. Students complete a complex acoustical ceiling project.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP253	Framing Curves and Arches - Carpenter Apprenticeship	Framing methods for curves and arches and their related structural limitations. Identifying various wall and ceiling types and layout principles and materials used for each. Lath applications and trim. Students complete a framing project that includes curves and arches.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP255	Fire Stopping/Fire Proofing Procedures - Carpenter Apprenticeship	Methods, technical skills, and fire stopping/fire proofing materials used to meet industry code requirements. Students apply and test fire stopping/fire proofing materials in a controlled environment.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP260	Advanced Lathing - Carpenter Apprenticeship	Advanced skills for the interior/exterior application of lathing materials. Wall anatomy terminology, applicable codes, lathing materials, and waterproofing methods. Includes key discussions to draw attention to typical installation issues, causes, and solutions frequently employed to correct flaws. Detailed project drawing review, providing practical experience for design analysis, material requirement, and code assessment. Emphasis on construction sequence will foster the development of job planning, preparation, and applied math skills. Importance of applicable building codes, tool use, safety, accuracy, construction sequence, and proper use of waterproofing techniques will be stressed during lathing exercises.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP261	Free-Form Lathing - Carpenter Apprenticeship	Comprehensive study of the theory and techniques used for development of freeform lathing projects. Students interpret gridline drawings, lay out and build lath cage work, and apply the appropriate lath(s) to achieve the desired or designed form or structure.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP263	Ceiling and Soffit Finishing - Carpenter Apprenticeship	Advanced level of finishing skills for applications with architecturally detailed ceilings and soffits. Determining type and quantity of materials for various designs and differentiating between levels of finish. Guided practice with a combination of hand and automatic tool techniques, promoting manipulative ability required for a successful result. Variety of finish trims integrated into each method of finish. Inspection criteria for evaluating finish levels.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP264	Advanced Hand Finishing - Carpenter Apprenticeship	Advanced methods and applications using hand tool techniques. Proper sequence of operation, phases, and materials to be used in order to produce a higher-level finished product to industry standards. Curved and radius wall characteristics for finish levels. Wall frame components, materials used, surface preparation, and application methods. Students complete a project to a level five standard.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP267	Wet Wall Finishes - Carpenter Apprenticeship	Industry methods, mediums, and typical applications of wet wall finishes. Includes terminology and description of industry standard finishing levels, application tool types and techniques, and material identification and selection. Manufacturer's guidelines highlighting the environmental conditions for proper mixture preparation and use. Key discussions drawing attention to typical finish issues, causes, and solutions frequently employed. Emphasis on the selection and use of low volatile organic compounds (VOC) products. Importance of mixture consistency and proper coating sequence during wet wall finishing exercises.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP268	Decorative Trims - Carpenter Apprenticeship	Advanced hand and automatic tool finishing techniques used to apply decorative trims. Product information for metal, paper, plastics, and art beads. Special attention given to coating and sanding sequence of selected specialty trim installations and waste reduction.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0
CRP280	Total Station (Robotics) - Carpenter Apprenticeship	Terminology, optical principles, and operating procedures for transit and laser levels. Students will set up levels, determine benchmarks, and take and record elevation readings.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
CRP296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
CRP296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRP296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
CRP298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CRP298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
CRP298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CRW120	Introduction to Writing Children's Literature	Overview of writing children's literature. Emphasis on genres and standards for quality. Development of techniques in reading, evaluating, writing, revising, and editing literature written for children ENH291 suggested but not required	Prerequisites: None. ENH291 suggested but not required.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRW150	Introduction to Creative Writing	Introduction to the basic aesthetics and techniques in contemporary creative writing within a variety of genres. Introduction to the analytical concepts and terminology necessary to understand, interpret, and enact contemporary creative writing. Facilitation of writing practices and evaluation. Introduction to literature's role in society.	Prerequisites: None.	LEC 3.0 3.0 3.0
CRW160	Introduction to Writing Poetry	Prewriting (invention and discovery); writing; analyzing and evaluating (in workshop); and revising to practice manipulating various elements of poetry, critique one's own and the poetry of others, and produce a portfolio of finished, marketable poems.	Prerequisites: None. CRW150 recommended but not required.	LEC 3.0 3.0 3.0
CRW170	Introduction to Writing Fiction	Practice in writing fiction through a process of prewriting (invention and discovery), writing, analysis and evaluation (in workshop), and revision; practice in manipulating various elements and forms of fiction.	Prerequisites: None. CRW150 recommended but not required.	LEC 3.0 3.0 3.0
CRW172	Introduction to Comic Book Writing	Introduction to elements and techniques of comic book writing in its specific form; teaches terminology and concepts needed for the successful participation in writing workshops; focuses on proposal outline, planning, structure facilitates writing practice (including character study) and evaluation; offers individual suggestions in the student's development in this genre.	Prerequisites: None.	LEC 3.0 3.0 3.0
CRW176	Writing Narrative for Video Games	Provides an introduction to narrative theory as it relates to video game production. Delivers a variety of video game storylines, narrative theories, and processes for narrative development in video games. Terminology and video game industry standards are covered. Offers discussion of team building and the role of video games in society.	Prerequisites: None.	LEC 3.0 3.0 3.0
CRW180	Introduction to Writing Nonfiction	Practice in writing creative nonfiction, including autobiography and biography, the essay, reviews, and humor using a process of invention and discovery, writing, analysis, evaluation, and revision. Combines lecture, discussion, and workshop, leading to the production of marketable quality creative nonfiction.	Prerequisites: None. CRW150 recommended but not required.	LEC 3.0 3.0 3.0
CRW190	Introduction to Screenwriting	Overview of screenwriting elements and introduction to screenwriting techniques.	Prerequisites: None. CRW150 recommended but not required.	LEC 3.0 3.0 3.0
CRW200	Readings for Writers	Close analysis and interpretation of selected literary texts designed to strengthen the students' own writing by extending their familiarity with the genre in which they write and their knowledge of selected literary elements. One-on-one meetings between student and instructor.	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRW201	Portfolio	Close analysis of the creative writing portfolio culminating in selection, revision, editing, and compiling of the student's own literary work in a portfolio. Students meet individually with instructor to choose, prepare, and compile their work.	Prerequisites: (Acceptance into Creative Writing Certificate Program and completion of at least nine (9) credit hours in creative writing (CRW)), or permission of Program Director.	LAB 1.0 1.0 0.0
CRW202	The Writer as Witness	Studio course focusing on writing with the writer as witness of the world: pre-writing, drafting, analysis, evaluation, and writing in various formats.	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW204	Journaling	Studio course focusing on practice in the art of various forms and genres of journal writing and memoir through a process of reflection, drafting, discovery and revision.	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW220	Intermediate Writing Children's Literature	Application of techniques in writing literature for children. Emphasis on independent writing, self-evaluation, and revision. Includes completion of a major writing project of marketable quality	Prerequisites: A grade of C or better in CRW120 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW251	Topics in Creative Writing	Analysis, writing, and revision focused on a selected element applicable to all genres of creative writing.	Prerequisites: None. CRW150 recommended.	LEC 3.0 3.0 3.0
CRW260	Intermediate Poetry Writing	Emphasis on writing a series of original poems; analysis and evaluation of the functions and effects of established works of poetry; concentration on evaluation and revising students' poetry through intensive workshops.	Prerequisites: A grade of C or better in CRW160 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW261	Topics in Writing: Poetry	Analysis, writing, and revision of genre or element within poetry.	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW270	Intermediate Fiction Writing	Writing original short stories; analysis of works of fiction; concentration on revising students' fiction through intensive workshopping.	Prerequisites: A grade of C or better in CRW170.	LEC 3.0 3.0 3.0
CRW271	Topics in Writing: Fiction	Analysis, writing, and revision of genre or element within fiction.	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW272	Planning and Structuring the Novel	Focus on planning, structuring, and beginning a novel; prewriting, writing, analysis, evaluation, and revision of novel plans and excerpts.	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW273	Writing the Novel	Provides the beginning novelist with structure, support, and guidance vital to sustained writing; focus on establishing goals and using critique sessions with instructor and peers to draft a novel; open- and topic-focused in-class forums, novel writing, peer and instructor critiques.	Prerequisites: A grade of C or better in CRW272 or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CRW274	Revising the Novel	Studio course workshop format. Requires a complete novel finished, in manuscript, ready for revision and polishing.	Prerequisites: A grade of C or better in CRW273 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW281	Topics in Writing: Non-Fiction	Analysis, writing, and revision of genre or element within non-fiction.	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW290	Intermediate Screenwriting	Drafting and revision of original screenplay; overview of marketing a screenplay.	Prerequisites: A grade of C or better in CRW190 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW291	Topics in Writing: Plays and/or Screenplays	Analysis, writing, and revision of genre or element within plays and/or motion picture screenplays.	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.	LEC 3.0 3.0 3.0
CRW298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CRW298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
CRW298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CSC100	Introduction to Computer Science (C++)	Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science.	Prerequisites: A grade of C or better in or MAT114 or MAT115 or MAT12+ or an appropriate District placement for MAT15+ or higher or permission of Instructor or Department/Division Chair.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSC100AA	Introduction to Computer Science (C++)	Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science.	Prerequisites: A grade of C or better in MAT114 or MAT115 or MAT12+ or an appropriate District placement for MAT15+ or higher or permission of Instructor or Department/Division Chair.	L+L 3.0 4.0 4.0
CSC100AB	Introduction to Computer Science (C++)	Concepts of problem-solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science.	Prerequisites: A grade of C or better in MAT114 or MAT115 or MAT12+ or an appropriate District placement for MAT15+ or higher or permission of Instructor or Department/Division Chair.	L+L 4.0 4.0 4.0
CSC101	Introduction to Computing with Python	Introduction to computing using the Python programming language. Focus on basic concepts of computer science, algorithms, and the fundamentals of the Python programming language.	Prerequisites: None.	L+L 3.0 4.0 4.0
CSC110	Introduction to Computer Science (Java)	Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors.	Prerequisites: A grade of C or better in MAT114 or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division	L+L 3.0 3.0 3.0
CSC110AA	Introduction to Computer Science (Java)	Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors.	Prerequisites: A grade of C or better in MAT114 or MAT115, or MAT12+ or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division	L+L 3.0 4.0 4.0
CSC110AB	Introduction to Computer Science (Java)	Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors.	Prerequisites: A grade of C or better in AT114 or MAT115 or MAT12+ or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division	L+L 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSC120	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, Read Only Memory (ROMs), Programmable Logic Device (PLDs), synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits.	Prerequisites: None. Corequisites: CSC100 or (CSC110 or CSC110AB) or permission of Instructor or Division or Department Chair.	L+L 4.0 6.0 6.0
CSC150	Programming in C/C++	Introduction to C and C++ programming. Flow control, functions, pointers, data structures, file handling, and introduction to object-oriented programming	Prerequisites: Permission of Instructor.	L+L 3.0 4.0 4.0
CSC150AA	Programming in C/C++	Introduction to C and C++ programming. Flow control, functions, pointers, data structures, file handling, and introduction to object-oriented programming	Prerequisites: Permission of Instructor.	LEC 4.0 4.0 4.0
CSC180	Computer Literacy	Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e- mail and text files, and use of Internet browsers.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSC180AA	Computer Literacy	Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e- mail and text files, and use of Internet browsers.	Prerequisites: None.	L+L 3.0 4.0 4.0
CSC180AB	Computer Literacy	Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e- mail and text files, and use of Internet browsers.	Prerequisites: None.	LEC 4.0 4.0 4.0
CSC181AA	Applied Problem Solving with Visual BASIC	Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSC182	Principles of Programming with C#.NET	Introduction to object-oriented program analysis, design, and development using Visual C#.NET. Includes general concepts, data types, expressions, flow control, methods, classes, arrays, event-driven models, Windows applications, and Web applications	Prerequisites: None.	LEC 3.0 3.0 3.0
CSC182AA	Principles of Programming with C#.NET	Introduction to object-oriented program analysis, design, and development using Visual C#.NET. Includes general concepts, data types, expressions, flow control, methods, classes, arrays, event-driven models, Windows applications, and Web applications	Prerequisites: None.	L+L 3.0 4.0 4.0
CSC185	World Wide Web and Introductory Internet Programming	Organization of and access to information on the Internet. Design, creation and publication of interactive web pages with HTML, multimedia, animated custom graphics, applets and JavaScript programming. Ethical issues, including security and privacy on the World Wide Web	Prerequisites: None.	LEC 3.0 3.0 3.0
CSC200	Principles of Computer Science (Java)	Introduction to computer science. Issues and concepts throughout the field, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Programming in Java.	Prerequisites: A grade of C or better in (CSC110 or CSC110AB) or (CSC100 or equivalent) and permission of	L+L 3.0 3.0 3.0
CSC200AA	Principles of Computer Science (Java)	Introduction to computer science. Issues and concepts throughout the field, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Programming in Java.	Prerequisites: A grade of C or better in (CSC110 or CSC110AB) or (CSC100 or equivalent) and permission of	L+L 3.0 4.0 4.0
CSC200AB	Principles of Computer Science (Java)	Introduction to computer science. Issues and concepts throughout the field, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Programming in Java.	Prerequisites: A grade of C or better in (CSC110 or CSC110AB) or (CSC100 or equivalent) and permission of	L+L 4.0 4.0 4.0
CSC205	Object Oriented Programming and Data Structures	Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of	L+L 3.0 3.0 3.0
CSC205AA	Object Oriented Programming and Data Structures	Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of	L+L 3.0 4.0 4.0
CSC205AB	Object Oriented Programming and Data Structures	Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of	L+L 4.0 4.0 4.0
CSC205AC	Object Oriented Programming and Data Structures	Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of	L+L 4.0 5.0 5.0
CSC205AD	Object Oriented Programming and Data Structures	Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSC210	Data Structures and Algorithms (Java)	Static and dynamic data structures and associated applications; recursive and iterative sorting and searching algorithms; introduction to object oriented design and programming techniques; software engineering methods including design models and implementation/testing strategies; professional responsibilities; Java language.	Prerequisites: A grade of C or better in CSC200.	L+L 3.0 3.0 3.0
CSC210AA	Data Structures and Algorithms (Java)	Static and dynamic data structures and associated applications; recursive and iterative sorting and searching algorithms; introduction to object oriented design and programming techniques; software engineering methods including design models and implementation/testing strategies; professional responsibilities; Java language	Prerequisites: A grade of C or better in CSC200.	L+L 3.0 4.0 4.0
CSC210AB	Data Structures and Algorithms (Java)	Static and dynamic data structures and associated applications; recursive and iterative sorting and searching algorithms; introduction to object oriented design and programming techniques; software engineering methods including design models and implementation/testing strategies; professional responsibilities; Java language.	Prerequisites: A grade of C or better in CSC200.	L+L 4.0 4.0 4.0
CSC220	Programming for Computer Engineering	Intermediate level procedural, object-oriented, and high-level scripting programming languages (C, C++, Python) in the Unix environment.	Prerequisites: A grade of C or better in (CSC/EEE120 and CSC205), or permission of Instructor or Division or Department Chair.	L+L 3.0 5.0 5.0
CSC225	Assembly Language Programming on Motorola Microprocessors	Assembly language programming including input/output programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Macintosh-based assignments.	Prerequisites: A grade of C or better in (CSC100 or CSC110 or CSC110AB or CSC200) and CSC/EEE120 or permission of Instructor. Xref: CSC120	L+L 4.0 5.0 5.0
CSC230	Computer Organization and Assembly Language	Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers and linkers. Processor organization and design, data path, control, pipelining and input/output. Memory organization with cache and virtual memory.	Prerequisites: A grade of C or better in [(CSC100 or CSC110 or CSC110AB) and CSC/EEE120] or permission of Instructor or Division or Department Chair. Xref: CSC120	L+L 4.0 5.0 5.0
CSC240	Introduction to Different Programming Languages	Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.	Prerequisites: A grade of C or better in CSC205 or permission of Instructor.	L+L 3.0 5.0 5.0
CSC240AA	Introduction to Different Programming Languages	Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.	Prerequisites: A grade of C or better in CSC205 or permission of Instructor.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSC260	Object-Oriented Programming in Java	Software development in Java including both applets and applications, in both standard and graphical programming. Includes objects and classes, inheritance, polymorphism, graphical programming with the Abstract Windows Toolkit and the Swing extension, graphical user interface design and layout, event handling, and exception handling	Prerequisites: A grade of C or better in CSC150 or CSC200 or permission of Instructor.	L+L 3.0 4.0 4.0
CSC260AA	Object-Oriented Programming in Java	Software development in Java including both applets and applications, in both standard and graphical programming. Includes objects and classes, inheritance, polymorphism, graphical programming with the Abstract Windows Toolkit and the Swing extension, graphical user interface design and layout, event handling, and exception handling	Prerequisites: A grade of C or better in CSC150 or CSC200 or permission of Instructor.	LEC 4.0 4.0 4.0
CSC282AA	Volunteerism for Computer Science: A Service Learning Experience	Service learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
CSC282AB	Volunteerism for Computer Science: A Service Learning Experience	Service learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
CSC282AC	Volunteerism for Computer Science: A Service Learning Experience	Service learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
CSC283AA	Bioinformatics and Scientific Computing	Introduction to Bioinformatics, including history, concepts, major genetic databases and access tools. Computer software and techniques for analyzing one nucleotide or protein sequence, searching for similar sequences, and aligning and comparing two or multiple sequences. Microarray analysis and phylogenetic trees. Application of standard software to bioinformatic computing tasks, including word processing of reports, and use of spreadsheets for statistical analysis and graphing. Text editors, Unix, Internet web site searching and construction, and ethics.	Prerequisites: A grade of C or better in [BIO220 and (MAT114 or MAT115 or MAT12+ or an appropriate District placement for MAT15+ or higher)] or permission of Instructor or Department/Division Chair.	LEC 4.0 4.0 4.0
CSC284	Web Programming and Design with FLASH	Design and publication of interactive web pages using Macromedia FLASH and Action Script. Animation, graphics design, timeline, layers, sound, movie clips, libraries, publishing with HTML, event driven programming, interactive programming of FLASH objects, form processing in FLASH, and programming constructs	Prerequisites: A grade of C or better in CSC185 or CIS233 or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSC284AA	Web Programming and Design with FLASH	Design and publication of interactive web pages using Macromedia FLASH and Action Script. Animation, graphics design, timeline, layers, sound, movie clips, libraries, publishing with HTML, event driven programming, interactive programming of FLASH objects, form processing in FLASH, and programming constructs	Prerequisites: A grade of C or better in CSC185 or CIS233 or permission of Instructor.	LEC 3.0 4.0 3.7
CSC285	Computer Programming in the WWW Environment	Software development paradigms and environments including Advanced HTML, JavaScript, Common Gateway Interface (CGI) and CGI scripting languages. Security and large scale data management	Prerequisites: A grade of C or better in CSC185 and prior programming experience/coursework.	LEC 4.0 4.0 4.0
CSC285AA	Computer Programming in the WWW Environment	Software development paradigms and environments including Advanced HTML, JavaScript, Common Gateway Interface (CGI) and CGI scripting languages. Security and large scale data management.	Prerequisites: A grade of C or better in CSC185 and prior programming experience/coursework.	LEC 3.0 4.0 3.7
CSC294	Special Topics in Computing	Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.	LEC 3.0 3.0 3.0
CSC294AA	Special Topics in Computing	Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.	L+L 3.0 4.0 4.0
CSC294AB	Special Topics in Computing	Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.	LEC 2.0 2.0 2.0
CSC294AC	Special Topics in Computing	Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.	L+L 2.0 3.0 3.0
CSC294AD	Special Topics in Computing	Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0
CSC294AE	Special Topics in Computing	Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
CSC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
CSC296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSC296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
CSC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CSC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
CSC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CSC310	Data Structures and Algorithms	Advanced algorithmic concepts and data structures, including algorithm analysis and design, trees, graphs, hashing, and advanced sorting techniques. Implementation of advanced algorithms and data structures in an object-oriented language.	Prerequisites: A grade of C or better in [CSC240, and (MAT230 or MAT231), and MAT227], or permission of Program Director.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSC350	Logic Programming for Artificial Intelligence	Introduction to the fundamentals of logic and logic programming, a paradigm that uses formal logic to express computational algorithms. Focus on propositional and predicate logic, basics of proof techniques, principles of computational logic, and logic programming concepts using Prolog-based logic programming languages. Emphasis on application to artificial intelligence.	Prerequisites: A grade of C or better in (CSC240++ and MAT227) or permission of Program Director.	L+L 3.0 4.0 4.0
CSI105	Debt Resolution Enrollment	Overview of debt resolution enrollment procedures. Covers characteristics of debt settlement, including regulatory entities, information security, and client hardships. Also includes procedures for completing quality enrollment calls, as well as a review of resources available to clients.	Prerequisites: None.	L+L 3.0 5.0 5.0
CSI154	Introduction to Debt Settlement	Introduction to the debt settlement industry. Covers customer service representative role in debt settlement including types of hardships, debt solutions, account resources, and legal services available to clients. Also includes Fair Debt Collection Practices Act regulations.	Prerequisites: None.	LEC 2.0 2.0 2.0
CSI155	Customer Service for Debt Settlement	Basic customer service principles for debt settlement. Evaluation of various program services as well as types of client debt. Emphasis on elements of customer service debt settlement transactions and effective communication.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSI161	Financial Services Retirement Plans	Introduction to financial service retirement accounts. Includes applicable vocabulary, Internal Revenue Service (IRS) codes, qualified and supplemental plans as well as loan options. Also covers deferred compensation and money sources.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSI163	Employer Sponsored Retirement Plans	Characteristics, restrictions, and guidelines for various employer sponsored retirement plans. Includes lifecycles and processes.	Prerequisites: None.	LEC 1.0 1.0 1.0
CSI164	Debt Resolution Account Procedures	Procedures for maintaining debt settlement customer accounts. Emphasis on screens and processes used to maintain accounts, provide education resources to customers, and respond to customer inquiries.	Prerequisites: None.	L+L 3.0 4.0 4.0
CSI165	Introduction to Financial Customer Service	Introduction to customer service procedures for managing member accounts. Covers computerized systems including online documentation and database usage. Procedures for account maintenance included as well as procedures for handling initial member requests. Emphasis on professional communication and customer service skills.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSI166	Debt Settlement Services	Practical application of customer service representative debt settlement skills. Includes various types of customers, calls, and interactions in addition to procedures for navigating client accounts. Also covers account modifications, legal services, and negotiations procedures.	Prerequisites: None.	LAB 2.0 6.0 6.0
CSI167	Financial Systems Customer Service	Practical application of financial account procedures for customer services representatives. Includes procedures for initiating and completing distributions, loan, service credits purchase, and Qualified Domestic Relationship Orders (QDRO) in addition to processing death claims.	Prerequisites: None.	L+L 3.0 4.0 4.0
CSI168	Introduction to Debt Resolution Sales	Introduction to debt resolution sales and the debt settlement industry. Covers characteristics, solutions, components, and regulators of debt settlement including the Fair Debt Collection Practices Act. Also includes types of hardships and financial distress, credit reports, and resources available to clients, in addition to an introduction to the sales process.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSI174	Debt Resolution Sales Procedures	Practical application of debt resolution sales procedures. Covers consultative sales tools and services used in the provision of direct debt management sales. Includes approval calls, enrollment agreements, underwriting and file submission procedures as well as tax consequences and managing client objections.	Prerequisites: None.	L+L 2.0 4.0 4.0
CSI180	Debt Resolution Sales Practices	Further application of debt resolution sales procedures. Covers consultative sales tools and services used in the provision of direct debt management sales. Includes approval and welcome calls, enrollment agreements, underwriting and file submission procedures as well as disclosures and tax consequences.	Prerequisites: A grade of C or better in CSI174.	L+L 2.0 4.0 4.0
CSI182	Introduction to Loan Consolidation	Introduction to loan consolidation in the debt settlement industry. Covers consolidation loan terminology, details, cycles, and benefits as well as disclosures and effective business communication for the loan consultant.	Prerequisites: None.	LEC 2.0 2.0 2.0
CSI184	Loan Consolidation Procedures	Practical application of loan consolidation procedures. Covers benefits of and processes for loan consolidation as well as consultative sales tools and services used in the provision of direct debt management sales. Includes initial calls, enrollment agreements, and customer education procedures as well as effective communication strategies.	Prerequisites: None.	L+L 3.0 4.0 4.0
CSI202	Debt Settlement Loan Servicing	Consolidation loan servicing procedures. Covers types of loans, features, and guidelines as well as enrollment structure and loan calculations. Also covers payments, customer protections, and procedures for account collections.	Prerequisites: None.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSI206	Banking Member Service Representative	Introduction to banking member service representative roles and responsibilities. Includes communication and problem solving skills when dealing with members. Also covers various types of banking products and services available to members as well as an introduction to computerized banking and online documentation systems.	Prerequisites: None. Corequisites: CSI207, CSI208 and CSI209.	LEC 3.0 3.0 3.0
CSI207	Banking Accounts and Products	Knowledge of bank accounts, products, and procedures for banking member service representatives. Covers new accounts, debit cards, certificates of deposit, and individual retirement accounts. Self-service banking benefits and procedures as well as cash advances and funds transfers included.	Prerequisites: None. Corequisites: CSI206, CSI208, and CSI209.	LEC 3.0 3.0 3.0
CSI208	Banking Account Management	Account management procedures for banking member service representatives. Banking terminology and maintenance procedures including member verification and privacy policies. Includes fraud handling and common banking inquiries by members such as updating account information, stopping payments, reordering checks, and requesting refunds. Retention of banking members also covered.	Prerequisites: None. Corequisites: CSI206, CSI207, and CSI209.	LEC 3.0 3.0 3.0
CSI209	Banking Account Management Lab	Practical application of banking member services and procedures. Covers computerized banking systems including online documentation and database usage. Procedures for new accounts and account maintenance included as well as procedures for handling various member requests. Communication and customer service skills emphasized.	Prerequisites: None. Corequisites: CSI206, CSI207, and CSI208.	LAB 1.0 2.0 2.0
CSI250	Customer Service for Credit Counselors	Basic customer service principles for the credit counselor. Examination of credit-counseling programs covered. Emphasis on elements of customer service transactions	Prerequisites: None.	L+L 3.0 4.0 4.0
CSI251	Legal Issues In Credit Counseling	Overview of laws and practices in granting credit. Types of credit and calculating finance charges included. Emphasis on implications of inadequate payment history on credit ratings.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSI252	Credit Counseling New Accounts	Overview of establishing new client accounts in a credit- counseling program. Emphasis on screens used to setup an account.	Prerequisites: None.	L+L 3.0 4.0 4.0
CSI255	Account Maintenance Procedures	Account maintenance procedures for customer service representatives. Emphasis on managing ongoing client accounts. Covers contact with creditors and clients	Prerequisites: None.	L+L 3.0 4.0 4.0
CSI257	Credit Counseling Account Processes	Overview of maintaining a client account in a credit counseling program. Emphasis on screens used to maintain an account.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSI258	Credit Counseling and Financial Management	Overview of financial topics relevant to clients and their accounts. Covers creditor information and policies as well as procedures for account review. Also includes identification of and education regarding client financial issues in addition to client resource identification and use.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSM101	Quality Customer Service	Examines the nature of quality customer service and the attitudes, knowledge, and skill needed to work effectively in a quality customer service environment. Foundation skills for quality customer services are taught, applied, and practiced	Prerequisites: None.	LEC 3.0 3.0 3.0
CSN102DA	Customer User Support	Examines skills, tools and strategies necessary for becoming a computer help-desk or end-user support professional.	Prerequisites: None.	110
CSN110	Information Security Fundamentals	Fundamental concepts of information technology security. Topics include authentication methods, access control, cryptography, public key infrastructure (PKI), network attack and defense methods, hardening of operating systems and network devices, securing remote access and wireless technologies and securing infrastructures and topologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of transmission control protocol/internet protocol (TCP/IP) and security concepts and Microsoft (MS) Windows and Linux administration.	Prerequisites: A grade of C or better in CSN126DL or CSN126RH or permission of Program Director. Corequisites: CSN150++ or CSN270.	122
CSN126DL	Linux Operating System	Introduction to the Linux operating system. Develop knowledge and skills required to install, configure and troubleshoot a Linux-based workstation including basic network functions. Learn basic command line and graphical user interface (GUI) desktop environment utilities and applications. Fundamental abilities to achieve the entry-level industry certification covered.	Prerequisites: None.	110
CSN140AB	Introduction to Networks	Focus on the architecture, structure, functions, components, and models of the internet and other computer networks. Principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Students will build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Preparation for Cisco certification examination.	Prerequisites: None.	122

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSN150AB	Switching, Routing, and Wireless Essentials	Focus is on configuring switches and routers for use in small and medium-sized networks. Includes virtual local area networks (VLANs), VLAN trunking, inter-VLAN routing, spanning tree protocol (STP), EtherChannel, dynamic host configuration protocol (DHCP), first hop redundancy, local area network (LAN) and switch security, and static routing. Knowledge and skills needed to implement a wireless local area network (WLAN) is also covered. Preparation for Cisco certification examination.	Prerequisites: None.	122
CSN160AB	Enterprise Networking, Security, and Automation	Focus is on the configuration of routers and switches within small and medium size networks for advanced functionality including: open shortest path first (OSPF), network security, access control lists (ACLs), network address translation (NAT), wide area network (WAN) concepts, virtual private networks (VPNs), quality of service (QOS), network management, design, troubleshooting, virtualization, and automation. Preparation for Cisco certification examination.	Prerequisites: None.	122
CSN170	A+ Exam Prep: Computer Hardware Configuration and Support	Explore technical aspects of personal computers, including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis placed on hardware installation, maintenance, mobile devices, and hardware troubleshooting. Helps prepare students for the CompTIA A+ examinations.	Prerequisites: None.	122
CSN270	A+ Exam Prep: Operating System Configuration and Support	Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on operating system (OS) installation, maintenance, mobile devices, security, software troubleshooting, and on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations.	Prerequisites: None.	122
CSR108	Motor Vehicle Documentation Concerns	Vehicle titling considerations with emphasis on documentation procedures. Includes Department of Revenue policy and procedures and examination of title documents. Also covers trailer and damaged vehicle documentation as well as procedures for completing special vehicle titling	Prerequisites: None.	L+L 2.0 3.0 3.0
CSR109	Motor Vehicle Documentation Procedures	State motor vehicle documentation procedure. Use of computer based government workstation emphasized. Includes procedures for location and modification of customer and vehicle records	Prerequisites: None.	L+L 2.0 3.0 3.0
CSR118	Property Insurance Billing Procedures	Overview of property insurance procedures for the customer service agent. Covers mission/vision in relation to roles and responsibilities of customer service agent, including expectations, insurance terminology, insurance coverage and policies, contracts and billing, and call flow guidelines.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSR120	Introduction to Property Insurance: Issuing and Servicing	Introduction to property insurance for the customer service representative. Covers types of insurance components and policies for home, rental, and condo properties. Examination of insurance issuance and servicing procedures. Also includes call flow process and guidelines for policy modifications, cancellations, and declines.	Prerequisites: None.	L+L 3.0 4.0 4.0
CSR122	Rental and Condo/Unit Owner Property Insurance	Introduction to rental property and condo/unit owner insurance components, policies and procedures for the customer service representative. Covers systems and procedures for issuance, modification, and cancellation of policies as well as declined accounts. Also includes member policy update procedures.	Prerequisites: None.	L+L 2.0 3.0 3.0
CSR124	Renters Valuable Personal Property Insurance: Issuing and Servicing	Introduction to renters Valuable Personal Property (VPP) insurance coverage and procedures for the customer service representative. Covers procedures for issuing and servicing renters VPP policies, including characteristics of VPP coverage. Also covers policy modifications, declines, cancellations, limits and guidelines for dealing with collections.	Prerequisites: None.	L+L 2.0 3.0 3.0
CSR130	Advocate-Driven Healthcare	Procedures for advocate-driven healthcare customer service representatives. Covers eligibility requirements, enrollment procedures, and Health Insurance Portability and Accountability Act of 1996 (HIPAA) compliance standards. Also includes healthcare services, products, and plans.	Prerequisites: None.	LEC 2.0 2.0 2.0
CSR136	Health Care Insurance: Claims I	Overview of health insurance, medical terminology, and various operating systems and applications. Also includes research of medical, outpatient, and inpatient claims.	Prerequisites: None.	L+L 4.0 6.0 6.0
CSR139	Introduction to Pharmacy Prescription Benefits Customer Care	Introduction to the Pharmacy Prescription Benefits program. Includes customer care responsibilities, confidentiality, and eligibility status in addition to various types of member inquiries. Also covers quality assurance and Federal and State laws governing controlled substances.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSR144	Prior Authorization Programs and Systems	Prior authorization programs and systems for federal employees. Covers Med-Ex, 'Buy and Bill' and Medical Formulary Exception (MFE) programs as well as identification and processes for compounds. Also covers customer service skills and use of an automated phone system and the Clinical Authorization System (CAS) program, including clinical rationales, outcomes, inquiries, and non-covered Qsets.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSR145	Prescription Prior Authorization I	Prescription prior authorization procedures for federal employees. Covers account access, documentation, and eligibility as well as claims process and claims adjudication. Computerized databases and automated phone systems emphasized.	Prerequisites: None.	L+L 4.0 4.0 4.0
CSR146	Prescription Prior Authorization II	Advanced prescription prior authorization procedures for federal employees. Usage of various computerized databases emphasized. Includes drug benefit management, drug limitation guidelines, standard allowance fill quantity, and prior authorization fill quantity. Approved and denied authorizations also covered in addition to grandfathered records and change in therapy procedures.	Prerequisites: A grade of C or better in CSR145.	L+L 4.0 4.0 4.0
CSR148	Health Care Insurance: Customer Service	Overview of customer service standards and objectives for health care insurance phone inquiries. Covers customer service solution processes, including first call resolution, account inquires, member eligibility and benefits. Health care regulations also covered.	Prerequisites: None.	L+L 4.0 6.0 6.0
CSR155	Pharmacy Prescription Benefit Plans	Overview of pharmacy prescription benefit plans. Includes types of plans, limitations, and drug coverage in addition to fulfillment requests. Also covers procedures for accessing accounts, responding to caller inquiries, completing test claims, and steps for locating formulary alternatives.	Prerequisites: A grade of C or better in CSR139.	LEC 3.0 3.0 3.0
CSR156	Retail Pharmacy Procedures	Practical application of retail pharmacy customer care procedures. Includes procedures for accessing accounts, responding to eligibility issues, and completing customer requests. Also covers billing and payment procedures as well as the provision of non-technical web support.	Prerequisites: A grade of C or better in CSR139.	L+L 2.0 4.0 4.0
CSR157	Pharmacy Prescription Procedures	Practical application of pharmacy customer care procedures. Includes procedures for managing billing and payment inquiries as well as order status processes and prior authorizations.	Prerequisites: A grade of C or better in CSR155.	L+L 2.0 3.0 3.0
CSR160	Pharmacy Practice for the Customer Service Representative	Orientation to customer service responsibilities in pharmacy practice. Includes educational and licensure requirements as well as basic functions of the pharmacy and the customer service representative	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
CSR162	Pharmacy Operations for the Customer Service Representative	Customer service responsibilities in pharmacy operations. Includes procedures for prescription dispensing and drug distribution in the retail setting. Inventory control, packaging and storage, in addition to computer usage and third party operations	Prerequisites: A grade of C or better in CSR160.	LEC 3.0 3.0 3.0
CSR171	Customer Representative Web Design Products and Services	Introduction to web design products and services. Includes customer services for web design, branding, and hosting as well as various products available to business owners. Also covers domain ownership and security.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSR172	Customer Representative Web Service Sales	Customer service account procedures for web service sales. Covers business specific services and products, and application to meeting customer needs. Also covers hosting and website design sales procedures as well as customer consultation techniques.	Prerequisites: None.	LEC 2.0 2.0 2.0
CSR173	Customer Service for Web Hosting	Introduction to web hosting products and customer services. Includes features and benefits of branding, productivity, presence, and marketing.	Prerequisites: None.	LEC 2.0 2.0 2.0
CSR174	Hosting Product Support Customer Service	Hosting product support customer service procedures. Covers databases, email solutions, and Content Management Systems (CMS) as well as business hosting. Also covers troubleshooting procedures including site latency.	Prerequisites: None.	LEC 2.0 2.0 2.0
CSR175	Web Hosting Account Customer Service	Account customer service for web hosting and domains. Includes new accounts, branding, and presence strategies and products, and their application to meeting customer needs. Also covers hosting and website design procedures as well as completion of a marketing consultation.	Prerequisites: None.	LEC 1.0 1.0 1.0
CSR176	Customer Product Service Management for Web Hosting/Domain Registrar	Introduction to web hosting and domain registrar products and customer services. Includes features and benefits of branding, productivity, presence, and marketing.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSR177	Customer Representative for Web Hosting/Domain Registrar Services	Customer service account procedures for web hosting and domain registrar product application. Includes new accounts, branding, and presence strategies and products, and their application to meeting customer needs. Also covers hosting and website design procedures as well as completion of a marketing consultation.	Prerequisites: None.	L+L 2.0 4.0 4.0
CSR178	Customer Service Consultations and Troubleshooting Lab	Practical application of strategies and procedures for conducting customer consultations and troubleshooting.	Prerequisites: None.	LAB 1.0 2.0 2.0
CSR184	Business Technology in Customer Service	Foundational business technology for enhancing customer service. Includes the integration of technology into an effective workforce management solution. Covers Enterprise Resource Planning (ERP) in addition to Customer Relationship Management (CRM) and Business Intelligence (BI).	Prerequisites: None.	LEC 2.0 2.0 2.0
CSR195	Customer Service Representative Sales and Marketing	Introduction to sales and marketing strategies for the customer service representative. Includes the sales and negotiation processes as well as behavioral styles and demographics of customers. Also covers types of markets, organizational structure, and elements of a marketing plan.	Prerequisites: None.	L+L 2.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSR196	Call Center Customer Service	Introduction to practical application for call center representatives. Covers the role of call center representatives and skills and behaviors necessary for successful and effective call flow and completion of inbound calls. Also includes procedures for customer authentication, billing, payments, and claims loss reports as well as de-escalation.	Prerequisites: Permission of Department or Division.	L+L 3.0 5.0 5.0
CSR197	Customer Service Representative Business Practices	Introduction to business practices for the customer service representative. Includes organization types and structures as well as essential business communication techniques and foundational skills. Also covers professional telephone techniques.	Prerequisites: None.	L+L 2.0 3.0 3.0
CSR200	Automobile Representative Customer Services	Automobile representative customer service responsibilities. Includes overview of insurance industry terminology and contracts as well as need determination. Also covers privacy and security issues in addition to relationship management strategies.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSR201	Web-Based Hosting Customer Service	Web-based hosting customer service. Includes resources, tools, and services for setup, maintenance, and troubleshooting.	Prerequisites: None.	LEC 1.0 1.0 1.0
CSR203	Productivity Customer Service	Web-based productivity customer service. Includes tools and resources for managing productivity as well as troubleshooting procedures.	Prerequisites: None.	LEC 1.0 1.0 1.0
CSR207	Automobile Policy Adjustment	Emphasis upon policy explanation and adjustment. Covers membership flow-thru criteria, quality customer service information, and in-depth on-line resource instrument review. Also includes consultative selling practice and the observation of acting member service representatives.	Prerequisites: None.	L+L 3.0 4.0 4.0
CSR211	Auto Insurance Quotes	Procedures for providing auto insurance quotes and completing various payments. Covers tools for investigating rate changes as well as procedures for modifying account vehicles and driver information. Also includes account research techniques and reinstatement procedures.	Prerequisites: None.	L+L 3.0 5.0 5.0
CSR212	Automobile Insurance Operations I	Automobile insurance member services representative operating procedures. Emphasis upon explanation of payment and rate information, the provision of written correspondence, and file information completion. Covers representative underwriting observation, fundamental need based sales principles, and phone system usage.	Prerequisites: None.	LEC 3.0 3.0 3.0
CSR213	Automobile Insurance Operations II	Auto insurance account operations. Includes the format and use of vehicle identification numbers (VIN) and the impact of regulation in the insurance industry. Also covers policy procedures including liability, exclusions, and credits. Review of the billing process and statements also covered.	Prerequisites: A grade of C or better in CSR212.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CSR214	Automobile Insurance Operations Lab	Practical application of auto insurance member services operational procedures. Includes use of the direct sales system to complete account navigation in addition to modification and billing procedures. Emphasis on effective communication skills, information gathering, and sales techniques.	Prerequisites: A grade of C or better in CSR213.	LAB 1.0 2.0 2.0
CSR220	Sales and Retention	Practical application for call center representatives. Covers skills and behaviors necessary for successful and effective completion of inbound sales and retention calls.	Prerequisites: Permission of Department or Division.	LAB 2.0 6.0 6.0
CSR280AB	Customer Service Internship	Customer service experience in business or industry. Eighty hours of designated work per credit. Maximum of eight credits allowed	Prerequisites: Permission of Department or Division.	L+L 2.0 2.0 2.0
CTE200	Career and Technical Education: Principles, Philosophy and Student Organizations	Examination of the role of career and technical educational (CTE) pathways as they relate to workforce development. Overview of career and technical student organizations (CTSO), occupational clusters, development and role of career and technical education, philosophy, history and impact of federal funding revenue streams, and career and technical delivery system.	Prerequisites: None.	LEC 3.0 3.0 3.0
CTE210	Career and Technical Education: Teaching Methods and Curriculum Development	Overview and practical application of teaching methodology and curriculum development for secondary education career and technical education teachers. Teaching strategies and learning styles covered. Curriculum design/mapping, lesson objectives, time management skills, teaching resources, and Arizona Department of Education Career and Technical Curriculum Framework Standards also included.	Prerequisites: None.	LEC 3.0 3.0 3.0
CTE220	Career and Technical Education: Classroom Management and Lab Safety	Classroom management techniques. Classroom discipline models, student behavior and misbehavior, group dynamics, student self-motivation, and learning styles covered. Essentials of lab safety issues, including regulatory agencies and policies. State Board of Education Professional Teaching Standards emphasized.	Prerequisites: None.	LEC 4.0 4.0 4.0
CTT110	Introduction to Caterpillar Service Industry	Introduction to the Caterpillar organization and product line, basic shop safety, and shop operation. Includes computer operations and service information systems.	Prerequisites: Permission of Department or Division.	L+L 3.0 5.0 5.0
CTT111	Caterpillar Engine Fundamentals	Introduction to diesel engine theory and service procedures. Focuses on Caterpillar engine systems and applications.	Prerequisites: A grade of C or better in CTT110.	L+L 4.0 8.0 8.0
CTT112	Hydraulic Fundamentals	Hydraulic fundamentals, including functions of valves used in Caterpillar hydraulic systems, functions of vane pumps, gear pumps, and piston pumps, and assembly and disassembly of hydraulic components. Includes ISO hydraulic symbols.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CTT113	Fuel Systems	Introduction to fuel systems used in Caterpillar engines. Covers fuel selection, calibrations, and nozzle testing procedures, governor operation, and hydraulic fuel ratio controls. Includes 1.1 and 1.2 MUI and HEUI, EUI, Nippondenso, and Zexel fuel systems.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0
CTT114	Basic Electrical Fundamentals	Basic electrical and electronic principles used by the technician to diagnose and repair electrical systems in Caterpillar machines.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0
CTT115	Air Conditioning Fundamentals	Introduction to principles, systems, components, and servicing of air conditioning systems used in Caterpillar products.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0
CTT116	Power Train I	Basic components and operations of power train systems used in Caterpillar machines. Covers basic components, clutches, manual shift transmissions, and power shift transmissions.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0
CTT117	Machine Hydraulic Systems	Operation, testing, and adjustment procedures for pilot operated hydraulic systems, load sensing pressure compensated (LSPC) hydraulic systems, electro-hydraulic systems, and hydrostatic systems. Components of hydraulic systems and oil flow through the system.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0
CTT118	Caterpillar Dealer Internship I	Application of skills and knowledge gained in CTT coursework in an internship in a dealership environment. Develops professional skills required of Caterpillar service technician. Provides experience in tool usage, shop safety, connective devices, computers and service information systems, air intake and exhaust systems, lubrication systems, cooling systems, fuel systems, engines, and electrical systems. Requires intern to complete a list of learning objectives, keep a logbook, and be evaluated by dealership supervisor and internship coordinator.	Prerequisites: A grade of C or better in CTT110.	LAB 3.0 3.0 0.0
CTT119	Caterpillar Dealer Internship II	Application of skills and knowledge gained in CTT coursework in an internship in a dealership environment. Develops professional skills required of Caterpillar service technician. Provides experience in hydraulics, pumps, valves, cylinders, and pilot-operated implement system. Requires intern to complete a list of learning objectives, keep a logbook, and be evaluated by dealership supervisor and internship coordinator.	Prerequisites: A grade of C or better in CTT110.	LAB 3.0 3.0 0.0
CTT200	Power Train II	Methods of transferring power. Hydraulic-driven machines and mechanical power train components, including differentials, brakes, final drives, and undercarriage.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0
CTT201	Machine Electronics	Introduction to machine electronic systems and diagnostic tooling used to diagnose and repair the complex electrical/electronic systems installed in Caterpillar machines.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CTT202	Engine Diagnostics and Repair	In-depth study of engine diagnostics and repair techniques used to troubleshoot and repair engine problems in Caterpillar machines. Selection and use of Caterpillar diagnostic tools. Covers oil, air, cooling, and fuel systems.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0
CTT203	Machine Diagnostics	Failure analysis, troubleshooting logic, and diagnostic tooling and processes used to diagnose and repair the complex systems installed in Caterpillar machines. Use of Caterpillar's Applied Failure Analysis. Introduction to Service Technician Workbench (STW) applications.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0
CTT204	Machine Specific Systems	Introduction to machine-specific systems. Machines covered include compact construction equipment, agricultural combines and challengers, 325B Excavator, off-highway trucks, wheel tractor scrapers, and motor graders.	Prerequisites: A grade of C or better in CTT110.	L+L 3.0 5.0 5.0
CTT205	Caterpillar Dealer Internship III	Application of skills and knowledge gained in CTT coursework in an internship in a dealership environment. Develops professional skills required of Caterpillar service technician. Provides experience in air conditioning systems, power trains, couplings, transmissions, and hydraulic systems. Requires intern to complete a list of learning objectives, keep a logbook, and be evaluated by dealership supervisor and internship coordinator.	Prerequisites: A grade of C or better in CTT110.	LAB 3.0 3.0 0.0
CTT206	Caterpillar Dealer Internship IV	Application of skills and knowledge gained in CTT coursework in an internship in a dealership environment. Develops professional skills required of Caterpillar service technician. Provides experience in lubrication systems, engine air induction systems, cooling systems, fuel systems, timing systems, failure analysis, diagnosis, and troubleshooting of specific types of Caterpillar equipment. Requires intern to complete a list of learning objectives, keep a logbook, and be evaluated by dealership supervisor and internship coordinator.	Prerequisites: A grade of C or better in CTT110.	LAB 3.0 3.0 0.0
CUL101	Culinary Basics	Theory and practice of basic elements of culinary arts fundamentals. Emphasis on safety, sanitation and uniform requirements, culinary terminology, basic nutritional guidelines, equipment needs and usage, standard measurements, knife selection and care, basic knife cuts, and fruit and vegetable identification and preparation.	Prerequisites: None.	LEC 3.0 3.0 3.0
CUL102	Hot Foods	Cooking techniques and preparation of varied meat, fish and poultry items. Theory and practice of production of stocks, sauces, and soups. Study of butchering, yields, purchasing and grade classification.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CUL103	Breakfast and Cold Foods	Cooking techniques and preparation of breakfast items, salads, sandwiches, and dressings. Theory and practice of production of egg, pasta, cheeses, and fruit dishes, canapes and hors d`oeuvre creations. Study of lettuces, fruits, grains, cheeses and dressings as components of salads and sandwiches.	Prerequisites: None.	LEC 3.0 3.0 3.0
CUL104	Bakery and Pastry	Provides a study of cooking techniques and preparation methods for cakes, pies, cookies and simple desserts as well as production of doughs and breads. Includes preparation of various bakery sauces and toppings, uses of chocolate, and appropriate presentation methods for various types of desserts.	Prerequisites: None.	LEC 3.0 3.0 3.0
CUL105	Principles of Professional Cooking	Introductory principles and skills for professional cooking. Introduces organizational structure of kitchen staff in different types of kitchens. Includes basic principles of safety and sanitation, equipment and utensil use, French cooking terms, recipe use, measuring techniques, identification and use of seasoning agents, and basic cooking methods applied to stocks, sauces and soups, vegetables, starches, entrees, and eggs. Emphasis on practical experiences in a commercial kitchen.	Prerequisites: None.	L+L 3.0 5.0 5.0
CUL107	Cold Food and Breakfast Production	Cooking techniques and preparation of cold food items to include salads, sandwiches, hors d'oeuvres, and appetizers. Preparation of common breakfast foods found in restaurant operations.	Prerequisites: A grade of C or better in CUL105.	L+L 3.0 5.0 5.0
CUL109	Menu Design and Development	Essential skills of menu planning and cost controls to follow a market plan. Emphasis on purchasing, receiving, storage, forecasting, production control, food and beverage control, budgeting, and evaluation systems. Provides a working model for food operation and appropriate menu to fit market plan.	Prerequisites: None.	LEC 2.0 2.0 2.0
CUL113	Commercial Baking Techniques	Principles and techniques for preparation, storage, and serving of bakery products. Includes breads, cakes, pies, pastry, cookies, fillings, and icings. Emphasis on practical experiences in a commercial bakery.	Prerequisites: None.	L+L 3.0 5.0 5.0
CUL115	Food Service Sanitation	Focuses on the theory and practice of food service safety and sanitation. Emphasis on understanding and applying the Hazard Analysis Critical Control Points (HACCP) concept. Reviews legal elements of food service sanitation based on requirements and recommendations of regulatory authorities. Focuses on stewarding as an important kitchen support service with emphasis on appropriate practices and principles of receiving food and product rotation.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CUL119	Bakery Operations	Basic business operations for a bakery including examination of product lines, menu development, pricing, and marketing strategies.	Prerequisites: None.	LEC 3.0 3.0 3.0
CUL120	Food Costing, Purchasing and Inventory Control	Basic skills necessary to understand and utilize cost controls. Focus on measurements, recipe costing and yield analysis. Application of systems and practices for efficient food purchasing, storage, production, budgeting and inventory.	Prerequisites: None.	L+L 3.0 3.0 3.0
CUL123	Customer Service Practicum	Professional food and beverage experience in a commercial food service operation. Focuses on food server, host/hostess, cashier, and busperson. Includes beverage preparation, application of sanitation, and safety concepts. Stresses professionalism in service, demeanor, and appearance.	Prerequisites: A grade of C or better in FON104.	L+L 4.0 11.0 0.0
CUL127	Classical Desserts	Advanced principles and techniques in commercial baking and dessert preparation. Focus on fine pastries with European flair and on desserts served in better hotels, restaurants, and resorts. Preparation of macaroons, tarts, puff pastries, specialty cakes, and desserts such as Bavarian creams, mousses, custards, souffles, crepe desserts, and flammeries. Preparation and use of sauces, techniques for using nuts and chocolate, and exploration of new recipes.	Prerequisites: A grade of C or better in CUL113, or permission of Program Director.	L+L 3.0 5.0 5.0
CUL130	Savory Foods I	Studies all facets of hot foods with an emphasis on French and regional cooking techniques; including vegetable preparation, stocks, sauces, and soups. Reviews ingredients, production and plating techniques that are unique to contemporary, international and regional cuisines.	Prerequisites: None.	L+L 6.0 7.5 7.5
CUL137	Specialty Breads and Breakfast Pastry	The preparation of classical and artisan breads using advanced production techniques and skills. Classic breakfast pastry, with the production of laminated doughs, sweet doughs, and rich yeast doughs to include Danish, croissant, puff pastry, brioche, and other international classics. Completion of edible centerpieces made out of various styles of bread.	Prerequisites: A grade of C or better in CUL113 or permission of Program Director.	L+L 3.0 5.0 5.0
CUL145	Banquet Food and Beverage Service Externship	Waiter/waitress serving experiences in a banquet setting; includes instructor-assisted placement, orientation, job seeking skills, and working a minimum of four banquets or twenty-four hours in banquet service. Professional appearance and attire required.	Prerequisites: A grade of C or better in CUL123 and FON104.	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CUL150	Garde Manger and Cold Foods	Studies all facets of garde manger and cold foods with an emphasis on safety and sanitation, standard commercial kitchen equipment, salads, dressings, sandwiches, cold sauces, salad condiments, basic knife skills, and a foundation in herbs, spices, vinegars and oils. Introduces basic cooking techniques and production organization when creating salads, cold soups, appetizers and sandwiches.	Prerequisites: None.	L+L 6.0 8.0 8.0
CUL160	Bakery I	Theory and practice of operating a bakery or pastry shop in a hotel or restaurant kitchen. Provides experience in planning, ordering, scheduling and producing fine French and American pastries and baked goods. Emphasis on rapid, high-quality hand production of doughs, creams, fillings, cookies and breads.	Prerequisites: None.	L+L 3.0 5.0 5.0
CUL170	Dining Room Operations I	Focuses on theory and practice of operating a casual dining room; includes set-up and clean-up, food and beverage service, proper etiquette, point-of-sale operation and presenting guest checks. Emphasis on service techniques, including buffet and banquet set-ups, and customer accommodations.	Prerequisites: None.	L+L 3.0 5.0 5.0
CUL175	Restaurant Operations Management	Studies all facets of front of the house operations with an emphasis on operating a casual dining room including food and beverage service, proper etiquette, service techniques, point-of-sales operations and presenting guest checks. Introduces sustainability, dining room set-up, types of service and guest relations.	Prerequisites: None.	L+L 6.0 8.0 8.0
CUL201	International Cuisine	Gourmet international food preparation applied to restaurants. Review principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to selected international cultures. Emphasis on practical cooking experiences in a restaurant kitchen. Cultures to include, but not limited to: Italian, German, Oriental, Middle Eastern, and Spanish.	Prerequisites: A grade of C or better in CUL105 or permission of Program Director.	L+L 3.0 5.0 5.0
CUL203	American Regional Cuisine	American regional food preparation applied to restaurants. Review principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to selected American regions. Emphasis on practical cooking experiences in a restaurant setting. American regions to include, but not limited to: Southern, Cajun/Creole, New England, Mid-West, and Pacific Coast.	Prerequisites: A grade of C or better in CUL105 or permission of Program Director.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CUL205	French Cuisine	Principles of French cooking applied to restaurant kitchens. Includes review of safety and sanitation principles, orientation to French culture, use of French terms and recipes, and reading French menus. Emphasis on practical experiences in preparing French meals in a restaurant kitchen. Introduces preparation of appetizers, hors-d`oeurves, charcuterie items, pastries, and desserts.	Prerequisites: A grade of C or better in CUL105 or permission of Program Director.	L+L 3.0 5.0 5.0
CUL207	Pacific Rim Cuisine	Local and gourmet Pacific Rim food preparation applied to restaurants. Overview of principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to Pacific Rim cultures. Emphasis on practical cooking experiences in a restaurant kitchen. Cultures to include, but not limited to Chinese, Japanese, Thai, Korean, and South Pacific islands.	Prerequisites: A grade of C or better in CUL105.	L+L 3.0 5.0 5.0
CUL209	Italian Cuisine	Principles of Italian cooking applied to restaurant kitchens. Includes review of safety and sanitation principles, orientation to Italian culture, use of Italian terms and recipes, and reading Italian menus. Emphasis on practical experiences in preparing Italian meals in a restaurant kitchen. Introduces preparation of appetizers, entrees, salads, fresh pasta items, pastries, and desserts.	Prerequisites: A grade of C or better in CUL105.	L+L 3.0 5.0 5.0
CUL213	Buffet Catering	Focuses on the basic steps of the catering process in a commercial food setting. Includes an overview of safety and sanitation principles. Emphasizes practical experiences in booking and record keeping, function planning, ordering, production, and service set-up and breakdown for both in-house and off-premise catered events.	Prerequisites: A grade of C or better in CUL105 or permission of Program Director.	L+L 3.0 5.0 5.0
CUL215	Advanced Pastry Arts	Advanced pastry arts and decorative work as applied to showpieces and special occasion cakes. Includes sugar work such as pulled, blown, and poured as well as the use of tempered and modeling chocolate. Design and execution of a three-tier wedding cake as well as work on a special occasion and team wedding cake using gum paste, pastillage, chocolate, or marzipan. Includes desserts for special diets and spa desserts.	Prerequisites: A grade of C or better in CUL113 or permission of Program Director.	L+L 3.0 5.0 5.0
CUL217	Specialty Cakes	Advanced techniques for the production of special occasion cakes, including initial design work, baking, icing, and finishing components.	Prerequisites: A grade of C or better in CUL113 or permission of Program Director.	L+L 3.0 5.0 5.0
CUL219	Professional Pastry Techniques	Production techniques for frozen desserts, cakes with multiple components, individual pastries, and chocolates.	Prerequisites: A grade of C or better in CUL113 or permission of Program Director.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CUL220	Culinary Nutrition	Study of basic nutrition concepts with an emphasis on the nutritional concerns of restaurants and other types of food service operations. Focuses on nutrients in foods, the relationships to other nutrients and the planning of well-balanced menus throughout the life cycle.	Prerequisites: None.	LEC 2.0 2.0 2.0
CUL223	Food Service Management	Administrative procedures and personnel relationships: Management of materials costs, record keeping and legal aspects of food and beverage service operations.	Prerequisites: None.	LEC 3.0 3.0 3.0
CUL230	Savory and Hot Foods	Studies all facets of hot foods with an emphasis on French, regional, international and contemporary cooking techniques. Focus on vegetable preparation, stocks, sauces and soups. Students also practice organization, communication, teamwork and plating skills.	Prerequisites: A grade of C or better in CUL150.	L+L 6.0 11.0 11.0
CUL231AC	Culinary Studies Internship	Work experience preparing hot and cold foods in a commercial food service operation, experience in volume food production preparing salads, soups, stocks, sauces, entrees, starches, and vegetables. Fifteen (15) hours of work weekly. Supervision and evaluation by an internship coordinator.	Prerequisites: A grade of C or better in CUL105, CUL115, and permission of Department or Division.	LAB 3.0 15.0 0.0
CUL235	Advanced Culinary Techniques I - Meats	Theory and practice of the varied uses and preparation of protein products. Emphasis on butchering, creating stocks, soups and sauces, cooking methodologies, cost effective applications, plating and selection of appropriate accompaniments and garnishes.	Prerequisites: A grade of C or better in CUL230 or industry equivalent.	L+L 2.0 2.0 2.0
CUL236	Advanced Culinary Techniques II - Seafood	Theory and practice of the varied uses and preparation of seafood products. Emphasis on butchering, creating stocks, soups and sauces, cooking methodologies, cost-effective applications, plating and selection of appropriate accompaniments and garnishes.	Prerequisites: A grade of C or better in CUL230 or industry equivalent.	L+L 2.0 2.0 2.0
CUL237	Advanced Culinary Techniques III - Game and Poultry	Theory and practice of the varied uses and preparation of game and poultry products. Emphasis on butchering, creating stocks, soups and sauces, cooking methodologies, cost effective applications, plating and selection of appropriate accompaniments and garnishes.	Prerequisites: A grade of C or better in CUL230 or industry equivalent.	L+L 2.0 2.0 2.0
CUL255	Advanced Garde Manger I - Salads and Sandwiches	Theory and practice of creating simple and complex salads and sandwiches. Emphasis on use of multiple ingredients for hot and cold products, dressings, emulsified oils and vinegars, condiments, production methodologies, cost effective applications, plating and appropriate accompaniments and garnishes.	Prerequisites: None.	L+L 2.0 2.0 2.0
CUL256	Advanced Garde Manger II - Appetizers and Hors d'oeuvres	Theory and practice of the key elements in production of appetizers and hors d'oeuvres. Emphasis on ingredient selection, flavor combinations, preparation methodologies, cost effective applications, displaying, garnishing and plating.	Prerequisites: None.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CUL260	Baking and Pastry	Studies all facets of bakery operations with an emphasis on French, regional, international and contemporary baking techniques. Focus on rapid, high-quality hand production of doughs, breads, creams, desserts, cookies and pastries. Students also practice planning, ordering, scheduling and producing a variety of baked goods.	Prerequisites: A grade of C or better in CUL150.	L+L 6.0 11.0 11.0
CUL265	Professional Baking I - Base Products and Sauces	Theory and practice of the preparation of base products and sauces. Emphasis on creating finished products using basic components, creating sauces, and study of cooking methodologies, cost effective applications and plating techniques.	Prerequisites: A grade of C or better in CUL260 or industry equivalent.	L+L 2.0 2.0 2.0
CUL266	Professional Baking II - Breads and Rolls	Theory and practice of cooking techniques and procedures in the preparation of breads and rolls. Emphasis on hands-on production of scratch recipes, understanding formulas, ratios and ingredient interaction for producing high quality breads and rolls, cooking methodologies, and cost-effective applications. Focus on production of yeast-leavened breads, quick breads, laminated dough, unleavened dough and artisan style breads.	Prerequisites: A grade of C or better in CUL260 or industry equivalent.	L+L 2.0 2.0 2.0
CUL267	Professional Baking III - Pastries, Pies and Cakes	Theory and practice of the preparation of complex pastries, pies and cakes. Emphasis on cooking methodologies, high quality cost effective applications, and visually dramatic plating and garnishing techniques.	Prerequisites: A grade of C or better in CUL260 or industry equivalent.	L+L 2.0 2.0 2.0
CUL268	Professional Baking IV - Decorative and Design Work	Theory and practice of the varied uses and preparation of chocolate and sugar as decorative items. Emphasis on applications for advanced show work, cooking methodologies, cost effective applications for plated desserts and use as appropriate display pieces.	Prerequisites: A grade of C or better in CUL260 or industry equivalent.	L+L 2.0 2.0 2.0
CUL270	Dining Room Operations II	Theory and practice of operating a formal dining room, including set-up and clean-up, food and beverage service, proper etiquette and tableside food preparation. Emphasis on formal etiquette and service practices for a dining room including buffet and banquet set-up and managerial duties	Prerequisites: A grade of C or better in CUL170.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CUL296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
CUL296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
CUL296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CUL296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
CUL298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CUL298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
CUL298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
CWE198AA	Career/Work Experience	Participation in a work experience, gaining on-the-job training, and/or exploring a career or field of choice. Helps students relate their education to the real work world. Resume writing and interviewing skills. Development of employability skills	Prerequisites: None.	L+L 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
CWE198AB	Career/Work Experience	Participation in a work experience, gaining on-the-job training, and/or exploring a career or field of choice. Helps students relate their education to the real work world. Resume writing and interviewing skills. Development of employability skills	Prerequisites: None.	L+L 2.0 2.0 2.0
CWE198AC	Career/Work Experience	Participation in a work experience, gaining on-the-job training, and/or exploring a career or field of choice. Helps students relate their education to the real work world. Resume writing and interviewing skills. Development of employability skills	Prerequisites: None.	L+L 3.0 3.0 3.0
CWE298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
CWE298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
CWE298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
DAE112	Dental Assisting I	Introduction to general dentistry, dental sciences, and basic preclinical dental assisting theory and skills. Topics include dental anatomy, recording oral conditions, infection control, patient preparation, communication, patient safety and comfort, emergency management, four-handed dentistry concepts and the use and maintenance of dental equipment, and development of professional behaviors.	Prerequisites: Acceptance into the Dental Assisting Program or permission of Program Director.	LEC 7.0 7.0 7.0 LAB 0.0 10.0 10.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAE124	Dental Radiography	Physics of radiography, theory of radiation production, exposure techniques, radiation protection, digital image production, film processing, mounting, and interpretation of radiographs.	Prerequisites: A grade of C or better in DAE156 or permission of Program Director. Corequisites: DAE131 or permission of Program Director.	LEC 2.0 2.0 2.0
DAE131	Dental Radiography Laboratory	Radiation safety and infection control procedures for operator and patient. Image receptor placement, exposure, processing, mounting, and evaluation of dental radiographs. Operation and maintenance of x-ray and processing equipment. Interpretation of radiographic findings.	Prerequisites: A grade of C or better in DAE156 or permission of Program Director. Corequisites: DAE124 or permission of Program Director.	LAB 2.0 6.0 6.0
DAE140	Dental Issues Seminar	Examination of legal and ethical responsibilities of dental team members. Review and analysis of clinical procedures in general and specialty practices. Includes professional and career development strategies and certification information and processes.	Prerequisites: A grade of C or better in DAE156 or permission of Program Director. Corequisites: (DAE224, DAE225, DAE226, DAE227, and DAE228) or permission of	LEC 1.0 1.0 1.0
DAE156	Dental Assisting II	Intermediate dental assisting skills, with an emphasis in treatment provided in general dentistry, including an introduction to dental diseases and their prevention, and preparing for and assisting in general dental restorative procedures, including the use of local anesthetics, dental materials, and pharmacological agents for procedures. Introduction to ethics and the legal aspects of dental practices.	Prerequisites: A grade of C or better in DAE112 or permission of Program Director.	LEC 7.0 7.0 7.0 LAB 0.0 10.0 10.0
DAE212	Dental Assisting III	Advanced dental assisting skills, with an emphasis in assisting for dental specialty procedures, including pediatrics, endodontics, periodontics, orthodontics, prosthodontics, and oral and maxillofacial surgery. Additional emphasis will be on expanded functions procedures performed by the dental assistant, as well as patient records management and pharmacology related to dental treatment procedures.	Prerequisites: A grade of C or better in DAE156 or permission of Program Director.	LEC 2.0 2.0 2.0 LAB 0.0 2.0 2.0
DAE224	General Clinical Practice	Placement of students in general practice dental facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director. Corequisites: DAE140 or permission of Program	LAB 1.0 5.0 0.0
DAE225	Pediatric Clinical Practice	Placement of students in pediatric dental facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director. Corequisites: DAE140 or permission of Program	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAE226	Periodontal Clinical Practice	Placement of students in periodontal facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director. Corequisites: DAE140 or permission of Program	LAB 1.0 5.0 0.0
DAE227	Orthodontic Clinical Practice	Placement of students in orthodontic facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director. Corequisites: DAE140 or permission of Program	LAB 1.0 5.0 0.0
DAE228	Oral and Maxillofacial Surgery Clinical Practice	Placement of students in oral and maxillofacial surgical facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director. Corequisites: DAE140 or permission of Program	LAB 1.0 5.0 0.0
DAE256	Dental Assisting IV	Advanced dental assisting sciences, with an emphasis in the recognition of oral pathologies, use of technology in dentistry, intermediate dental office management skills, and legal considerations for the practice of dentistry. Additional emphasis will be placed on coronal polishing and community oral health.	Prerequisites: A grade of C or better in DAE212 or permission of Program Director.	LEC 2.0 2.0 2.0 LAB 0.0 2.0 2.0
DAH100	Introduction to Dance in the United States	Overview of the field of dance focusing on origins, historical development, cultural characteristics of the various styles of dance and their contemporary practice in the United States, and dance as a vital part of the human experience.	Prerequisites: None.	LEC 3.0 3.0 3.0
DAH201	Dance, Culture, and Global Contexts	Introduction to the study of dance as culture in diverse global contexts.	Prerequisites: None.	LEC 3.0 3.0 3.0
DAH250	Dance in Popular Culture	Interdisciplinary approach investigating diverse cultural dance practices that have shaped American popular culture from the late 19th century to the present. Highlights issues of power, class, race, ethnicity, gender, age and sexuality. Emphasis is on revealing diverse cultural influences in U.S. popular culture.	Prerequisites: None.	LEC 3.0 3.0 3.0
DAH255	Hip Hop: Arts, Aesthetic and Culture	Selective survey and historico-cultural analysis of hip hop arts, aesthetics and culture organized around the founding elements of DJing, MCing, B-boy and B-girling, graffiti arts and knowledge.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
DAN101AA	Social Dance: Ballroom	Theory and practice of Ballroom dance. Development of movement quality and performance skills individually, with a partner or in a group setting.	Prerequisites: None.	L+L 1.0 2.0 2.0
DAN101AB	Social Dance: Swing	Theory and practice of Swing dance. Development of movement quality and performance skills individually, with a partner or in a group setting.	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAN101AC	Social Dance: Latin	Theory and practice of Latin dance. Development of movement quality and performance skills individually, with a partner or in a group setting.	Prerequisites: None.	L+L 1.0 2.0 2.0
DAN101AE	Social Dance: Tango	Theory and practice of Tango dance. Development of movement quality and performance skills individually, with a partner or in a group setting.	Prerequisites: None.	L+L 1.0 2.0 2.0
DAN102	Hip Hop I	Theory and practice of Hip Hop dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN102PA	Hip Hop Basic Level	Theory and practice of Hip Hop dance at the basic level. Development of movement quality and improvisation skills. Dance training for personal skill development and interest.	Prerequisites: None.	L+L 0.5 1.5 1.5
DAN103	Hip Hop II	Theory and practice of Hip Hop dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN102 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN103PA	Hip Hop Beginning Level	Theory and practice of Hip Hop dance at the beginning level. Development of movement quality and improvisation skills. Dance training for personal skill development and interest.	Prerequisites: A grade of C or better in DAN102 or DAN102PA or permission of Instructor.	L+L 0.5 1.5 1.5
DAN104AA	Ballroom I	Theory and practice of Ballroom dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN104AB	Ballroom II	Theory and practice of Ballroom dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN104AA or permission of Instructor.	L+L 1.0 3.0 3.0
DAN106AA	Latin I	Theory and practice of Latin dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN106AB	Latin II	Theory and practice of Latin dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN106AA or permission of Instructor.	L+L 1.0 3.0 3.0
DAN108AA	Tango I	Theory and practice of Tango dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN108AB	Tango II	Theory and practice of Tango dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN108AA or permission of Instructor.	L+L 1.0 3.0 3.0
DAN115	Dance Trends	Theory and practice of current social dance trends. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN120AB	World Dance: Flamenco	Theory and practice of Flamenco. Development of movement quality and performance skills, individually, with a partner or in a group setting.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN120AE	World Dance: Middle Eastern Dance	Theory and practice of Middle Eastern dance. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAN120AK	World Dance: Capoeira	Theory and practice of Capoeira. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN129	Musical Theatre Dance I	Introduction to the theory and practice of musical theatre dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN130	Musical Theatre Dance II	Theory and practice of musical theatre dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN129 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN131	Ballet I	Level one ballet theory and practice. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN131PA	Ballet I: Community	Dance training for personal skill development and interest. Level one ballet theory and practice.	Prerequisites: None. Prior dance experience suggested but not required.	L+L 0.5 1.5 1.5
DAN132	Modern Dance I	Introduction to the theory and practice of modern dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN132PA	Modern Dance Basic Level	Dance training for personal skill development and interest. Introduction to the theory and practice of modern dance at the basic level.	Prerequisites: None. Prior dance experience suggested but not required.	L+L 0.5 1.5 1.5
DAN133	Jazz Dance I	Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None. Corequisites: DAN138 for dance majors.	L+L 1.0 3.0 3.0
DAN133PA	Jazz Basic Level	Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the basic level.	Prerequisites: None. Prior dance experience suggested but not required.	L+L 0.5 1.5 1.5
DAN134	Ballet II	Level two ballet theory and practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN131 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN134PA	Ballet II: Community	Dance training for personal skill development and interest. Level two ballet theory and practice.	Prerequisites: A grade of C or better in DAN131PA or permission of Department or Division.	L+L 0.5 1.5 1.5
DAN135	Modern Dance II	Theory and practice of modern dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN132 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN135PA	Modern Dance Beginning Level	Dance training for personal skill development and interest. Theory and practice of modern dance at the beginning level.	Prerequisites: A grade of C or better in DAN132PA or permission of Department or Division.	L+L 0.5 1.5 1.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAN136	Jazz Dance II	Theory and practice of jazz dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN133 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN136PA	Jazz Beginning Level	Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN133PA or permission of Department or Division.	L+L 0.5 1.5 1.5
DAN140	Tap Dance I	An introduction to the theory and practice of tap dance.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN141	Dance Workshop	An intensive experience in the process of choreography, performance, and production elements.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN145	Tap Dance II	Theory and practice of tap dance at an advanced beginning level.	Prerequisites: A grade of C or better in DAN140 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN146	Tap Dance Ensemble	Introduction to the process and practice of dance performance, specific to the genre of tap dance.	Prerequisites: A grade of C or better in DAN140 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN150	Dance Performance I	The process and practice of level I dance performance.	Prerequisites: None. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance.	L+L 1.0 3.0 3.0
DAN155	Dance Performance II	The process and practice of level II dance performance.	Prerequisites: A grade of C or better in DAN150 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world	L+L 1.0 3.0 3.0
DAN164	Improvisation	An introduction to and an exploration of basic improvisational dance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN170	Dance Kinesiology	In-depth study of how the human body functions during dance movement both theoretically and practically. Attention given to correct body alignment and use while dancing, exploring each part of the body individually and analyzing the body as a whole.	Prerequisites: None.	LEC 3.0 3.0 3.0
DAN190	Discovering Dance Careers	An overview of the professional opportunities available in dance and dance related fields.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAN191	Viewing Dance	This course emphasizes developing critical analysis skills in order to find effective and intelligent ways of viewing and discussing choreography, dance for film, and lighting design for dance. Students will view masterpiece examples of choreography, dance for film, and lighting design from notable artists during the 20th and 21st centuries spanning various genres of dance.	Prerequisites: None.	L+L 1.0 1.0 1.0
DAN192	Digital Music for Dancers	Learn to use Digital Audio Workstation (DAW) software to edit and create music for dance performance and film as well as fix audio issues in music and sound.	Prerequisites: None.	L+L 1.0 1.0 1.0
DAN193	Professional Promotion for Dancers	An introduction to professional promotion for dancers. Design software and online applications will be used to manipulate photos and graphics in the creation of design projects for promotion.	Prerequisites: None.	L+L 1.0 1.0 1.0
DAN202	Hip Hop III	Theory and practice of Hip Hop dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN103 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN202PA	Hip Hop Intermediate Level	Theory and practice of Hip Hop dance at the intermediate level. Development of movement quality and improvisation skills. Dance training for personal skill development and interest.	Prerequisites: A grade of C or better in DAN103, or DAN103PA, or permission of	L+L 0.5 1.5 1.5
DAN203	Hip Hop IV	Theory and practice of Hip Hop dance at the intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN202 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN203PA	Hip Hop Intermediate Advanced Level	Theory and practice of Hip Hop dance at the intermediate advanced level. Development of movement quality and improvisation skills. Dance training for personal skill development and interest.	Prerequisites: A grade of C or better in DAN202, or DAN202PA, or permission of Instructor.	L+L 0.5 1.5 1.5
DAN210	Dance Production I	Introduction to the elements of pre-production and production, including but not limited to production organization, production management, lighting design, and sound design as they relate to the art of dance.	Prerequisites: None.	L+L 3.0 3.0 3.0
DAN220	Dance Career Preparation	This course provides foundational skills for employment in the field of dance including career research; development of promotional materials; interview and audition preparation; and entrepreneurial strategies for achieving educational and career goals.	Prerequisites: A grade of C or better in ENG101 or permission of Instructor.	L+L 3.0 3.0 3.0
DAN221	Rhythmic Awareness I	Exploration of rhythm in dance performance, choreography and pedagogy. Emphasis on the basic understanding of rhythm and cultivating awareness of rhythm in everyday life.	Prerequisites: None.	LEC 3.0 3.0 3.0
DAN229	Musical Theatre Dance III	Theory and practice of musical theatre dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN130 or permission of Instructor.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAN230	Musical Theatre Dance IV	Theory and practice of musical theatre dance at the intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN229 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN231	Ballet III	Level three ballet theory and practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN134 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN231AA	Ballet III: Intensive	Level three ballet theory and intensive practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN134 or permission of Instructor.	L+L 2.0 5.0 5.0
DAN231PA	Ballet III: Community	Dance training for personal skill development and interest. Level three ballet theory and practice.	Prerequisites: A grade of C or better in DAN134PA or permission of Department or Division.	L+L 0.5 1.5 1.5
DAN232	Modern Dance III	Theory and practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN135 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN232AA	Modern Dance III: Intensive	Theory and intensive practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN135 or permission of Instructor.	L+L 2.0 5.0 5.0
DAN232PA	Modern Dance Intermediate Level	Dance training for personal skill development and interest. Theory and practice of modern dance at the intermediate level.	Prerequisites: A grade of C or better in DAN135PA or permission of Department or Division.	L+L 0.5 1.5 1.5
DAN233	Jazz Dance III	Theory and practice of jazz dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN136 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN233AA	Jazz Dance III: Intensive	Theory and intensive practice of jazz dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN136 or permission of Instructor.	L+L 2.0 5.0 5.0
DAN233PA	Jazz Intermediate Level	Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the intermediate level.	Prerequisites: A grade of C or better in DAN136PA or permission of Department or Division.	L+L 0.5 1.5 1.5
DAN234	Ballet IV	Level four ballet theory and practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN231 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN234AA	Ballet IV: Intensive	Level four ballet theory and intensive practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN231AA or permission of Instructor.	L+L 2.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAN234PA	Ballet IV: Community	Dance training for personal skill development and interest. Level four ballet theory and practice.	Prerequisites: A grade of C or better in DAN231PA or permission of Department or Division.	L+L 0.5 1.5 1.5
DAN235	Modern Dance IV	Theory and practice of modern dance at the intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN232 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN235AA	Modern Dance IV: Intensive	Theory and intensive practice of modern dance at the advanced intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN232AA or permission of Instructor.	L+L 2.0 5.0 5.0
DAN235PA	Modern Dance Advanced Level	Dance training for personal development and interest. Theory and practice of modern dance at the advanced level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN232PA or permission of Department or Division.	L+L 0.5 1.5 1.5
DAN236	Jazz Dance IV	Theory and practice of jazz dance at the intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN233 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN236AA	Jazz Dance IV: Intensive	Theory and intensive practice of jazz dance at the advanced intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN233AA or permission of Instructor.	L+L 2.0 5.0 5.0
DAN236PA	Jazz Advanced Level	Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the advanced level.	Prerequisites: A grade of C or better in DAN233PA or permission of Department or Division.	L+L 0.5 1.5 1.5
DAN237	Ballet Pointe I	An introduction to the theory and practice of level one pointe work. Development of strength and movement quality.	Prerequisites: A grade of C or better in DAN134 or permission of Instructor. Corequisites: DAN231 or DAN234.	L+L 1.0 1.0 1.0
DAN240	Tap Dance III	Theory and practice of tap dance at a beginning intermediate level.	Prerequisites: A grade of C or better in DAN145 or permission of Instructor.	L+L 1.0 3.0 3.0
DAN245	Tap Dance IV	Theory and practice of tap dance at an intermediate level.	Prerequisites: A grade of C or better in DAN240 or permission of Instructor.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAN250	Dance Performance III	The process and practice of level III dance performance.	Prerequisites: A grade of C or better in DAN155 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world	L+L 1.0 3.0 3.0
DAN255	Dance Performance IV	The process and practice of level IV dance performance.	Prerequisites: A grade of C or better in DAN250 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world	L+L 1.0 3.0 3.0
DAN264	Choreography I	Study of basic dance choreography to include construction of a phrase, structure and form in a composition, and the basic elements of time, space and energy	Prerequisites: None.	L+L 3.0 3.0 3.0
DAN265	Choreography II	Exploration of choreography at the intermediate level. Experimentation with the various approaches to creative practice as established by 20th and 21st century artists.	Prerequisites: A grade of C or better in DAN264 or permission of Instructor.	L+L 3.0 3.0 3.0
DAN272	Dance Technology	Survey of the expanding field of technology as it pertains to the study and performance of dance.	Prerequisites: None.	L+L 3.0 3.0 3.0
DAN275	Choreography for Film and Video	Introduction to creating choreography uniquely for screen medium, emphasizing relationship between choreography, work of the camera, and the editing in maintaining the three dimensional qualities of movement when transferred to the two dimensional space of the screen.	Prerequisites: None. DAN264 recommended but not required.	LEC 3.0 3.0 3.0
DAN280	Dance Practicum	A culmination of coursework for the dance major requiring completion of an extended choreographic work from conception to performance. Also requires a final evaluative paper on the successes and challenges encountered throughout the project.	Prerequisites: Permission of Instructor.	L+L 2.0 3.0 3.0
DAN282AA	Service-Learning Experience in Dance	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
DAN282AB	Service-Learning Experience in Dance	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
DAN282AC	Service-Learning Experience in Dance	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAN290AA	Dance Conservatory I	An intensive course focusing on the theory and practice of dance technique including, but not limited to, ballet, modern dance, modern jazz, pilates, yoga and dance performance at the beginning level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills.	Prerequisites: None.	L+L 1.0 3.0 3.0
DAN290AB	Dance Conservatory I	An intensive course focusing on the theory and practice of dance technique including, but not limited to, ballet, modern dance, modern jazz, pilates, yoga and dance performance at the beginning level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills.	Prerequisites: None.	L+L 2.0 6.0 6.0
DAN290AC	Dance Conservatory I	An intensive course focusing on the theory and practice of dance technique including, but not limited to, ballet, modern dance, modern jazz, pilates, yoga and dance performance at the beginning level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills.	Prerequisites: None.	L+L 3.0 9.0 9.0
DAN293	Teaching Dance in Elementary Education	Introduction to theories and methods of teaching dance and movement in the elementary school setting. Includes planning, facilitating, and assessing dance and movement experiences for grades K-6.	Prerequisites: A grade of C or better in (BIO160, DAN231, DAN232, DAN233 and DAN264) or permission of Instructor.	LEC 3.0 3.0 3.0
DAN294	Teaching Dance In Secondary Education	Introduction to the theories and methods of teaching dance and movement in the secondary school setting. Includes planning, facilitating, and assessing dance and movement experiences for grades 7-12.	Prerequisites: A grade of C or better in (BIO160, DAN231, DAN232, DAN233 and DAN264) or permission of Instructor.	LEC 3.0 3.0 3.0
DAN298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
DAN298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DAN298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
DFT105AA	Computer Aided Drafting I: AutoCAD	Industrial use of AUTOCAD equipment (hardware and software) in the areas of mechanical, electronic and construction drawings	Prerequisites: None.	L+L 3.0 6.0 6.0
DFT106	Algebra and Graphs for Design Technology	Algebraic principles and applications used in the design trades. Additional topics in the use of rectangular coordinates.	Prerequisites: A grade of C or better in MAT092 or equivalent or 1 year of high school algebra or permission of Department or Division.	LEC 3.0 3.0 3.0
DFT107	Trigonometry and Analytic Geometry for Design Technology	An introduction to plane trigonometry and plane and solid geometry with practical applications to the field of design drafting. Problems in the analysis of force, stress, and vectors as well as primary geometric considerations	Prerequisites: A grade of C or better in DFT106 or equivalent.	LEC 3.0 3.0 3.0
DFT110	Introduction to Drafting	Fundamentals of drafting including lettering, basic drawing concepts, geometric construction and multiview projection.	Prerequisites: None.	L+L 3.0 6.0 6.0
DFT111	Intermediate Drafting	Dimensioning and tolerancing, sectional views and auxiliary views.	Prerequisites: A grade of C or better in DFT105AA, or DFT110, or equivalent.	L+L 3.0 6.0 6.0
DFT112	Advanced Drafting	Detail and assembly drawings, dimensioning and tolerancing per current manufacturing standards.	Prerequisites: A grade of C or better in (DFT111 and DFT254AA) or equivalent.	L+L 3.0 6.0 6.0
DFT114	Machine Trades Blueprint Reading	Analysis and interpretation of technical drawings, common to manufacturing and the machine trades	Prerequisites: None.	LEC 3.0 3.0 3.0
DFT115	Geometric Dimensioning and Tolerancing	Principles and application of the latest techniques in geometric dimensioning and tolerancing in accordance with current American Society of Mechanical Engineers (ASME) Y14.5M. Recommended for all manufacturing personnel who read or produce engineering drawings related to contracts with the U.S. Government.	Prerequisites: A grade of C or better in DFT110 or Corequisites: DFT110 or permission of Department or Division.	LEC 3.0 3.0 3.0
DFT126	Building Trades Blueprint Reading	Analysis and interpretation of technical drawings common to the construction industry and building trades	Prerequisites: None.	LEC 3.0 3.0 3.0
DFT254AA	Computer Aided Drafting II: AutoCAD	Advanced AutoCAD techniques in constructing three-dimensional objects and symbols, dimensioning and text; advanced techniques for projection, rotation, and translation of objects; advanced plotter use.	Prerequisites: A grade of C or better in DFT105AA or equivalent or permission of Department or Division.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DFT255	3D Printing/Additive Manufacturing	Rapidly advancing additive manufacturing (AM) technologies, often called 3D printing, provide us a direct way of converting digital data into physical objects. Additive manufacturing enables the building of customized parts previously impossible to fabricate. Design for additive manufacturing teaches background, terminology, fundamentals designing for additive manufacturing, and current AM technology as well as advantages and limitations of 3D printing, materials, and post-processing. Students will learn and apply technique through lab activities, machine operation and maintenance, part design and analysis, adapting stereolithography files, printing models, and post-processing.	Prerequisites: A grade of C or better in DFT254AA or permission of Department or Division.	L+L 4.0 4.0 4.0
DFT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
DFT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DFT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
DFT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
DFT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
DFT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DFT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
DHE110	Pharmacology for the Dental Hygienist	Study of the principles of pharmacology and drugs affecting oral health and dental treatment. Topics include drug interactions, oral manifestations, drugs used in dentistry and alternative medicine.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.	LEC 3.0 3.0 3.0
DHE112	Oral Pathology	Identification, classification, etiology, and treatment of lesions, diseases, and atypical conditions of the oral cavity and supporting structures. Evaluation of abnormal oral conditions and the need for a definitive diagnosis and referral. Apply technologies that are used in the identification of oral lesions.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.	LEC 3.0 3.0 3.0
DHE115	Emergency Medicine	Introduction to recording and interpreting medical history. Additional topics include: recognition of signs and symptoms of medical emergencies, procedures and techniques introduced to prevent emergencies and management of emergency situations in the dental environment.	Prerequisites: Admission to the Dental Hygiene Program.	LEC 2.0 2.0 2.0
DHE117	Dental Radiography	Physics of radiography, theory of radiation production, exposure techniques, radiation protection, image processing, mounting, and interpretation of radiography. Course activities include multimedia resources.	Prerequisites: Admission to the Dental Hygiene Program or permission of Program Director.	LEC 2.0 2.0 2.0
DHE119	Head and Neck Anatomy	Study of the structures of the head and neck relevant to dental hygiene. Topics include: osteology, musculature, vascular supply, lymph and glandular tissue, cranial nerves and routes of infection. Course activities include use of skulls, models and multimedia resources.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.	LEC 3.0 3.0 3.0
DHE120	Pre-Clinical Dental Hygiene	Introduction to the dental hygiene profession and the process of care. Infection control, patient assessment, preventive treatment and dental hygiene instrumentation are practiced. Students are introduced to self assessment skills and quality improvement.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.	L+L 6.0 12.0 12.0
DHE121	Dental Anatomy, Embryology and Histology	Includes the histology and embryology of oral tissues; developmental disturbances of the face, oral cavity, and related structures; tooth composition and morphology including anomalies; eruption patterns and occlusal evaluation. Use of skulls, models and multimedia resources also covered.	Prerequisites: Admission to the Dental Hygiene Program.	L+L 2.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DHE125	Dental Radiography Laboratory	Radiation safety and infection control procedures for operator and patient. Image receptor placement, exposure, processing, mounting and evaluation of dental radiographs. Operation and maintenance of X-ray and processing equipment. Interpretation of radiographic findings.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: (DHE117 and admission to the Dental Hygiene Program) or permission of Program Director.	LAB 1.0 3.0 3.0
DHE127	Prevention of Dental Disease	Introduction to preventive aids, chemotherapeutic agents, and motivational interviewing techniques to help patients achieve optimum oral health, reduce incidence of disease, and minimize risk of oral injury. Instills critical thinking in etiologic agents, cariology, fluorides, sealants, nutrition, and their oral and systemic implications.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.	LEC 3.0 3.0 3.0
DHE132	Dental Hygiene Theory I	Study of the dental hygiene process of care with emphasis on assessment, planning and implementation. Topics include instrumentation, adjunct dental hygiene services, instrument sharpening, computer technology, dental specialties and professional accountability.	Prerequisites: A grade of C or better in (DHE120 and admission to the Dental Hygiene Program) or permission of Instructor. Corequisites:	L+L 3.0 5.0 5.0
DHE133	Dental Hygiene Clinic I	Application of the dental hygiene process of care with emphasis on assessment, planning, and implementation. Introduction to evaluation of dental hygiene therapy.	Prerequisites: A grade of C or better in DHE120 and admission to the Dental Hygiene Program. Corequisites: DHE132 and current CPR card.	LAB 3.0 9.0 9.0
DHE201	Dental Materials	Composition, properties and criteria for safe use of dental materials. Principles of manipulation of restorative, preventive, and laboratory dental materials.	Prerequisites: Admission to the Dental Hygiene Program or permission of Program Director/Chair. Corequisites: DHE202.	LEC 2.0 2.0 2.0
DHE202	Dental Materials Laboratory	Manipulate permanent and temporary restorative materials, impression delivery systems, and dental cements. Fabricate mouth guards, tooth whitening appliances, and study models. Laboratory proficiency in the application process of permanent restorative materials.	Prerequisites: Admission to the Dental Hygiene Program or permission of Program Director/Chair. Corequisites: DHE201.	LAB 1.0 3.0 3.0
DHE212	Dental Hygiene Theory II	Study of the dental hygiene process of care with emphasis on comprehensive care planning, case presentation, and clinical decision making. Introduction to advanced periodontal instrumentation.	Prerequisites: A grade of C or better in DHE132 and DHE133 and admission to the Dental Hygiene Program. Corequisites: DHE213.	L+L 2.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DHE213	Dental Hygiene Clinic II	Application of the dental hygiene process of care with emphasis on comprehensive care planning, case presentation, clinical decision making, advanced instrumentation and improved time utilization.	Prerequisites: A grade of C or better in DHE132 and DHE133 and admission to the Dental Hygiene Program. Corequisites: DHE212.	LAB 5.0 15.0 15.0
DHE219	Practice Management	Integration of practice management concepts and comprehensive quality patient care in preparation for future collaborative practice between dental hygienists and dentists. Students are challenged with practice situations including productivity, conflict management, ethical and legal issues.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.	LEC 2.0 2.0 2.0
DHE225	Periodontics	Principles of periodontology; etiology, microbiology, pathogenesis, classification and characteristics of healthy and diseased periodontal tissues. Surgical treatment of periodontal disease and the effects of dental hygiene therapy, surgical techniques and maintenance therapy. Evaluation of the scientific literature and multi-media resources are used extensively.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.	LEC 3.0 3.0 3.0
DHE227	Dental Anesthesia	A comprehensive lecture and laboratory course providing concepts and techniques for the administration of local anesthetic agents and nitrous oxide. Experience gained in medical history review, electronic recordkeeping, patient management, and hands-on experience administering local anesthetics and nitrous oxide in a clinical setting.	Prerequisites: A grade of C or better in DHE119.	LEC 2.0 2.0 2.0 LAB 0.0 3.0 3.0
DHE229	Community Oral Health	An examination of methods used to assess the oral health status of the community and to plan, implement, finance and evaluate dental public health programs. Focus on community-based health promotion and disease prevention measures to improve the oral health of the population, as well as the characteristics of dental care delivery systems and the social, political, psychological and economic factors affecting utilization within the system.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.	LEC 3.0 3.0 3.0
DHE232	Dental Hygiene Theory III	Study of the dental hygiene process of care with emphasis on the patient with special needs and advanced instrumentation. Students participate in field observations and present case documentations.	Prerequisites: A grade of C or better in (DHE212 and DHE213) and admission to the Dental Hygiene Program. Corequisites: DHE233.	L+L 2.0 2.0 2.0
DHE233	Dental Hygiene Clinic III	Application of the dental hygiene process of care with emphasis on diverse populations. Students prepare for clinical practice using self assessment, evaluation and critical thinking skills.	Prerequisites: A grade of C or better in (DHE212 and DHE213) and admission to the Dental Hygiene Program. Corequisites: DHE232.	LAB 5.0 15.0 15.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DHE298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
DIE104	Electrical for Diesel Engines I	Introduces electrical principles and circuit theory through the operation, diagnostics and repair of batteries, starting and charging circuits. Concepts include magnetism, electrical circuits, DC electricity, electrical schematic reading, interpretation, and testing.	Prerequisites: None.	L+L 3.0 4.0 4.0
DIE106	Mobile Hydraulics and Pneumatics	The transmission of energy through hydraulic and pneumatic systems. Defines the function and operation of valves, cylinders, pumps, motors, accumulators, reservoirs, coolers, hoses, fluids, filters, seals and contamination control. Basic troubleshooting and schematic interpretation emphasized. Pneumatic functions discussed.	Prerequisites: None.	L+L 3.0 4.0 4.0
DIE108	Heavy Duty Diesel PowerTrains	Introduction to powertrain concepts and operation of basic components of the powertrain system. Basic powertrain maintenance industry practices and skills that include but not limited to pressure testing and adjustments. Clutch fill calibration and some component disassembly will be covered.	Prerequisites: None.	L+L 3.0 4.0 4.0
DIE112	General Diesel Engines	Introduction to diesel engine operation and related systems. Concepts include basic engine maintenance, engine tear-down, inspection, reassembly, and all necessary adjustments.	Prerequisites: None.	L+L 3.0 4.0 4.0
DIE296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DIE296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
DIE296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
DIE296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DIE298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
DIE298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
DIE298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
DMS100	Introduction to Diagnostic Medical Sonography	Role of health care worker in diagnostic medical sonography. Job duties, responsibilities, working conditions and work environments in the inpatient and outpatient clinical settings. Overview of diagnostic and therapeutic procedures. Shadowing experience in diagnostic sonography department.	Prerequisites: None.	LEC 0.5 0.5 0.5
DMS101	Patient Care in Diagnostic Sonography	Safety procedures for the hospitalized patient. Transfer, moving and positioning techniques. Patent assessment methods and procedures. Protection of drains, tubes, intravenous lines, and infusion pumps. Gloving, gowning, and sterile procedures. Safe use and application of sonography equipment. Professional behavior and responsibility of the sonographer in the diagnostic imaging lab.	Prerequisites: Admission to the Diagnostic Medical Sonography program or permission of Instructor.	LAB 1.0 3.0 3.0
DMS110	Introduction to Diagnostic Sonography	Use of ultrasound including medical applications. Job description including opportunities, licensure, use of sonography equipment, responsibilities of diagnostic medical sonographers in the workplace, and medical ethics.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 3.0 3.0 3.0
DMS110LL	Introduction to Diagnostic Sonography Laboratory,	Use and maintenance of sonography equipment, and responsibilities of Diagnostic Medical Sonographers in the workplace.	Prerequisites: A grade of C or better in DMS110 or Corequisites: DMS110.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DMS120	Ultrasound Imaging: Abdominal Procedures I	Ultrasound evaluation of upper abdominal organs. Normal and pathologic ultrasound appearances of the liver, gallbladder, pancreas, biliary tree, spleen, adrenal glands, kidneys, major vascular structures, and lymph nodes.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 3.0 3.0 3.0
DMS120LL	Ultrasound Imaging: Abdominal Procedures I Laboratory	Ultrasound evaluation of upper abdominal organs. Normal ultrasound appearances of the liver, gallbladder, pancreas, biliary tree, spleen, adrenal glands, kidneys, major vascular structures, small parts, and lymph nodes.	Prerequisites: A grade of C or better in DMS120 or Corequisites: DMS120.	LAB 1.0 3.0 3.0
DMS121	Ultrasound Imaging: Abdominal Procedures II	Ultrasound evaluation of upper abdominal organs. Normal and pathologic ultrasound appearances of the liver, gallbladder, pancreas, biliary tree, spleen, adrenal glands, kidneys, major vascular structures, lymph nodes, and small parts.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 3.0 3.0 3.0
DMS130	Ultrasound Imaging: OB/GYN Procedures	Ultrasound evaluation of the female pelvis, reproductive system, and fetus. Diagnostic tests related to the ultrasound procedure. Normal and pathologic ultrasound appearances of the fetus, placenta, uterus, cervix, fallopian tubes, and ovaries.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 3.0 3.0 3.0
DMS130LL	Ultrasound Imaging: OB/GYN Procedures Laboratory	Application of diagnostic concepts to evaluation of the pelvis, reproductive system, and fetus. Normal and pathologic ultrasound appearances of the fetus, placenta, uterus, cervix, fallopian tubes, ovaries, and male pelvis.	Prerequisites: None. Corequisites: DMS130 or permission of the Program Director.	LAB 1.0 3.0 3.0
DMS140	Ultrasound Case Studies: Part I	Medical terminology, anatomy, physical principles, and techniques for determining proper technical factors. Anatomical variants, normal, and pathological sonographic findings in diagnostic ultrasound case presentations.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 2.0 2.0 2.0
DMS145	Clinical Pathology for Diagnostic Imaging	Disease etiology and impact on the human body. Physiologic effects of disease on body systems. Role of Diagnostic Medical Imaging (DMI) modalities in the diagnosis and treatment of selected disease processes. DMI as part of the health care team. Cultural implications in the prevention and treatment of disease.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 1.0 1.0 1.0
DMS148	Introduction to Musculoskeletal Sonographic Imaging	Ultrasound terminology. Ethics. Tissue structure and physiology in imaging. Legal ramifications. Documentation and reporting. Billing and coding. Professional standards. Roles healthcare clinicians and relationships to Sonography.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.	LEC 1.0 1.0 1.0
DMS150	Sonographic Principles and Instrumentation I	Sonographic principles and instrumentation necessary for the performance of diagnostic sonographic imaging and vascular examinations. Quality control materials and procedures. Biological effects of ultrasound energy.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 3.0 3.0 3.0
DMS150LL	Sonographic Principles and Instrumentation Laboratory	Laboratory experience in support of DMS150.	Prerequisites: A grade of C or better in DMS150 or Corequisites: DMS150.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DMS151	Sonographic Principles and Instrumentation II	Sonographic principles and instrumentation necessary for the performance of diagnostic sonographic examinations using Hemodynamics and Doppler imaging. Identifying and reducing image artifacts. Quality control materials and procedures. Biological effects of ultrasound energy.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 2.0 2.0 2.0
DMS155	Introduction to Clinical Care for Sonography	Observation of correct hospital policies and procedures in clinical simulation. The job description, duties, and functions of the sonographer. Career opportunities in ultrasound.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 1.0 3.0 3.0
DMS161	Clinical Practicum II-AA	Technical and professional aspects of diagnostic ultrasound in a simulated clinical setting at the beginner level. Simulation of hospital and clinical procedures and policies. Observation, assistance, and performance of clerical, patient care, and sonographic duties under strict supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 1.0 3.0 3.0
DMS162	Clinical Practicum II-AB	Development of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the beginner level. Hospital procedures and policies. Continued observation, assistance and performance of clerical, patient care and sonographic duties under strict supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS171	Clinical Practicum III-AA	Technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the advanced beginner level. Reinforcement and broadening of knowledge base related to hospital procedures and policies. Observation, assistance and performance of patient care and sonographic duties under moderate supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS172	Clinical Practicum III-AB	Continued technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the advanced beginner level. Ongoing reinforcement and broadening of knowledge base related to hospital procedures and policies. Continued observation, assistance and performance of patient care and sonographic duties under moderate supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS210	Concepts of Vascular Imaging	Vascular physics and terminology. Application of imaging concepts to arterial, venous, and cerebrovascular ultrasound. Normal, abnormal and pathologic states of human vascular anatomy. Review and demonstration of selected scanning protocols to include extremity, cerebral vascular systems, and abdominal duplex.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 3.0 3.0 3.0
DMS210LL	Concepts of Vascular Imaging Laboratory	Application of diagnostic concepts to arterial, venous, and cerebrovascular vasculature. Normal human vascular anatomy. Demonstration of selected scanning protocols to include extremity and visceral vascular systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: DMS210.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DMS220	Sectional Anatomy	Sectional human anatomy in the transverse, sagittal and coronal planes. Emphasis on the brain, neck, chest, abdomen and pelvic cavity.	Prerequisites: A grade of C or better in (BIO160 or BIO201) and (HCC145 or HCC146), or a graduate of a related medical program of study or currently registered as a technologist in radiography, nuclear medicine, radiation therapy or sonography OR Admission to the Medical Radiography Program or permission of Instructor.	LEC 3.0 3.0 3.0
DMS225	High Risk Obstetric/Gynecology Sonography	Sonographic overview of the female reproductive system. High risk intervention and tests related to sonography. Normal and abnormal sonographic presentations of the uterus and fetus in pregnancy.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 1.0 1.0 1.0
DMS230	Introduction to Echocardiography	Anatomy and physiology of the heart. Normal, abnormal and pathologic states of cardiac anatomy as it relates to diagnostic sonography. Demonstration of scanning techniques in echocardiography.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 1.0 1.0 1.0
DMS235	Ultrasound Breast Imaging	Ultrasound imaging of the breast. Includes terminology, technique, physics and instrumentation. Breast anatomy, physical examination and procedure findings. Pathology and correlation with other imaging modalities.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 1.0 1.0 1.0
DMS240	Ultrasound Case Studies: Part II	Medical terminology, anatomy, physical principles, and technology for determining proper technical factors. Anatomical variants, normal, and pathological sonographic findings in diagnostic ultrasound case presentations.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 2.0 2.0 2.0
DMS241	Ultrasound Case Studies: Part III	Medical terminology, anatomy, physical principles, and technology for determining proper technical factors. Anatomical variants, normal, and pathological sonographic findings in diagnostic ultrasound case presentations.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 2.0 2.0 2.0
DMS245	Neurosonography	Neuroanatomy and neurosonography of the brain and spinal cord.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 1.0 1.0 1.0
DMS250	Musculoskeletal Sonography and Small Parts	Normal sonographic human anatomy in sagittal, transverse, oblique, coronal planes. Emphasis on musculoskeletal imaging, and small parts.	Prerequisites: Admission to Diagnostic Medical Sonography program.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DMS252	Musculoskeletal Procedures I	Ultrasound terminology and physics. Anatomical variants, normal, and pathological sonographic findings in musculoskeletal diagnostic ultrasound of the upper extremity.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.	L+L 4.0 6.0 6.0
DMS254	Musculoskeletal Procedures II	Ultrasound terminology and physics. Anatomical variants, normal, and pathological sonographic findings in musculoskeletal diagnostic ultrasound of the lower extremity.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.	L+L 4.0 6.0 6.0
DMS255	Abdominal Extended Sonography	Ultrasound imaging of the pediatric population and extended anatomy for abdominal procedures. Includes terminology, technique, physics and instrumentation. Embryology, anatomy, physical examination and procedure findings. Pathology and correlation with other imaging modalities.	Prerequisites: Admission to Diagnostic Medical Sonography program, or Registered Diagnostic Medical Sonographer (RDMS) credentialed and permission of Program Director.	LEC 3.0 3.0 3.0
DMS261	Clinical Practicum IV-AA	Technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the intermediate level. Reinforcement and broadening of knowledge base related to hospital procedures and policies. Observation, assistance and performance of patient care and sonographic duties under limited supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS262	Clinical Practicum IV-AB	Development of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the intermediate level. Ongoing reinforcement and broadening of knowledge base related to hospital procedures and policies. Continued observation, assistance and performance of patient care and sonographic duties under limited supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS263	Vascular Clinical Practicum I	Technical and professional aspects of diagnostic vascular ultrasound in a hospital or clinical setting at the intermediate level. Reinforcement and broadening of knowledge base related to hospital procedures and policies. Observation, assistance and performance of patient care and vascular sonographic duties under limited supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS265	Musculoskeletal Clinical Practicum	Musculoskeletal Clinical Practicum of 240 hours in healthcare setting Ultrasound imaging instrumentation, protocol implementation and positioning techniques. Application of Ultrasound safety, quality control procedures and effective patient care and communication skills.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.	LAB 4.0 24.0 0.0
DMS267	Musculoskeletal Case Studies	Medical terminology, anatomy, physical principles, and technology for determining proper technical factors. Anatomical variants, normal, and pathological sonographic findings in musculoskeletal diagnostic ultrasound case presentations.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DMS270	Clinical Practicum V-AA	Technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the advanced level. Clinical diagnostic experiences in routine/high risk obstetrics, pelvic, vascular, abdominal and small parts scanning.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS271	Clinical Practicum V-AB	Development of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the advanced level. Continued opportunity for clinical diagnostic experiences in routine/high risk obstetrics, pelvic, vascular, abdominal and small parts scanning. Focus on progression to independent level of function.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS272	Clinical Practicum V-AC	Culminating clinical practice course with application of theoretical and practical concepts related to diagnostic ultrasound. Emphasis on independent performance of all clinical diagnostic procedures including routine/high risk obstetrics, pelvic, vascular, abdominal and small parts scanning.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS273	Vascular Clinical Practicum II	Development of technical and professional aspects of diagnostic vascular ultrasound in a hospital or clinical setting at the advanced level. Continued opportunity for clinical diagnostic experiences in routine/complex vascular scanning. Focus on progression to independent level of function.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LAB 2.0 10.0 0.0
DMS281	Ultrasound Registry Preparation Seminar: Physics and Instrumentation	Intensive review of major content measured in the American Registry for Diagnostic Medical Sonography certification examination. Physics and instrumentation in ultrasound technology.	Prerequisites: Admission into the Diagnostic Medical Sonography program or permission of the Program Director.	LEC 1.0 1.0 1.0
DMS282	Ultrasound Registry Preparation Seminar: Abdominal and Small Parts Imaging	Intensive review of major content measured in the American Registry for Diagnostic Medical Sonography certification examination. Specialties of abdominal and small parts imaging.	Prerequisites: Admission into the Diagnostic Medical Sonography program or permission of the Program Director.	LEC 1.0 1.0 1.0
DMS283	Ultrasound Registry Preparation Seminar: Obstetrics and Gynecology	Intensive review of major content measured in the American Registry for Diagnostic Medical Sonography certification examination for obstetrics and gynecology.	Prerequisites: Admission into the Diagnostic Medical Sonography program or permission of the Program Director.	LEC 1.0 1.0 1.0
DMS284	Ultrasound Registry Preparation: Vascular Imaging	Anatomy and physiology of the vascular system. Testing parameters and methods for vascular examinations. Scan protocol for sonographic evaluation of head and neck, extremities, upper abdomen and pelvis vasculature. Interpret scans and special cases.	Prerequisites: Admission into the Diagnostic Medical Sonography program or permission of the Program Director.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
DMS285	Intermediate Vascular Technology	Sonographic evaluation of the upper and lower peripheral vascular system and the cerebrovascular system. Normal and pathologic sonographic imaging and Doppler evaluation of the venous, arterial systems of the upper and lower extremities, and intra and extracranial vessels.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 2.0 2.0 2.0
DMS286	Advanced Vascular Technology	Vascular evaluation of the intracranial cerebrovascular system, indirect imaging techniques of the peripheral arterial and venous systems. Capabilities, limitations, protocols, and techniques required for diagnosis of the systemic, hepatoportal, collateral systems, and extremities. Roles of ultrasound in surgical techniques, treatment, and advanced imaging techniques.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 3.0 3.0 3.0
DMS286LL	Advanced Vascular Technology Laboratory	Application of advanced vascular imaging. Demonstration of selected scanning protocols to include lower extremity non-invasive procedures, transcranial doppler and grafts. Entry-level proficiency for most vascular exams performed in clinical practice.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: DMS286.	LAB 1.0 3.0 3.0
DMS290	Advanced Medical Ultrasound Procedures	Presentation of advanced topics in sonography including state of the art equipment. Superficial organs, heart and vessels, neurosonography, musculoskeletal, intraoperative, and interventional procedures. Aseptic technique, medical-legal and patient record keeping and image acquisition for performance of advanced sonographic examinations.	Prerequisites: Admission to Diagnostic Medical Sonography program.	LEC 4.0 4.0 4.0
DMS295	Stress Echocardiography	Anatomy and physiology of the heart. Normal and stressed states of cardiac anatomy as it relates to diagnostic sonography. Performance of stress echocardiography exam. Pharmacological agents used in stress echocardiography.	Prerequisites: Completion of echocardiography program, or Registered Diagnostic Cardiac Sonographer (RDCS), or Registered Diagnostic Medical Sonographer (RDMS), or Registered Cardiac Sonographer (RCS) credentials.	L+L 2.0 3.5 3.5
ECE102	Engineering Analysis Tools and Techniques	Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design.	Prerequisites: A grade of C or better in MAT15+ or higher-level mathematics course, or an appropriate District placement above MAT15+, or permission of Instructor or Division or Department Chair.	L+L 2.0 4.0 4.0
ECE103	Engineering Problem Solving and Design	Fundamentals of the design process: engineering modeling, communication and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession.	Prerequisites: A grade of C or better in ECE102 or permission of Instructor or Division or Department Chair.	L+L 2.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECE104	EPICS Gold I	EPICS Gold is the first of a sequence of two two-credit service learning courses in which EPICS teams are formed from students potentially representing all engineering, computer science, and construction disciplines, as well as other majors, including sustainability, business, liberal arts, sciences, and others.	Prerequisites: None.	L+L 2.0 2.0 2.0
ECE105	MATLAB Programming	Use MATLAB to solve engineering problems. An overview of programming, including matrices, structures, strings, functions, control flow, file management, data analysis, graphing capabilities, and mathematical calculations.	Prerequisites: A grade of C or better in [(MAT150 or MAT151 or MAT152 or MAT155 or MAT156) and MAT182] or (MAT187 or MAT188) or higher level mathematics course or permission of Instructor or Division or Department Chair.	L+L 1.0 2.0 2.0
ECE106	Survey of Nanotechnology	Reading and discussion on topics in nanotechnology. Includes key issues in the development of nanoscale engineering	Prerequisites: None.	LEC 1.0 1.0 1.0
ECE111	Bioengineering Systems	Introduction to biological concepts and application of engineering to biological and earth systems. Analysis of materials, structures, fluid mechanics, bioelectricity, and dynamics as applied to biological and environmental systems	Prerequisites: None.	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0
ECE150	Exploring Engineering and its Impact on Society	Introduction to the profession of engineering and its impact on culture and society.	Prerequisites: None.	LEC 3.0 3.0 3.0
ECE205	Introduction to Mining Engineering	Introduction to the process of mineral and metal extraction. From location, design, operation to reclamation of a mine site.	Prerequisites: A grade of C or better in ECE102.	LEC 3.0 3.0 3.0
ECE211	Engineering Mechanics-Statics	Modeling of static equilibrium in particles and rigid bodies through analysis of forces and mechanical properties.	Prerequisites: A grade of C or better in PHY121 or permission of Instructor or Division or Department Chair. Corequisites: MAT230 or MAT231 or permission of Instructor or Division or Department Chair.	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0
ECE212	Engineering Mechanics-Dynamics	Modeling of dynamic motion in particles and rigid bodies through kinetics and kinematics. Work and energy principles; impulse and momentum principles; planar kinematics; equations of motion; conservation of energy and momentum.	A grade of C or better required in all Prerequisites. Prerequisites: (ECE211 and PHY121) or permission of Instructor or Division or Department Chair. Prerequisites or Corequisites: MAT240 or MAT241 or permission of Instructor or Division or	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECE214	Engineering Mechanics	Foundations of engineering mechanics, including force systems, resultants, equilibrium of particles and rigid bodies, analysis of static structures, centroids and centers of mass, area and mass moments of inertia, friction, internal forces in structures, kinematics, and kinetics of particles.	Prerequisites: A grade of C or better in [ECE103 and (MAT230 or MAT231) and PHY121] or permission of Instructor or Division or Department Chair. Corequisites: MAT240 or MAT241 or permission of Instructor or Division or	L+L 4.0 6.0 6.0
ECE215	Mechanics of Materials	Designed to provide students with a strong fundamental foundation in the mechanics of solids. Includes the concepts of stress and strain applied to the analysis and design of members subjected to axial and torsional loads and members subjected to shear and bending, applications and transformation of plane stress and plane strain, deformation of beams, and elastic buckling of columns.	Prerequisites: A grade of C or better in (ECE211 or ECE214).	L+L 3.0 5.0 5.0
ECE216	Computer-Aided Engineering	Introduction to engineering graphics, including tolerancing and fasteners, as well as creation and use of engineering drawings.	Prerequisites: A grade of C or better in ECE103 or permission of Instructor. Corequisites: ECE216LL.	LEC 2.0 2.0 2.0
ECE216AA	Computer-Aided Engineering	Study and application of engineering graphics, parts modeling, assemblies modeling, and engineering drawings including tolerancing and fasteners using Computer-Aided Design (CAD) software.	Prerequisites: A grade of C or better in ECE103 or permission of Instructor or Division or Department Chair.	L+L 3.0 4.0 4.0
ECE216LL	Computer-Aided Engineering Laboratory	Laboratory experience in support of ECE216.	Prerequisites: A grade of C or better in ECE103 or permission of Instructor. Corequisites:	LAB 1.0 2.0 2.0
ECE230	Introduction to the Chemical Engineering Process	Introduces fundamental skills and principles needed to analyze the industrial processes of importance to the chemical engineering profession.	Prerequisites: A grade of C or better in CHM152 and MAT231.	L+L 3.0 5.0 5.0
ECE231	Introduction to Fluid Transport Phenomena	Fundamental skills and principles of fluid transport on both macroscopic and microscopic scales using mass balances, momentum balances and energy balances to analyze and/or design fluid systems of interest in the chemical engineering profession.	Prerequisites: A grade of C or better in MAT271 and PHY121.	L+L 3.0 5.0 5.0
ECE280	Foundational Statistics for Engineers	Fundamentals of probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, regression analysis, analysis of variance, and design of experiments.	Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECE285	Introduction to Astrodynamics	Introduction to celestial mechanics and the dynamics of spacecraft navigation. Introduction to rocket propulsion and spacecraft design. Orbital and interplanetary celestial mechanics and maneuvers. Astrophysics and characteristics of the space environment. Lab is project-based, utilizing a real-time spacecraft simulation environment.	Prerequisites: A grade of C or better in ENG101 and PHY121.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
ECE294	Special Topics in Engineering	Exploration and investigation of a focused topic in engineering.	Prerequisites: Permission of Instructor or Department or Division Chair.	L+L 3.0 3.0 3.0
ECE294AA	Special Topics in Engineering	Exploration and investigation of a focused topic in engineering.	Prerequisites: Permission of Instructor or Department or Division Chair.	L+L 2.0 2.0 2.0
ECE294AB	Special Topics in Engineering	Exploration and investigation of a focused topic in engineering.	Prerequisites: Permission of Instructor or Department or Division Chair.	L+L 1.0 1.0 1.0
ECE294AC	Special Topics in Engineering	Exploration and investigation of a focused topic in engineering.	Prerequisites: Permission of Instructor, or Department or Division Chair.	L+L 0.5 0.5 0.5
ECE296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECE296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
ECE296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0
ECE296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECE297WA	Engineering Internship	Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes.	Prerequisites: Permission of Instructor or Division Chair or Department Chair.	LAB 1.0 5.0 0.0
ECE297WB	Engineering Internship	Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes.	Prerequisites: Permission of Instructor or Division Chair or Department Chair.	LAB 2.0 10.0 0.0
ECE297WC	Engineering Internship	Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes.	Prerequisites: Permission of Instructor or Division Chair or Department Chair.	LAB 3.0 15.0 0.0
ECE297WD	Engineering Internship	Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes.	Prerequisites: Permission of Instructor or Division Chair or Department Chair.	LAB 4.0 20.0 0.0
ECE298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Instructor, or Department or Division Chair.	LAB 1.0 1.0 0.0
ECE298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Instructor, or Department or Division Chair.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECE298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Instructor, or Department or Division Chair.	LAB 3.0 3.0 0.0
ECG100	Introduction to Healthcare: Medical, Legal, Ethics	This course is designed to offer the student a foundation in allied health career skills. Students will demonstrate knowledge of the healthcare delivery system, health occupations, basic infection control procedures, Health Insurance Portability and Accountability Act (HIPAA) guidelines, and the general laws and ethical responsibilities of healthcare workers. Students will learn to handle emergency situations, practice safety and security procedures, build interpersonal communication skills as well as define the roles and responsibilities of an electrocardiogram (ECG) technician. Students will learn medical terminology used in healthcare, with special care populations and in special services. Body systems approach to terms related to structures, functions, diseases, procedures and diagnostic tests. Building and analyzing terms using word parts. Medical abbreviations and symbols and term spelling.	Prerequisites: Successful completion of RDG100 or higher or appropriate reading placement into CRE101.	25
ECG101	The Cardiovascular System: Anatomy & Physiology and Pathophysiology of Cardiovascular Disease	In this course, students will explore the structure and functions of the cardiovascular system. This course covers the anatomical structures of the heart, the composition of blood, the path of the blood through the heart, and the electrical conduction system. Students will learn how these systems act as one to supply vital oxygen, nutrients and hormones to tissues and remove carbon dioxide and metabolic waste products. This course also covers pathophysiologic concepts and interventions for patients with heart and coronary vessel disease and disorders such as coronary artery disease (CAD), angina pectoris, myocardial infarction (MI), congestive heart failure (CHF), dysrhythmias, inflammatory processes and valvular heart disease.	Prerequisites: ECG100.	30
ECG102	Introduction to ECG	Students will learn the fundamentals of electrocardiography. Students will be able to describe the electrophysiologic basis of cardiac arrhythmias, illustrate the electrical conduction system through the heart, and the process of recording an electrocardiogram (ECG). Students will learn how to acquire 3-lead ECG, 4-lead ECG, 12-lead ECG and interpret rhythm strips.	Prerequisites: ECG101.	40

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECG103	Applied ECG: Atrial, Junctional, Ventricular Rhythms and Heart Blocks	Students will learn to recognize arrhythmias that originate within the atria, the ventricle, the AV junction, AV node as well as heart blocks. Students will identify the specific features of each arrhythmia, where it originates from and diseases associated with each.	Prerequisites: ECG102.	50
ECG105	Advanced ECG: Diagnostic Procedures, Certification Prep and Exam	In this course, students will learn the skills and knowledge to perform patient assessments, and obtain vital signs. Students will learn how to attach a Holter monitor to produce a diagnostic trace and analyze the trace following the monitoring process. Students will also learn how to conduct clinical exercise stress tests utilizing exercise electrocardiography for patients with known or suspected coronary artery disease. In this course, students will also learn how to conduct telemetry monitoring while in a hospital setting and assess and evaluate pacemakers. Diagnostic testing procedures will be performed within a prescribed range of functions involving routine and non-routine methods as well as diagnostic procedures which require the exercise of some discretion and judgment. Students will have completed an exam prep course and taken the Certified ECG Technician (CET) Exam by the National Healthcareer Association (NHA). The exam is a 100-question exam and students will have 2 hours to complete it. The exam is timed and proctored.	Prerequisites: ECG103.	100

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECG106	Clinical Practicum	This course serves as the clinical practicum for Electrocardiogram (ECG) Technician in which the students synthesize standard of care and scope of practice through diagnostic technology, patient assessment, patient advocacy, ethical and professional behaviors, critical thinking and decision making while in the healthcare industry setting. Mandatory attendance for all 80 hours is required for successful completion.	Prerequisites: 1. A grade of C or better in ECG105. 2. Background check requirements in compliance with the Maricopa County Community College District Supplemental Background Check Policy. 3. Students also must provide a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Students must maintain current fingerprint clearance throughout the externship(s). 4. Complete and submit the Allied Health Student Health and Safety Documentation Checklist, with included documentation. 5. Students are responsible to meet the requirements of the background check, fingerprint clearance card, and health and	80
ECH128	Early Learning: Play and the Arts	Examines theory, research and practices relating to play and the creative arts in early childhood. Considers practical constraints and alternative perspectives.	Prerequisites: None.	LEC 3.0 3.0 3.0
ECH140	Learning Made Visible Through Documentation	The study of pedagogical documentation in early childhood settings, including strategies to reflect on children's thinking, hypothesis development, and multiple relationships essential in learning environments.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH141	Explore the Fundamentals of the Reggio Emilia Approach	Investigation and critically examination of the integral elements of the organization and philosophy of the Reggio Emilia approach to early childhood education.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH176	Child Development	Study of the science of human development from conception through adolescence. Includes observation skills, parent and adult roles in the lives of children, and contemporary issues.	Prerequisites: None.	LEC 3.0 3.0 3.0
ECH267	Child Development Associate Preparation Practicum I	Participation in early childhood education related work experience for the purpose of final preparation for the Child Development Associate (CDA) national credential process.	Prerequisites: None.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECH268	Child Development Associate Preparation Practicum II	Participation in early childhood education related work experience for the purpose of final preparation for the Child Development Associate (CDA) national credential process.	Prerequisites: None.	LAB 1.0 1.0 0.0
ECH269	Early Childhood Education Seminar	Emphasizes professional experiences including employment procedures, human relations, employment related issues, and career exploration.	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
ECH270	Observing Young Children	Introduction to observation techniques, recording methods and interpretation of collected data for children from birth to age eight while addressing legal and ethical implications.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH271	Arranging the Environment	Exploration of the influence of the environment on the behavior and development of young children. Considers indoor and outdoor spaces from the perspective of safety, age-related needs, spatial requirements, and usage.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH272	Science and the Young Child	Methods and techniques for recognizing and supporting scientific thinking in young children between the ages of birth and age eight. Focus upon social constructivist theory.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH273	Math and the Young Child	Methods and techniques for recognizing and supporting mathematical thought in young children between the ages of birth through age eight. Focus upon social constructivist theory.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH274	Books and Verse for the Young Child	Introduction to verse, storytelling, books and bookmaking for infants, toddlers, and preschoolers. Information as well as storybooks considered.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH275	Literacy Development and the Young Child	Literacy development from birth through age eight. Focus on communication and multiliteracies within social contexts.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH279	Early Childhood Curriculum Development	An intensive focus on the process of building curriculum appropriate to the interests and capabilities through the use of design, implementation and evaluation of materials and experiences for children, birth through age eight.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH280	Food Experiences with Young Children	A discussion of the nutritional needs of young children and the cultural and social meanings of foods, feeding and eating. Includes planning and managing food experiences in home and group settings.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH281	Movement/Music for the Young Child	Consideration of motor development in the toddler through the 8-year-old and exploration of age-appropriate rhythmic, musical and creative movement methods.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH282	Discipline/Guidance of Child Groups	Exploration of techniques for guiding children in groups with focus on individual child and adult needs for a disciplined environment.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECH284AA	Early Childhood Teaching Internship	Work experience in child care centers. 80 hours of designated work per credit.	Prerequisites: A grade of C or better in CFS/ECH176 and permission of Department or Division. Xref: CFS176	L+L 1.0 1.0 0.0
ECH284AB	Early Childhood Teaching Internship	Work experience in early care and education settings centers. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 3.0 3.0 0.0
ECH287	Professional Development in Early Childhood Education	Emerging professionalism within the field of early childhood education. Consideration of job responsibilities, rewards, ethics and current issues facing practitioners. Includes assessment and career planning.	Prerequisites: None.	LEC 1.0 1.0 1.0
ECH288	Community Resources and Referral	Survey of current community agencies, resources, and support groups for a variety of child and family needs. Considers appropriate procedures for referral, handling of information, confidentiality and follow up.	Prerequisites: None.	LAB 1.0 1.0 0.0
ECH298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ECH298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ECH298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ECN100	Economics in American Society	Selected principles of macroeconomic and microeconomic analysis. Recommended as a social science elective and for some paraprofessional programs. Not for business transfer students; credit will not be granted if ECN111 or ECN112 has been completed	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECN160	Economic History of the United States	A description of the trends of American population, industry, and wealth through examination of major American institutions, historical events, and economic thought. Emphasis on the roles of technology and natural resources in agriculture and industry, the labor force, the monetary system, market structures, and the economic impact of government	Prerequisites: None.	LEC 3.0 3.0 3.0
ECN208	Microeconomic Issues	Microeconomic principles applied to current problems of market structure, consumer preference, supply and demand, and the theory of the firm. Topics will include contemporary events that are suitable for application of the economic way of thinking.	Prerequisites: None.	LEC 3.0 3.0 3.0
ECN211	Macroeconomic Principles	A descriptive analysis of the structure and functioning of the American economy. Emphasis on basic economic institutions and factors that determine national income and employment levels. Consideration given to the macroeconomic topics of national income, unemployment, inflation and monetary and fiscal policies.	Prerequisites: None.	LEC 3.0 3.0 3.0
ECN212	Microeconomic Principles	Microeconomic analysis including the theory of consumer choice, price determination, resource allocation and income distribution. Includes non-competitive market structures such as monopoly and oligopoly; and the effects of government regulation.	Prerequisites: None.	LEC 3.0 3.0 3.0
ECN213	The World Economy	An analysis of the economic interdependence among nations, with emphasis on international trade and finance. Consideration given to the role and function of the multinational enterprise	Prerequisites: None.	L+L 3.0 3.0 3.0
ECN250	World Economic Systems	A descriptive analysis of capitalist, socialist and mixed economies. Some consideration also given to the problems of less developed economies	Prerequisites: None.	L+L 3.0 3.0 3.0
ECN296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ECN296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
ECN298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ECN298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
EDT100	Introduction to Endoscopy	Interpret endoscopy technology purpose, design, and structure. Basic understanding of the history and advancement of endoscopic procedures; anatomy of flexible endoscopes; role and importance of endoscopy technicians; introductory endoscopy reprocessing; regulating agencies and professional endoscopy organizations impacting the current field of endoscopy.	Prerequisites: None. Corequisites: EDT101, EDT102, EDT105, or permission of Program Director.	L+L 1.0 1.0 1.0
EDT101	Microbiology and Infection Control in Endoscopy	Identify and review the basic concepts of microbiology and microorganisms affecting endoscopic reprocessing and procedures. Indicate the requirements for all endoscopic work areas and staff to properly insure asepsis and best patient outcomes.	Prerequisites: None. Corequisites: EDT100, EDT102, EDT105, or permission of Program Director.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDT102	Fundamentals of Endoscope Care and Handling	Learn the fundamentals of endoscope care and handling including cleaning, decontamination, testing, and preparation for disinfection and sterilization.	Prerequisites: None. Corequisites: EDT100, EDT101, EDT105, or permission of Program Director.	L+L 3.0 3.0 3.0
EDT105	Advanced Endoscopy Care and Handling	Learn advanced endoscope care and handling including recordkeeping, transport, manual and mechanical high-level disinfection and storage of rigid, semi-rigid, and flexible endoscopes.	Prerequisites: None. Corequisites: EDT100, EDT101, EDT102, or permission of Program Director.	L+L 3.0 3.0 3.0
EDT200	Clinical Practicum	Direct preceptor supervision of students applying knowledge from the Endoscopy program to include communication, policy and procedures, aseptic and sterile technique, endoscopy instruments, trays and packs, sterilization equipment, documentation, and patient assistance performed in the clinical environment.	Prerequisites: A grade of C or better in (EDT100 and EDT101 and EDT102 and EDT105) or permission of Program Director. Corequisites: EDT201 or permission of Program Director.	LAB 3.0 22.5 0.0
EDT201	Endoscopy Procedures	Roles and responsibilities of endoscopy room personnel focusing on the endoscopy technician under the direction of the clinical facility preceptor demonstrating the role of the endoscopy technician and scope of practice and standard of recommendations.	Prerequisites: A grade of C or better in (EDT100 and EDT101 and EDT102 and EDT105) or permission of Program Director. Corequisites: EDT200 or permission of Program Director.	LEC 3.0 3.0 3.0
EDU101AA	Tutor Training and Practicum	Tutor training with an opportunity to gain insights into instructional support services through a minimum of 30 hours of supervised on-site experience within an educational setting. Overview of the role and responsibilities of instructional tutors as well as tutoring techniques, with particular focus on reading and writing strategies	Prerequisites: None.	LEC 1.0 1.0 1.0
EDU115	Digital Literacy for Teaching and Learning in Education	Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU204	Fine Arts in Educational Settings	Exploration of fine arts integration in the K-12 classroom setting. Focus on the impact on life-long learning and education goal achievement when curriculum includes fine arts. Arizona art standards of dance, visual, theater and music also covered.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU220	Introduction to Serving English Language Learners (ELL)	Historical overview of current educational and legal issues for serving English Learners (EL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), Sheltered English Instruction, and bilingual/Dual Language Immersion (DLI). Includes SEI, Sheltered English Instruction, and bilingual/DLI strategies.	Prerequisites: None.	LEC 3.0 3.0 3.0
EDU221	Introduction to Education	Overview of the historical, political, economic, social, ethical, and philosophical factors that contribute to the complexity of the education system. Opportunity for students to self-reflect and assess their interest and suitability for a career in teaching.	Prerequisites: None.	LEC 3.0 3.0 3.0
EDU222	Introduction to the Exceptional Learner	Overview of the exceptional learner with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mild disabilities, severe disabilities, emotional and behavioral disorders, intellectual disabilities, and students who are gifted.	Prerequisites: None.	LEC 3.0 3.0 3.0
EDU223AA	Emotional Disabilities in the Classroom	Investigation into the characteristics of and teaching strategies for students with emotional disabilities. Emphasis on Professional Teaching Standards. Includes current research findings related to teaching students with emotional disabilities.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU222.	LEC 3.0 3.0 3.0
EDU223AB	Learning Disabilities in the Classroom	Investigation into the characteristics of and teaching strategies for students with learning disabilities. Emphasis on Professional Teaching Standards. Includes current research findings related to teaching students with learning disabilities.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU222.	LEC 3.0 3.0 3.0
EDU223AC	Mild and Moderate Intellectual Disability in the Classroom	Investigation into the characteristics of and teaching strategies for students with mild and moderate intellectual disability. Emphasis on Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU222.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU223AD	Physical and Other Health Impairments in the Classroom	Investigation into the characteristics of and teaching strategies for students with physical and other health impairments. Emphasis on Professional Teaching Standards. Includes current research findings related to teaching students with physical and other health impairments.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU222.	LEC 3.0 3.0 3.0
EDU223AF	Assessment and Eligibility in Special Education	A basic overview of eligibility requirements for special services of students with disabilities, as well as investigation into the concepts, laws, issues, and procedures that relate to the formal and informal assessment of students with disabilities. Covers educational achievement tests and standardized diagnostic tests for students with disabilities as well as intelligence and adaptive behavior measurements. Includes current research findings related to assessing students with special needs and how assessment is used to inform and guide instruction.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 3.0 3.0 3.0
EDU224	Brain Development and Learning	Exploration of fine arts integration in the K-12 classroom setting. Focus on the impact on life-long learning and education goal achievement when curriculum includes fine arts. Arizona art standards of dance, visual, theater and music also covered.	Prerequisites: Formal acceptance to a Maricopa Community College undergraduate state approved teacher preparation program or permission of Department or	LEC 3.0 3.0 3.0
EDU225	Professionalism and Ethics in Education	Exploration of topics relative to the professionalism, legal knowledge, and ethical development of classroom teachers. Topics include professionalism within the teaching profession, legal considerations, ethics vs. code of conduct, dispositions, and impact of personal and community values. Prepares individuals for the professional, legal, and ethical issues that are routinely seen in an educational setting.	Prerequisites: None.	LEC 1.0 1.0 1.0
EDU230	Cultural Diversity in Education	Examination of the relationship of cultural diversity to academic success. Includes educational environments and their impact on educational equity. Emphasis on teacher preparation that offers an equal educational opportunity to students of all cultural backgrounds.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU235	The Exceptional Learner	Overview of the exceptional learner, one who differs from the average or typical, with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mildly disabled, severely disabled, emotionally and behaviorally disordered, intellectual disabilities, and gifted students. Includes current research findings related to teaching exceptional learners.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU236	Classroom Relationships	Analysis of K-12 classroom interactions, classroom environment, and classroom management skills from a teacher's point of view. Focus on classroom as a multidimensional environment in which principles of classroom design, communication, management, and resources determine effectiveness.	Prerequisites: None. EDU221 suggested but not required.	LEC 3.0 3.0 3.0
EDU239	Structured English Immersion Grades K-8	A foundation course designed to prepare educators to serve the needs of English Learners (EL) grades K-8. Includes Structured English Immersion (SEI) models and the Arizona Language Development Approach with emphasis on asset based behaviors and expectations, integrated and targeted English Language Development (ELD) instruction, assessment monitoring and feedback. Also covers legal and historical foundations and current issues.	Prerequisites: Baccalaureate Degree or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU240	Structured English Immersion Grades 6-12	A foundational course designed to serve needs of English Learners (EL) grades 6-12. Includes comparison and evaluation of various Structured English Immersion (SEI) models and the Arizona Language Development Approach including asset based behaviors and expectations, integrated and targeted English Language Development (ELD) instruction, assessment monitoring and feedback. Also covers legal and historical foundations and current issues.	Prerequisites: Baccalaureate Degree or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU242	Language Developmental and Disorders	Language development and language acquisition of typical children and children with disabilities. Includes language characteristics of children with a variety of disabilities and the creation of enhanced learning experiences in the classroom. Covers the referral process, as well as augmentative and alternative communication tools. Also compares Language Disorders and Language Differences.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LAB 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU244	Special Education Collaboration and Communication Practices	Principles of effective collaboration, consultation, and co-teaching to improve programs, services, and outcomes for individuals with exceptionalities and their families. Includes critical interpersonal communication strategies and tools for working with diverse groups of people in addition to the benefits of collaboration as well as the challenges that educators currently face.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LAB 1.0 1.0 1.0
EDU250	Teaching and Learning in the Community College	The history, functions, organization and current issues in the community/junior college with emphasis on the Arizona community colleges. Includes focus on the design and practice of effective community college teaching and learning with special emphasis on the Maricopa County Community College District	Prerequisites: None.	LEC 3.0 3.0 3.0
EDU254	Education Internship	Teaching experience in PK-12 classroom setting. Required to work 120 hours. Supervised and evaluated by a faculty coordinator.	Prerequisites: Permission of Department or Division and admission into a post-baccalaureate teacher certification program.	LAB 1.5 7.5 0.0
EDU255AA	Student Teaching Lab Elementary Education, K-8	Supervised student teaching in a K-8 classroom. Development of knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree and formal acceptance into an elementary (K-8) post-baccalaureate program or permission of Department or Division.	LAB 4.0 12.0 0.0
EDU255AB	Student Teaching Lab Elementary Education, K-8	Supervised student teaching in a K-8 classroom. Competency in knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree, a grade of C or better in EDU255AA, and formal acceptance into an elementary (K-8) post-baccalaureate program or permission of Department or Division.	LAB 4.0 12.0 0.0
EDU255AC	Student Teaching Lab Elementary Education, K-8	Supervised student teaching in a K-8 classroom. Foundational knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree and formal acceptance into an elementary (K-8) post-baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU255AD	Student Teaching Lab Elementary Education, K-8	Supervised student teaching in a K-8 classroom. Development of knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree, a grade of C or better in EDU255AC, and formal acceptance into an elementary (K-8) post-baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EDU255AE	Student Teaching Lab Elementary Education, K-8	Supervised student teaching in a K-8 classroom. Refinement of knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree, a grade of C or better in EDU255AD, and formal acceptance into an elementary (K-8) post-baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EDU255AF	Student Teaching Lab Elementary Education, K-8	Supervised student teaching in a K-8 classroom. Competency in knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree, a grade of C or better in EDU255AE, and formal acceptance into an elementary (K-8) post-baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EDU256AA	Student Teaching Lab Secondary Education, 6-12	Supervised student teaching in a 6-12 classroom. Development of knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree and formal acceptance into a secondary (6-12) post-baccalaureate program or permission of Department or Division.	LAB 4.0 12.0 0.0
EDU256AB	Student Teaching Lab Secondary Education, 6-12	Supervised student teaching in a 6-12 classroom. Competency in knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree, a grade of C or better in EDU256AA, and formal acceptance into a secondary (6-12) post-baccalaureate program or permission of Department or Division.	LAB 4.0 12.0 0.0
EDU256AC	Student Teaching Lab Secondary Education, 6-12	Supervised student teaching in a 6-12 classroom. Foundational knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree and formal acceptance into a secondary (6-12) post-baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU256AD	Student Teaching Lab Secondary Education, 6-12	Supervised student teaching in a 6-12 classroom. Development of knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree, a grade of C or better in EDU256AC, and formal acceptance into a secondary (6-12) post-baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EDU256AE	Student Teaching Lab Secondary Education, 6-12	Supervised student teaching in a 6-12 classroom. Refinement of knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree, a grade of C or better in EDU256AD, and formal acceptance into a secondary (6-12) post-baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EDU256AF	Student Teaching Lab Secondary Education, 6-12	Supervised student teaching in a 6-12 classroom. Competency in knowledge and skills in the areas of lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Baccalaureate Degree, a grade of C or better in EDU256AE, and formal acceptance into a secondary (6-12) post-baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EDU260AA	Art Methods and Curriculum Development for Elementary	Overview and practical application of teaching elementary art. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 4.0 4.0 4.0
EDU260AB	Art Methods and Curriculum Development for Secondary	Overview and practical application of teaching secondary art. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 4.0 4.0 4.0
EDU261AA	Dance Methods and Curriculum Development for Elementary	Overview and practical application of teaching elementary dance and movement. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU261AB	Dance Methods and Curriculum Development for Secondary	Overview and practical application of teaching secondary dance and movement. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 4.0 4.0 4.0
EDU262AA	Dramatic Arts Methods and Curriculum Development for Elementary	Overview and practical application of teaching elementary dramatic arts. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 4.0 4.0 4.0
EDU262AB	Dramatic Arts Methods and Curriculum Development for Secondary	Overview and practical application of teaching secondary dramatic arts. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 4.0 4.0 4.0
EDU263AA	Music Methods and Curriculum Development for Elementary	Overview and practical application of teaching elementary music. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 4.0 4.0 4.0
EDU263AB	Music Methods and Curriculum Development for Secondary	Overview and practical application of teaching secondary music. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Boardof Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 4.0 4.0 4.0
EDU267	Reading Instructional Practices, Interventions, and Assessments	Overview of instructional practices, interventions, and assessments associated with reading instruction and the systematic teaching of phonics. Course will address historical methods and current research in reading; analyze research-based instructional practices; analyze research-based assessments and possible interventions; review support provided by Multi-Tiered Systems of Support (MTSS) and Response to Intervention (RTI); and explore Reading disabilities (Dyslexia) and laws associated with Reading disabilities.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU268	Science of Reading Including Systematic Phonics Instruction	Overview of the science of reading with an emphasis on explicit instructional practices associated with research based systematic phonics instruction. Covers research based on the science of reading related to the teaching of reading in the K-8 school setting to include understanding reading research; essential components of reading instruction; implementation of effective methods for reading instruction; and alignment of reading instruction to systematic phonics instruction.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU269	Educational Technology	Overview and practical application of teaching methodology integrating technology into curriculum development for teachers. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc.). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Emphasis placed on effective use of technology in teaching and learning. Discusses current trends and related issues about technology and its impacts in P12 education.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU270	Learning and the Brain	Teaching and learning issues within a cognitive processes context. Covers emotion, memory, and recall as well as early brain development and its relationship to learning. Emphasis on current neuroscientific brain research and how it impacts teaching practice in preK-12 classrooms.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU270AB	Secondary Reading and Decoding	Focus on the theories, methods and models of teaching literacy and decoding in the content areas of secondary grades.	Prerequisites: Baccalaureate Degree and formal admission to a state approved Post Baccalaureate teacher preparation program.	LEC 3.0 3.0 3.0
EDU272	Educational Psychology	Focus on the study and application of psychological principles, theories, and methodologies related to teaching and learning. Emphasis on developmental, learning, and motivational theories. Current trends also covered.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU274	Understanding Adolescent Behavior in the Classroom	Focuses on understanding adolescents' development including psychosocial, emotional, cognitive and physical. Covers impact of early experiences, relationships, and learning abilities. Establishment of a learning environment supportive of the adolescent emphasized. Includes current research findings related to adolescents.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU276	Classroom Management and Behavior Analysis	Classroom management techniques, and behavior analysis. Classroom discipline models, student behavior and misbehavior, group dynamics, student self-motivation and learning styles covered. Professional Teaching Standards emphasized.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU278	Educational Assessment and Evaluation	Examination of assessing student performance. Assessment criteria and development of various types of assessment covered. Instructor developed assessments emphasized. Standardized, norm-referenced and criterion-referenced tests also included. Arizona State Board of Education Professional Teaching Standards emphasized.	Prerequisites: None.	LEC 3.0 3.0 3.0
EDU282AA	Service-Learning Experience in Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
EDU282AB	Service-Learning Experience in Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
EDU282AC	Service-Learning Experience in Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
EDU287AA	Master Teacher Seminar I	Special topics in education with an emphasis on current issues not covered in education courses.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU287AB	Master Teacher Seminar II	Special topics in education with an emphasis on current issues not covered in education courses.	Prerequisites: Formal admission to an undergraduate teacher preparation program.	LEC 1.0 1.0 1.0
EDU287AC	Master Teacher Seminar III	Special topics in education with an emphasis on current issues not covered in education courses.	Prerequisites: Baccalaureate degree and formal admission to a state approved post baccalaureate teacher preparation program.	LEC 1.0 1.0 1.0
EDU288AA	Student Teaching Lab - Elementary	Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU251 and permission of Department or Division.	LAB 8.0 5.0 0.0
EDU288AB	Student Teaching Lab - Secondary	Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU251 and permission of Department or Division.	LAB 8.0 5.0 0.0
EDU289	Secondary Methods and Curriculum Development	Overview and practical application of teaching methodology and curriculum development for secondary education teachers. Teaching strategies, curriculum design, lesson objectives, time management skills, teaching resources and student assessments covered. Professional Teaching Standards emphasized. Includes current research findings related to secondary education methods and curriculum development.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 1.0 1.0 1.0
EDU289AA	Secondary Social Studies Methods and Curriculum Development	Overview and practical application of social studies teaching methodology and curriculum development for secondary teachers. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to the application and learning of secondary social studies content; the methods alignment will be centered around History, Geography, Economics, or Political Science.	Prerequisites: Baccalaureate Degree and acceptance of formal application into a state approved post-baccalaureate teacher preparation program or permission of Department or Division. A grade of C or better in EDU289 or Corequisites: EDU289.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU289AB	Secondary Mathematics Methods and Curriculum Development	Overview and practical application of mathematics teaching methodology and curriculum development for secondary teachers. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to the application and learning of secondary mathematics content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program. Prerequisites: A grade of C or better in EDU289 or Corequisites: EDU289.	L+L 2.0 2.0 2.0
EDU289AC	Secondary Science Methods and Curriculum Development	Overview and practical application of science teaching methodology and curriculum development for secondary teachers. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to the application and learning of secondary science content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program. Prerequisites: A grade of C or better in EDU289 or Corequisites: EDU289.	L+L 2.0 2.0 2.0
EDU289AD	Secondary English Methods and Curriculum Development	Overview and practical application of English teaching methodology and curriculum development for secondary teachers. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to the application and learning of secondary English content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program. Prerequisites: A grade of C or better in EDU289 or Corequisites: EDU289.	L+L 2.0 2.0 2.0
EDU289AE	Secondary Methods and Curriculum Development in Special Topics	Overview and practical application of teaching methodology and curriculum development for secondary teachers in special topics such as Music, Theater, Art, Economics, Foreign Languages, Computers, PE, etc. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to specific content teaching areas in Secondary Education.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program. Prerequisites: A grade of C or better in EDU289 or Corequisites: EDU289.	L+L 2.0 2.0 2.0
EDU290	Science Methods and Curriculum Development	Overview and practical application of teaching elementary science. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on Professional Teaching Standards. Includes current research findings related to the application and learning of elementary science content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU291	Children's Literature	Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children.	Prerequisites: None.	LEC 3.0 3.0 3.0
EDU292	The Art Of Storytelling	Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom.	Prerequisites: None.	LEC 3.0 3.0 3.0
EDU293	Mathematics Methods and Curriculum Development	Overview and practical application of teaching mathematics in K-8 grades. Development of lesson plans and assessment instruments emphasized. Current trends, Professional Teaching Standards and National Council of Teachers of Mathematics Standards also covered. Includes current research findings related to the application and learning of elementary mathematics content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 3.0 3.0 3.0
EDU294	Multicultural Folktales	Study of multicultural folktales, exploring the impact of the oral tradition in American society and showing classroom applications	Prerequisites: None.	LEC 3.0 3.0 3.0
EDU295	Social Studies Methods and Curriculum Development	Overview of teaching elementary social studies. Topics include lesson plans preparation, teaching strategies, assessments, classroom management techniques and teaching resources. Emphasis on Professional Teaching Standards. Includes current research findings related to the application and learning of elementary social studies content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	LEC 3.0 3.0 3.0
EDU297	Language Arts Methods and Curriculum Development	Methods to teach research-based instruction in elementary English language arts including reading, writing, speaking, and listening. Topics include developmentally appropriate instruction, assessment, cross-curricular integration, lesson plan preparation, evidence-based teaching strategies, and teaching resources.	Prerequisites: Baccalaureate degree and formal admission to a post-baccalaureate teacher preparation program, or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
EDU298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
EDU337	Structured English Immersion in Grades K-8	Overview of teaching to serve the needs of diverse English learner (EL) students in grades K-8. Includes comparison and evaluation of various language educational models, including Structured English Immersion (SEI) and the Arizona Language Development Approach (LDA) with a focus on asset based behaviors and expectations, integrated and targeted English Language Development (ELD) instruction. Covers legal and historical foundations and current issues.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU367	Science of Reading with Systematic Phonics Instruction in Grades K-8	Overview of the science of reading with an emphasis on explicit instructional practices associated with research-based systematic phonics instruction. Uses analysis of science of reading-based research to identify best practices for effectively teaching reading in the K-8 school setting, including essential components, pedagogical strategies and alignment to systematic phonics instruction.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU368	Reading Instructional Practices, Interventions, and Assessments in Grades K-8	Application of instructional practices, interventions and assessments associated with reading instruction and the systematic teaching of phonics to support readers of varying ages and ability levels, including students with dyslexia. This course addresses historical methods, current research, research-based instructional practices, assessments and interventions using Multi-tiered Systems of Support (MTSS) or Response to Intervention (RTI).	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU372	Educational Psychology for Teachers (Grades K-12)	Overview of scientific research and psychological principles, theories, and methodologies related to teaching and learning. Emphasis on developmental, learning, and motivational theories. Focuses on human diversity, theories of learning, intelligence, memory, creativity, assessment, and factors influencing effective instruction and learning.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU427	Social Studies Teaching Methods and Pedagogical Strategies for Grades K-8	Application of research-based instruction in elementary social studies. Topics include developmentally appropriate instruction, and assessment, cross-curricular integration of social studies, lesson plan preparation, evidence-based teaching strategies, and teaching resources. Emphasis on current professional teaching standards and Arizona Academic Standards.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU428	English Language Arts Teaching Methods and Pedagogical Strategies for Grades K-8	Application of research-based instruction in elementary English Language Arts, including reading, writing, speaking, and listening. Topics include developmentally appropriate instruction, and assessment, cross-curricular integration of language arts, lesson plan preparation, evidence-based teaching strategies, and teaching resources. Emphasis on current professional teaching standards and Arizona Academic Standards.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU429	Science Teaching Methods and Pedagogical Strategies for Grades K-8	Application of research-based instruction in elementary science. Topics include developmentally appropriate instruction, and assessment, cross-curricular integration of scientific concepts and problem solving skills, lesson plan preparation, evidence-based teaching strategies, and teaching resources. Emphasis on current professional teaching standards and Arizona Academic Standards.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU431	Mathematics Teaching Methods and Pedagogical Strategies for Grades K-8	Application of research-based instruction in elementary mathematics. Topics include developmentally appropriate instruction, and assessment, cross-curricular integration of mathematics and logical problem solving, lesson plan preparation, evidence-based teaching strategies, and teaching resources. Emphasis on current trends, professional teaching standards and Arizona Academic Standards.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EDU477	Student Teaching: Elementary (Grades K-8)	Supervised student teacher practicum in a K-8 classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LAB 6.0 6.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EDU487	Professional Seminar: Current Trends in Elementary and Special Education	Special topics in K-12 (elementary and special) education with an emphasis on current topics and trends.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 2.0 2.0 2.0
EEC205	Early Learning: Instructional Methodologies of Language, Math, Science, Social Studies and the Arts	Overview and practical application of teaching elementary language, math, science, social studies and the arts. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on Early Learning Standards (Birth to Age 5), Arizona Academic Standards Kindergarten-Third (K-3) Grade, and State Board of Education Professional Teaching Standards.	Prerequisites: Must hold a provisional or standard elementary or special education teaching certificate or permission of Department or Division.	LEC 3.0 3.0 3.0
EED111	Multimedia and the Early Childhood Education Classroom	Explores theories and teaching strategies related to the use of multimedia with children from birth through 8 years of age. Examines usage of various multimedia in early childhood education settings and ways to meaningfully integrate it to foster cognitive development. Explores the use of multimedia and early childhood education (ECE) professional growth.	Prerequisites: None.	LEC 3.0 3.0 3.0
EED115	Digital Literacy for Teaching and Learning in Education	Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education.	Prerequisites: None.	LEC 3.0 3.0 3.0
EED200	Foundations of Early Childhood Education	Overview of early childhood education (birth to age eight) in American society, including current issues and responsibilities. Emphasis on issues of professionalism, ethics and program types. Opportunities for students to explore potential career paths.	Prerequisites: None.	LEC 3.0 3.0 3.0
EED205	The Developing Child: Prenatal to Age Eight	Examination of process of physical, social, emotional, cognitive, language, and literacy development of typical and atypical young children; prenatal through age eight. Includes practical application and fieldwork experience	Prerequisites: None.	LEC 3.0 3.0 3.0
EED210	Creative and Cognitive Play	Benefits of play for children birth to 8 years of age. Inclusion of art, music, and movement used in all dimensions of play. Identify uses and roles in the development of children.	Prerequisites: A grade of C or better in CFS176 ECH176, or CFS235, or EED205.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EED211	Language Acquisition in the Young Child	Define speech and language and discuss theories of language acquisition in young children, birth through 8 years of age in a variety of settings. Explore techniques to encourage and support the development of language, assessment techniques and family involvement.	Prerequisites: A grade of C or better in CFS/ECH176, or CFS235, or EED205. Xref: CFS176	LEC 3.0 3.0 3.0
EED212	Guidance, Effective Interactions and the Environment	Principles for guiding young children in early care and education environments. Exploration of guidance, effective interactions, and how the environment impacts the lives of young children. Includes observation of children, birth to age eight.	Prerequisites: None.	LEC 3.0 3.0 3.0
EED215	Early Learning: Health, Safety, Nutrition and Physical Fitness	Consideration of public health issues and safety procedures within early childhood settings that serve young children birth to age eight. Overview of nutritional needs and issues of physical fitness and well-being in young children. Includes practicum designed to explore the field of early childhood education.	Prerequisites: None.	LEC 3.0 3.0 3.0
EED220	Child, Family, Community and Culture	Examines family, community and cultural influences on development of the young child (birth to age eight). Considers trends and threats to attachment, relationships and cultural identity. Includes social and emotional experiences and their impact on the developing brain.	Prerequisites: None.	LEC 3.0 3.0 3.0
EED222	Introduction to the Exceptional Young Child: Birth to Age Eight	Overview of the exceptional learner (birth - age eight), one who differs from the average or the norm, with emphasis on observation, techniques, characteristics, identification, types of programs, and work with families. Issues related to learning exceptionalities, sensory and communication disorders, social and emotional problems, physical and health related disorders, and giftedness. Includes practicum designed to explore the field of early childhood education.	Prerequisites: None.	LEC 3.0 3.0 3.0
EED225	Language and Literacy in the Context of Culture and Relationships	Introduces children's language acquisition and literacy development. Exploration of the relationships among language, literacy, family, culture, and community. Study of educational practices and advocacy opportunities that support language acquisition, literacy development and the preservation of heritage languages.	Prerequisites: None.	LEC 3.0 3.0 3.0
EED250	Early Literacy Development	Overview of emergent literacy, early literacy development, and appropriate early experiences with books, reading, and writing. Emphasis placed on reading and writing readiness, methods to enhance literacy development, and strategies for selecting and using children's books	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EED255	Independent Study Portfolio Development and Writing for the Early Childhood Profession	Portfolio development, completion, and presentation skills designed for the individual student. Self-assessment and educational short-term and long-term planning, professional development, writing and critical learning included.	Prerequisites: A grade of C or better in completion of twelve (12) credit hours of EED Early Education coursework and permission of Program Coordinator.	LEC 3.0 3.0 3.0
EED260	Early Childhood Infant/Toddler Internship	Work experience with infants and toddlers in early care and education settings. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	LAB 1.0 1.0 0.0
EED261	Early Childhood Preschool Internship	Work experience with preschoolers in early care and education settings. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	LAB 1.0 1.0 0.0
EED262	Early Childhood Internship: Infant/Toddler	Work experience with infants and toddlers in early care and education settings.	Prerequisites: Permission of Department or Division.	LAB 2.0 2.0 0.0
EED263	Early Childhood Internship: Preschool	Work experience with preschoolers in early care and education settings.	Prerequisites: Permission of Department or Division.	LAB 2.0 2.0 0.0
EED265	Early Childhood Internship: K-3	Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: A grade of C or better in EED200, EED212, EED215, EED220, EED222, EED270, EED275, and EED280.	LAB 4.0 5.0 0.0
EED270	Early Learning Development: Birth to Age Eight	Teaching and early learning issues within a cognitive processes context. Covers emotion, memory, and recall as well as early brain development and its relationship to early learning for the young child, birth to age eight.	Prerequisites: A grade of C or better in CFS/ECH176 or CFS205 or CFS235 or EED205 or permission of instructor. Xref: CFS176	LEC 3.0 3.0 3.0
EED275	Early Learning Curriculum and Instruction: Math and Science	Overview and practical application of teaching math and science concepts to typical and atypical toddlers, preschoolers, and students Kindergarten-third grade (K-3). Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on overview and practical application of National Association for the Education of Young Children Standards, Early Learning Standards, Arizona Academic Standards (K-3), State Board of Education Professional Teaching Standards and National Council of Teachers of Mathematics Standards.	Prerequisites: A grade of C or better in CFS/ECH176 or EED205. Xref: CFS176	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EED277	Early Learning Curriculum and Instruction: Language Arts, Social Studies, Art, Music and Movement	Overview and practical application of teaching language arts, social studies, art, music and movement to typical and atypical toddlers, preschoolers, and students K-3. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on overview and practical application of National Association for the Education of Young Children Standards, Early Learning Standards, Arizona Academic Standards (K-3), and State Board of Education Professional Teaching Standards.	Prerequisites: A grade of C or better in CFS/ECH176 or EED205. Xref: CFS176	LEC 3.0 3.0 3.0
EED278	Early Learning Curriculum and Instruction - Birth to Age Eight	Considerations and evaluations of curriculum appropriate to the developmental characteristics of learners, birth through eight years. Includes how early childhood standards, philosophies, and program settings relate to the teaching, learning, and assessment process. Includes field experience.	Prerequisites: A grade of C or better in EED200.	LEC 3.0 3.0 3.0
EED280	Standards, Observation & Assessment of Typical/Atypical Behaviors of Young Children Birth to Age Eight	Standards, observation, and assessment of typical and atypical behaviors, overview of standards, observation and assessment methodologies for typical and atypical young children (birth to age eight). Includes ethics, referral and reporting procedures, and collaboration with families and other professionals.	Prerequisites: A grade of C or better in CFS/ECH176 or CFS235 or EED205. Xref: CFS176	LEC 3.0 3.0 3.0
EED282AA	Service-Learning Experience in Early Childhood Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
EED282AB	Service-Learning Experience in Early Childhood Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
EED282AC	Service-Learning Experience in Early Childhood Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
EEE120	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, Read Only Memory (ROMs), Programmable Logic Device (PLDs), synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits.	Prerequisites: None. Corequisites: CSC100 or (CSC110 or CSC110AB) or permission of Instructor or Division or Department Chair.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EEE202	Circuits and Devices	Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks.	Prerequisites: None. Corequisites: (PHY131 or permission of Instructor or Division or Department Chair) and (MAT276 or permission of Instructor or Division or Department Chair).	LEC 5.0 4.0 4.0 LAB 0.0 3.0 3.0
EEE203	Signals and Systems	Introduction to continuous and discrete time signal and system analysis, linear systems, Fourier, and z-transforms.	Prerequisites: A grade of C or better in EEE202.	L+L 3.0 5.0 5.0
EEE220	Programming for Computer Engineering	Intermediate level procedural, object-oriented, and high-level scripting programming languages (C, C++, Python) in the Unix environment.	Prerequisites: A grade of C or better in (CSC/EEE120 and CSC205), or permission of Instructor or Division or Department Chair.	L+L 3.0 5.0 5.0
EEE230	Computer Organization and Assembly Language	Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory.	Prerequisites: A grade of C or better in [(CSC100 or CSC110 or CSC110AB) and CSC/EEE120] or permission of Instructor or Division or Department Chair. Xref: CSC120	L+L 4.0 5.0 5.0
EEG202	Intermediate Electroencephalography (EEG)	Intermediate Electroencephalography (EEG) testing principles and procedures including terminology, tracings, normal findings, activations, American Clinical Neurophysiology Society (ACNS) guidelines, and disorders and diseases that affect brain activity.	Prerequisites: A grade of C or better in NDT101 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: EEG202LL.	LEC 3.0 3.0 3.0
EEG202LL	Intermediate Electroencephalography (EEG) Laboratory	Application of Electroencephalography (EEG) advanced skills for measurement, electrode application, equipment operation, and procedures.	Prerequisites: A grade of C or better in NDT103LL and admission into the Clinical Neurodiagnostic Technology program. Corequisites: EEG202.	LAB 1.0 3.0 3.0
EEG203	Advanced Electroencephalography (EEG)	Advanced Electroencephalography (EEG) testing principles and procedures, including abnormal EEG, epilepsy, seizure types, pattern recognition, and disorders and diseases that affect brain activity.	Prerequisites: A grade of C or better in EEG202 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: NDT200LL.	LEC 2.0 2.0 2.0
EEG215	Electroencephalography (EEG) Clinical Rotation I	Introduction to a Neurodiagnostic Technology (NDT) facility conducting Electroencephalograms (EEG), and participation in performance of associated procedures. Emphasis on patient preparation, testing protocol, instrument calibration and operation, documentation, and patient interactions.	Prerequisites: A grade of C or better in NDT200LL and admission into the Clinical Neurodiagnostic Technology program. Corequisites: PSG215.	LEC 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EEG225	Electroencephalography (EEG) Clinical Rotation II	Participation in clinical Electroencephalogram (EEG) testing. Emphasis on patient preparation, troubleshooting, documentation, record review, and report generation.	Prerequisites: A grade of C or better in EEG215 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: PSG225.	LEC 3.0 15.0 0.0
EEG235	Electroencephalography (EEG) Clinical Rotation III	Advanced participation in clinical Electroencephalography (EEG) testing. Emphasis on patient preparation, troubleshooting, documentation, record review, and technologist interpretation.	Prerequisites: A grade of C or better in EEG225 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: PSG235.	LEC 3.0 15.0 0.0
EEG280	EEG Board Exam Review	Includes a review of all material covered in the Electroneurodiagnostic Technology program. Taught during students' final semester of coursework to prepare them for their board examination.	Prerequisites: Admission into the Electroneurodiagnostic Technology program or permission of Program Director.	LEC 2.0 2.0 2.0
EEP224	Child Development: Prenatal to Age Eight	Examination of process of physical, social, emotional, cognitive, language, and literacy development of typical and atypical young children; prenatal through age eight. Consideration of public health issues and safety procedures within early childhood settings. Overview of nutritional needs and issues of physical fitness and well-being in typical and atypical young children. Includes practical application and fieldwork experience.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EEP240	Early Childhood Foundations	Overview of early childhood education (birth to age eight) in American society, including current issues and responsibilities. Emphasis on issues of professionalism, ethics and program types. Opportunities for students to explore potential career paths. Includes field experience.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EEP242	Early Childhood Guidance and Management	Principles for guiding young children in early care and education environments. Exploration of guidance, management, and how the environment impacts the lives of typical and atypical young children. Includes observation of classrooms of children ages birth to age eight.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EEP244	Early Childhood Introduction to the Exceptional Young Child	Overview of the exceptional learner (birth to age eight), one who differs from the average or the norm, with emphasis on observation, techniques, characteristics, identification, types of programs, and work with families. Issues related to learning exceptionalities, sensory and communication disorders, social and emotional problems, physical and health related disorders, and giftedness. Includes field experience.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EEP246	Early Childhood Culture, Community, Family and the Child	Examines family, community, and cultural influences on development of the young child birth to third grade. Considers trends and threats to attachment, relationships and cultural identity. Includes social and emotional experiences and their impact on the developing brain.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	LEC 3.0 3.0 3.0
EEP260	Early Childhood Curriculum and Methods of Math - Birth to Age Eight	Overview and practical application of teaching math concepts to toddlers, preschoolers, and students Kindergarten through third grade (K-3). Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on overview and practical application of Early Learning Standards, Arizona Academic Standards (K-3), State Board of Education Professional Teaching Standards and National Council of Teachers of Mathematics Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program.	LEC 3.0 3.0 3.0
EEP262	Early Childhood Curriculum and Methods of Science - Birth to Age Eight	Overview and practical application of teaching science concepts to toddlers, preschoolers, and students Kindergarten and third grade (K-3). Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on overview and practical application of Early Learning Standards, Arizona Academic Standards K-3, State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program.	LEC 2.0 2.0 2.0
EEP264	Early Childhood Curriculum and Methods of Social Studies - Birth to Age Eight	Overview and practical application of teaching social studies to toddlers, preschoolers, and students K-3. Covers teaching strategies, learning environments, and teaching resources. Emphasis on overview and practical application of Early Learning Standards, Arizona Academic Standards Kindergarten through third grade (K-3).	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EEP266	Early Childhood Curriculum and Methods in Language Arts - Birth to Age Eight	Overview and practical application of teaching Language Arts concepts to toddlers, preschoolers, and students in Kindergarten through third grade (K-3). Covers communication skills of reading, writing, listening and speaking, interpreting visual messages and creating visual messages. Emphasis on overview and practical application of Early Learning Standards, Arizona Language Arts Standards (K-3), and State Board of Education Professional Teaching Standards	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program.	LEC 1.0 1.0 1.0
EEP268	Early Childhood Curriculum and Methods in The Arts - Birth to Age Eight	Exploration of fine arts integration, birth to age 8, in early childhood settings. Focus on the impact on life-long learning and education goal achievement when curriculum includes fine arts. Arizona art standards of dance, visual, theater and music also covered.	Prerequisites: Baccalaureate Degree and formal admission to a post-baccalaureate early childhood teacher preparation program.	LEC 1.0 1.0 1.0
EEP276	Standards, Observation and Assessment of Typical and Atypical Behaviors Birth to Age Eight	Observation and assessment of typical and atypical behaviors, overview of standards, observation and assessment methodologies for typical and atypical young children birth to age eight. Includes ethics, referral and reporting procedures, and collaboration with families and other professionals.	Prerequisites: A grade of C or better in EEP260, EEP262, EEP264, EEP266, EEP268 and Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program.	LEC 3.0 3.0 3.0
EEP288	Student Teaching Lab - Early Childhood	Supervised (K-3) student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in (EDU220, EDU251, EEP240, EEP242, EEP244, EEP246 and EEP276) and permission of Department or Division.	LAB 4.0 5.0 0.0
EEP289	Internship: Early Childhood Infant, Toddler, Preschool	Supervised field experience with infants, toddlers and/or preschoolers in early care and education settings.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program and (EDU220 EDU251 EEP240 EEP242 EEP244 EEP246 and EEP276) and permission of Department or Division.	LEC 4.0 4.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EEP311	Foundations of Dual Language Learning - Birth to Age Eight	Examination of the needs of dual language learners birth to grade three. Includes comparison and evaluation of various language educational models with a focus on asset based behaviors and expectations, integrated and targeted dual language instruction. Covers legal and historical foundations and current issues.	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0
EEP312	Family, Community, and School Collaboration for Dual Language Learners - Birth to Age Eight	Examines multiple influences on the development of the dual language learner (birth to age eight). Considers foundational structure provided by and reinforced by the family. Recognizes multiple messages of value and power communicated through community structures. Includes strategies for relationship building between families, school, and community with a long term goal of encouraging dual language learners.	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0
EEP313	Bilingual and ESL Methods - Birth to Age Eight	Culturally responsive strategies for working with the dual language learners in early childhood settings. Components of dual language curriculum content and learning techniques focusing on bilingual and English as a Second Language (ESL) strategies.	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0
EEP314	Teaching of Reading and Writing for Dual Language Learners - Birth to Age Eight	Introduction to teaching reading and writing for dual language learners in early childhood settings. Includes second language acquisition terminology, theories, and strategies. Emphasis on instructional and assessment strategies as well as reading comprehension and writing skills.	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EEP315	Social Studies and Arts Methods for Dual Language Learners - Birth to Age Eight	Overview and practical application of teaching social studies and arts for dual language learners in early childhood settings. Covers teaching strategies, learning environments, and teaching resources. Emphasis on overview of relevant guidelines and standards for children birth through third grade (pre-K-3).	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0
EEP316	Math and Science Methods for Dual Language Learners - Birth to Age Eight	Overview and practical application of teaching math and science for dual language learners in early childhood settings. Covers teaching strategies, learning environments, and teaching resources. Emphasis on overview of relevant guidelines and standards for children birth through third grade (pre-K-3).	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0
EEP411	Sheltered Instruction for Dual Language Settings - Birth to Age Eight	Analysis of sheltered instruction strategies designed to serve the needs of dual language learners ages birth to eight. Includes comparison and evaluation of various language educational models with a focus on asset based behaviors and expectations as well as integrated and targeted language instruction.	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0
EEP412	Assessment of Dual Language Learners - Birth to Age Eight	Teaching and assessment of dual language learners ages birth to eight. Covers differentiated instruction, special education needs vs. language needs, learning environments and utilizing ongoing assessment of student learning to guide instruction.	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EEP413	Reading Instructional Practices, Interventions, and Assessments - Birth through Adolescence	Overview of instructional practices, interventions, and assessments associated with reading instruction and the systematic teaching of phonics to children from birth through adolescence. Includes historical methods and current research in reading; research-based instructional practices; research based assessments and possible interventions; support provided by Multi-Tiered Systems of Support (MTSS) and Response to Intervention (RTI). Focus on reading disabilities (dyslexia) and laws associated with reading disabilities for children from birth through adolescence.	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0
EEP414	Science of Reading and Systematic Phonics Instruction for Birth through Adolescence	Overview of the science of reading with an emphasis on explicit instructional practices associated with research-based, systematic phonics instruction for children from birth through adolescence. Covers research-based on the science of reading related to the teaching of reading in the pre-K-8 school setting to include understanding reading research; essential components of reading instruction; implementation of effective methods for reading instruction; and alignment of reading instruction to systematic phonics instruction.	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 3.0
EEP415	Student Teaching in a Dual Language K-3 Setting	Supervised (K-3) student teacher practicum in a dual language setting. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or	LEC 3.0 3.0 0.0
EFE232	Mild-Moderate Disabilities Student Teaching	Supervised student teaching. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Formal admission to an undergraduate teacher preparation program and permission of Department or Division.	LAB 8.0 5.0 0.0
EFE260	Student Teaching Lab K-12 - Art	Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state-approved post-baccalaureate teacher preparation program and permission of Department or Division.	LAB 12.0 9.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EFE260AC	Intern Certificate Student Teaching Lab K-12 - Art Education I	Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.	LAB 3.0 9.0 0.0
EFE260AD	Intern Certificate Student Teaching Lab K-12 - Art Education II	Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EFE260AC and a minimum of 25% successful completion of all designated required course	LAB 3.0 9.0 0.0
EFE260AE	Intern Certificate Student Teaching Lab K-12 - Art Education III	Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EFE260AD and a minimum of 50% successful completion of all designated required course	LAB 3.0 9.0 0.0
EFE260AF	Intern Certificate Student Teaching Lab K-12 - Art Education IV	Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EFE260AE and a minimum of 75% successful completion of all designated required course	LAB 3.0 9.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EFE261	Student Teaching Lab K-12 - Dance	Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state-approved post-baccalaureate teacher preparation program and permission of Department or Division.	LAB 12.0 9.0 0.0
EFE261AC	Intern Certificate Student Teaching Lab K-12 - Dance Education I	Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.	LAB 3.0 9.0 0.0
EFE261AD	Intern Certificate Student Teaching Lab K-12 - Dance Education II	Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE261AC and a minimum of 25% successful completion of all designated required course	LAB 3.0 9.0 0.0
EFE261AE	Intern Certificate Student Teaching Lab K-12 - Dance Education III	Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE261AD and a minimum of 50% successful completion of all designated required course	LAB 3.0 9.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EFE261AF	Intern Certificate Student Teaching Lab K-12 - Dance Education IV	Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE261AE and a minimum of 75% successful completion of all designated required course	LAB 3.0 9.0 0.0
EFE262	Student Teaching Lab K-12 - Drama	Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state-approved post-baccalaureate teacher preparation program and permission of Department or Division.	LAB 12.0 9.0 0.0
EFE262AC	Intern Certificate Student Teaching Lab K-12 - Drama Education I	Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.	LAB 3.0 9.0 0.0
EFE262AD	Intern Certificate Student Teaching Lab K-12 - Drama Education II	Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE262AC and a minimum of 25% successful completion of all designated required course	LAB 3.0 9.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EFE262AE	Intern Certificate Student Teaching Lab K-12 - Drama Education III	Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE262AD and a minimum of 50% successful completion of all designated required course	LAB 3.0 9.0 0.0
EFE262AF	Intern Certificate Student Teaching Lab K-12 - Drama Education IV	Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE262AE and a minimum of 75% successful completion of all designated required course	LAB 3.0 9.0 0.0
EFE263	Student Teaching Lab K-12 - Music	Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state-approved post-baccalaureate teacher preparation program and permission of Department or Division.	LAB 12.0 9.0 0.0
EFE263AC	Intern Certificate Student Teaching Lab K-12 - Music Education I	Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.	LAB 3.0 9.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EFE263AD	Intern Certificate Student Teaching Lab K-12 - Music Education II	Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE263AC and a minimum of 25% successful completion of all designated required course	LAB 3.0 9.0 0.0
EFE263AE	Intern Certificate Student Teaching Lab K-12 - Music Education III	Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE263AD and a minimum of 50% successful completion of all designated required course	LAB 3.0 9.0 0.0
EFE263AF	Intern Certificate Student Teaching Lab K-12 - Music Education IV	Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE263AE and a minimum of 75% successful completion of all designated required course	LAB 3.0 9.0 0.0
EFE291	Special Education: Mild-Moderate Student Teaching	Supervised student teaching. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and (a grade of C or better in EDU223AF and EDU293) and permission of Department or Division.	LAB 8.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EFE291AC	Special Education: Mild-Moderate Student Teaching I	Supervised student teaching in a K-12 special education setting. Students are expected to demonstrate foundational knowledge and skills in the areas of appropriate assessment strategies, lesson planning, implement instructional strategies, and utilize behavior management systems and programs. Emphasis on the provision of specialized instruction to meet the requirements of Individuals with Disabilities Education Act (IDEA).	Prerequisites: Baccalaureate Degree and formal acceptance into a mild/moderate disabilities, K-12 post baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EFE291AD	Special Education: Mild-Moderate Student Teaching II	Supervised student teaching in a K-12 special education setting. Students are expected to demonstrate developing knowledge and skills in the areas of appropriate assessment strategies, lesson planning, implement instructional strategies, and utilize behavior management systems and programs. Emphasis on the provision of specialized instruction to meet the requirements of Individuals with Disabilities Education Act (IDEA).	Prerequisites: Baccalaureate Degree, a grade of C or better in EFE291AC, and formal acceptance into a mild/moderate disabilities, K-12 post baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EFE291AE	Special Education: Mild-Moderate Student Teaching III	Supervised student teaching in a K-12 special education setting. Students are expected to demonstrate refining knowledge and skills in the areas of appropriate assessment strategies, lesson planning, implement instructional strategies, and utilize behavior management systems and programs. Emphasis on the provision of specialized instruction to meet the requirements of Individuals with Disabilities Education Act (IDEA).	Prerequisites: Baccalaureate Degree, a grade of C or better in EFE291AD, and formal acceptance into a mild/moderate disabilities, K-12 post baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EFE291AF	Special Education: Mild-Moderate Student Teaching IV	Supervised student teaching in a K-12 special education setting. Students are expected to demonstrate competent knowledge and skills in the areas of appropriate assessment strategies, lesson planning, implement instructional strategies, and utilize behavior management systems and programs. Emphasis on the provision of specialized instruction to meet the requirements of Individuals with Disabilities Education Act (IDEA).	Prerequisites: Baccalaureate Degree, a grade of C or better in EFE291AE, and formal acceptance into a mild/moderate disabilities, K-12 post baccalaureate program or permission of Department or Division.	LAB 2.0 6.0 0.0
EFE297AA	Intern Certificate Student Teaching Lab - K-3 Part A	Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep program plan by an Arizona Department of Education approved college program and the partnering school district.	LAB 2.0 6.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EFE297AB	Intern Certificate Student Teaching Lab - K-3 Part B	Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep plan by an Arizona Department of Education approved college program, the partnering school district, EFE297AA, and a minimum of 50% successful completion of course work.	LAB 2.0 6.0 0.0
EFE297AC	Intern Certificate Student Teaching Lab - K-3 Level I	Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep program plan by an Arizona Department of Education approved college program and the partnering school district.	LAB 1.0 3.0 0.0
EFE297AD	Intern Certificate Student Teaching Lab - K-3 Level II	Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep plan by an Arizona Department of Education approved college program, the partnering school district, EFE297AC, and a minimum of 25% successful completion of course work.	LAB 1.0 3.0 0.0
EFE297AE	Intern Certificate Student Teaching Lab - K-3 Level III	Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep plan by an Arizona Department of Education approved college program, the partnering school district, EFE297AD, and a minimum of 50% successful completion of course work.	LAB 1.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EFE297AF	Intern Certificate Student Teaching Lab - K-3 Level IV	Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep plan by an Arizona Department of Education approved college program, the partnering school district, EFE297AE, and a minimum of 75% successful completion of course work.	LAB 1.0 3.0 0.0
EHS100	Aesthetics Essentials i	As students begin their training in Aesthetics, they will begin to develop and demonstrate proficiencies in effective client communication, interpersonal skills, and will learn how to deliver an effective skin care facial treatment and client pre and post consultations. Topics will also include sanitation, Arizona laws, client care, and facial care.	Prerequisites: Admission to the Aesthetics program, or Program Manager's approval.	184
EHS105	Aesthetics Essentials II	As students continue their training in Aesthetics, they will further develop and demonstrate proficiencies in effective client communication, interpersonal skills, and will learn how to deliver an effective skin care facial treatment and client pre and post consultations. Topics will also include sanitation, Arizona laws, client care, and facial care.	Prerequisites: Completion of EHS100 with a grade of 80% or better.	132
EHS110	Advanced Aesthetics	Theory and application of advanced skin care modalities, resurfacing, and cosmetic chemistry. Hair removal techniques, makeup application, and an introduction to body treatments are also included. Application of theory and skills through treatment services provided to the public. Focus on communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB).	Prerequisites: EHS105 with a grade of 80% or Program Manager's approval.	180
EHS115	Aesthetics Mastery	Focus on theories and performance of comprehensive professional aesthetics treatments for the public including communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB). Overview of business planning and employment in the field including marketing, job search strategies, professional development, and self promotion. BCB licensure examination preparation.	Prerequisites: EHS110 with a grade of 80% or better, or Program Manager's approval.	104

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELA111	Construction Electricity I	Introduction to the electrical construction trade incorporating safety awareness, introductory concepts in electrical theory, math review, solving simple equations, ratios, percentages and proportions. Study of the National Electrical code (NEC), practical use of materials and tools of the electrical construction trade. Basic splicing, anchoring, and fusing procedures; basic conduit bending calculations and installations, introduction to blueprint reading for electricians, rigging and lifting techniques.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ELA112	Construction Electricity II	Introduction to the fundamentals electricity, basic direct current (DC) theory through advanced DC theory, advanced conduit fabrication, bending applications and calculations. Practical applications for wiring devices and conduit bending.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ELA113	Introduction to National Electrical Code	Development, content, structure, and definitions in the National Electrical Code (NEC). Application of the NEC for proper and safe electrical installations and wiring methods.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
ELA123	Construction Electricity III	American labor history, parliamentary procedures. Electrical theory of alternating current systems pertaining to inductance, and capacitance; use of alternating current (AC) and direct current (DC) meters, rectifiers and capacitors.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ELA124	Construction Electricity IV	Transformers principles and applications in regards to use, connection, installation and safety related to transformer principles and applications including requirements specified by the National Electrical Code (NEC). Filters and power quality for electrical systems, direct current generation, application of test instruments for power quality, instrumentation, insulation testing and voice-data-video. Blueprint reading for electricians, commercial drawings, specifications, and schedules.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ELA125	National Electric Code I	National Electrical Code (NEC) related to branch circuits, feeders, services, devices, conductors, raceways and cable assembles. Electrical safety incorporating Occupational Safety and Health Association (OSHA) requirements and National Fire Protection Association (NFPA) 70E guidelines.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
ELA235	Advanced Construction Electricity I	Advanced industrial blueprint reading, lighting design, healthcare systems including the National Electrical Code (NEC) requirements. Motors and motor controls.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 6.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELA236	Advanced Construction Electricity II	Motor Controls, types of motor controls, components, motor control circuitry, and installations of motor control components and circuitry: Instrumentation and process controls, theory of process controls, installation, calibration, and troubleshooting of instruments and control circuitry.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ELA238	National Electric Code II	National Electrical Code requirements for Grounding and bonding electrical installations. Continued study of electrical safety incorporating Occupational Safety and Health Association (OSHA) requirements and National Fire Protection Association (NFPA) 70E guidelines.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	LAB 3.0 3.0 3.0
ELA246	National Electric Code III	National Electrical Code (NEC) requirements for special occupancies, conditions, and equipment. Calculations for conductor ampacites, conductor fill specific branch circuits. Installation and NEC requirements for Photovoltaic (PV) Systems.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	LAB 3.0 3.0 3.0
ELA247	Advanced Construction Electricity III	Leadership and motivation techniques for the electrical industry, digital electronics, Boolean algebra and logic gates. Power quality for electrical systems, distributed generation, information technologies sites, uninterruptable power supplies, and fuel cells. Torque theory and applications. National Electrical Code (NEC) related to over current protective devices (OCPDs), types, sizing, and ratings. Tape rules, fault current calculations and ratings, motor branch circuits and circuit/transformer protection.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ELA248	Advanced Construction Electricity IV	Introduction to fire alarm systems, requirements, devices, wiring methods and applicable codes; fire alarm blueprints and specifications. Cables, cabling systems, terminations, grounding and bonding. Telecommunications Industry Association/Electronic Industries Alliance (TIA/EIA) standards. Hazardous location introduction and history, area classification, protection techniques, equipment, wiring requirements, and special occupancies. National Electrical Code (NEC) updates, installation of emergency and standby systems over 600 volts, remote-control, signaling, and power-limited circuit, specific raceways and cable tray systems, in-floor, multi-outlet assembles, changes and update to the NEC.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
ELC103	Electrical/Mechanical Calculations	Fundamental calculations in arithmetic, algebra, trigonometry, descriptive geometry, economics, and probability. Application of theories and formulas to solve design, installation, maintenance, and troubleshooting problems for industrial, commercial, and residential electrical and mechanical systems.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELC115	Motors, Controls and Wiring Diagrams	Principles of three-phase motors. Wye and delta wiring. Calculation of motor current draw. Sequence of operation, wiring diagram and electrical components associated with industrial equipment. Procedures for evaluating electrical problems. Safety stressed.	Prerequisites: None.	LEC 3.0 3.0 3.0
ELC119	Concepts of Electricity and Electronics	Introduction to theory and principles of electric circuits, magnetism and electromagnetism including basic motors, transformers and generators. Use of basic measuring instruments. Overview of Ohm's and Kirchhoff's law and electronics in the modern world.	Prerequisites: None.	LEC 3.0 3.0 3.0
ELC120	Solid State Fundamentals	Theory of operation of semi-conductor devices, component and system construction, operation, installation, and service. Specific and practical applications in relations to temperature, light, speed and pressure control as used in industry today. Includes amplifiers, power supplies, integrated circuits, alternating current (AC) and direct current (DC) drives, fiber optics, and safety.	Prerequisites: None.	LEC 3.0 3.0 3.0
ELC123	Residential Electrical Wiring and Codes	Analysis and interpretation of residential drawings, local codes and specific sections of the National Electrical Code. Including needed materials derived from plans and specifications and the proper procedures for wiring a residence and other special locations. Areas of focus include circuits, conductors, switches, outlets, heating, security, and communication systems.	Prerequisites: None.	L+L 3.0 3.0 3.0
ELC124	Industrial Electrical Wiring and Codes	Industrial electrical power techniques of low, medium and high voltage systems. Selection of electrical distribution components, single and three phase systems, one-line diagrams, motors, transformers, protective devices, power factor, demand factor, conductor selection, system planning, grounding and energy management.	Prerequisites: A grade of C or better in ELC123 or permission of Instructor or admission to Electric League of Arizona program.	LEC 3.0 3.0 3.0
ELC125	Commercial Electrical Wiring and Codes	Commercial electrical power distribution techniques of low voltage (under 600 volt) systems. Selection of electrical distribution components, single and three systems, one-line diagrams and conductor selection. System grounding, planning and over current protection.	Prerequisites: A grade of C or better in ELC123 or permission of Instructor or admission to Electric League of Arizona program.	L+L 3.0 3.0 3.0
ELC144	Basic Automated Systems Using Programmable Controllers	Principles of automated control systems. Principles and application of programmable controllers, control functions, hardware, logic, programming, documentation, troubleshooting, start-up, maintenance and operation. Commercial and industrial control applications. Introduction to commercial programmable controllers.	Prerequisites: A grade of C or better in ELC120 or permission of Instructor or admission to Electric League of Arizona program.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELC160	Applied Electrical Codes I	Analysis of diagrams and application of current code interpretations. Includes local exceptions and practices. Review of the National Electrical Code (NEC) related to definitions, installations, wiring and protection, wiring methods, materials, and equipment.	Prerequisites: A grade of C or better in ELC119 or permission of Instructor.	LEC 3.0 3.0 3.0
ELC161	Applied Electrical Codes II	National Electrical Code (NEC) requirements for hazardous locations, special use and occupancies. Commercial, industrial and service locations. Fiber optics, communications and other state-of-the-art applications. Local inspection practices and requirements.	Prerequisites: A grade of C or better in ELC160 or permission of Instructor.	LEC 3.0 3.0 3.0
ELC162	Electrical Codes and Inspection I	Analysis of diagrams and application of current code interpretations. Includes local exceptions and practices	Prerequisites: A grade of C or better in (ELE100 and ELE101) or permission of Instructor.	LEC 3.0 3.0 3.0
ELC164	Grounding and Bonding	Electrical theory and calculation of electrical current. Grounding and bonding terminology including National Electric Code (NEC) Articles 250. Interpreting code requirements for grounding and bonding. Code requirements for field installation and sizing.	Prerequisites: None.	LEC 3.0 3.0 3.0
ELC210	AC Machinery and DC Machinery	Principles and operation of AC (Alternating current) and DC (direct current) motors, generators, and alternators. Includes single-phase motors along with induction, synchronous, and wound-rotor types of three-phase motors. DC motors including shunt-field, series field, wound rotor, permanent magnet, stepper and brushless types.	Prerequisites: A grade of C or better in ELC119 or permission of Instructor or admission to Electric League of Arizona program.	LEC 3.0 3.0 3.0
ELC217	Motor Controls	Electrical symbols, line diagrams and logic. Contacts and starters, control devices, reversing circuits and power distribution systems. Magnetism and magnetic solenoids, reduced voltage starters, and circuits. Hand tools and safety procedures.	Prerequisites: A grade of C or better in ELC119 or permission of Department or Division or admission to Electric League of Arizona program.	L+L 3.0 3.0 3.0
ELC218	Variable Frequency Drives	Principles and operation of frequency controlled AC (Alternating current) motor drives, including current source inverters (CSI), variable voltage inverters (VVI) and pulse width modulated inverters (PWM). Heating, ventilation and air conditioning (HVAC) applications along with energy savings, motor pump sizing and torque load calculations.	Prerequisites: A grade of C or better in ELC120 or permission of Instructor or admission to Electric League of Arizona program.	LEC 3.0 3.0 3.0
ELC219	Programmable Controllers	Principles and applications of programmable logic controls (PLC's). Numbering systems, control strategies, and ladder logic. Basic machine functions and operations to include programming, troubleshooting and maintenance. Application of PLC programming, operations and troubleshooting skills.	Prerequisites: A grade of C or better in ELC/FAC115 and ELC119 or permission of Instructor. Xref: ELC115	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
ELC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
ELC296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELC296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
ELC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ELC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ELC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ELE100	Concepts of Electricity and Electronics	Principles of electric circuits, magnetism and electromagnetism including basic motors and generators. Use of basic measuring instruments. Includes an overview of electronics in the modern world	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELE101	Beginning Algebra for Technology	Basic axioms of algebra, linear equations in one or two variables, operations on polynomials, rational expressions, simultaneous solutions of linear equations, laws of exponents.	Prerequisites: Score of 19 on Technical Mathematics placement test or a Grade of C or better in GTC107 or MAT082 or equivalent.	LEC 3.0 3.0 3.0
ELE105	Algebra-Trigonometry for Technology	Topics from college algebra and trigonometry essential to the study of electronics; polynomials, exponential and logarithmic functions, complex numbers, and trigonometric functions and identities.	Prerequisites: A grade of C or better in either ELE101 or MAT090 or MAT091 or MAT092 or equivalent or score of 16 on Technical Algebra placement test.	LEC 5.0 5.0 5.0
ELE111	Circuit Analysis I	Direct current (DC) and alternating current (AC) electric circuits. Ohm's law, Kirchoff's laws, series, parallel and series-parallel circuits, fundamentals of inductance and capacitance, and the transient behavior of circuits containing resistance and capacitance or resistance and inductance.	Prerequisites: None. Corequisites: MAT120, or MAT121, or MAT122, or equivalent.	L+L 4.0 6.0 6.0
ELE112	Circuit Analysis II	Alternating current (AC) and direct current (DC) circuits containing resistance and reactance. Detailed coverage of AC/DC circuit parameters, including theorems, impedance matching, and resonance	Prerequisites: A grade of C or better in ELE111.	L+L 4.0 6.0 6.0
ELE121	Solid-State Devices and Circuits I	Theory of operation of semiconductor diodes and transistors. Bipolar junction transistor biasing and load-line analysis. Alternating Current (AC) equivalent circuits applied to small signal amplifiers. Characteristics of large signal and power amplifiers	Prerequisites: A grade of C or better in ELE111.	L+L 4.0 6.0 6.0
ELE131	Digital Logic and Circuits	Number systems, binary arithmetic, and Boolean algebra, combinational and sequential logic circuits, and memory elements.	Prerequisites: None.	L+L 3.0 6.0 6.0
ELE161	Custom Electric Guitar Fabrication	Offered to guitar or bass players, artists, woodworkers or anyone who wants to learn the specialized skills of a luthier or the art of electric guitar crafting, maintenance, and setup. Fabricate and integrate a complete guitar neck and body, and finish with a combination of paint, stain, and clear coats.	Prerequisites: None.	L+L 3.0 4.0 4.0
ELE162	Custom Acoustic Guitar Fabrication	Offered to guitar players, artists, woodworkers or anyone who wants to learn the specialized skills of a luthier or the art of acoustic guitar crafting, maintenance, and setup. Fabricate and integrate a complete guitar neck and body, and finish with a combination of paint, stain, and clear coats.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELE173	Fabrication Techniques	Introduction to electronic assembly safety practices and procedures, hand tool, and measuring devices. Includes basic and special assembly tools, fastener installation and removal tools, precision measuring tools, fabrication tools, torque measuring instruments, Electrostatic Discharge (ESD) awareness and procedures, basic soldering/desoldering, prototype and troubleshooting.	Prerequisites: None.	L+L 3.0 6.0 6.0
ELE181	Computer Programming for Technology	Elementary computer programming techniques. Hands-on computer usage	Prerequisites: None.	L+L 3.0 5.0 5.0
ELE222	Solid-State Devices and Circuits II	Theory and application of differential and operational amplifiers. Power supplies and regulators; special devices and circuits.	Prerequisites: A grade of C or better in ELE112 and ELE121.	L+L 4.0 6.0 6.0
ELE241	Microprocessor Concepts	Architectures of selected microprocessors. Presentation of machine and assembly language programming	Prerequisites: A grade of C or better in ELE131.	L+L 4.0 6.0 6.0
ELE243	Microprocessor Applications	Presents the microprocessor in computing and control applications. System hardware and software used to control the microprocessor system to perform input/output operations.	Prerequisites: A grade of C or better in ELE241.	L+L 3.0 5.0 5.0
ELE245	Advanced Microprocessors and Systems	Microprocessors and systems, in the expanding Internet of Things. Legacy, current, and future wired and wireless interfaces and protocols. Connecting modern software environments to real-world electronic hardware.	Prerequisites: A grade of C or better in (ELE131 and ELE181), or ELE241, or permission of Instructor.	L+L 3.0 3.0 3.0
ELE251	Electronic Measurements	Application and operation of common electronic and electrical test instruments including: oscilloscopes, analog and digital multimeters, digital counters and signal sources. Transducers, amplifiers, and filters, as they apply to instrumentation systems. Laboratory reports and documentation are emphasized	Prerequisites: A grade of C or better in ELE121.	L+L 3.0 5.0 5.0
ELE261	Communication Systems	Communication systems. Amplitude modulation (AM), frequency modulation (FM), single-sideband (SSB), radio receivers, pulse systems, radiation, antennas and wave propagation.	Prerequisites: A grade of C or better in ELE121 and ELE131. Corequisites: ELE222.	L+L 4.0 6.0 6.0
ELE263	Digital Data Communications	Overview of modern telephone system. Telephone switching and modulation techniques. Familiarization with AM(amplitude modulation) and FM(frequency modulaation) circuits. Operation of asynchronous and sychronous modems	Prerequisites: A grade of C or better in ELE121 and ELE241.	L+L 4.0 6.0 6.0
ELR131	Electrical Systems	Electricity related to residential and light commercial applications, to include common electrical components, alternating current (AC) and direct current (DC) circuits, and electrical safety. Provides an introduction to reading, interpreting, and creating wiring diagrams and the application of electrical power. Operation and use of specific meters, tools, and an introduction to the National Electrical Code (NEC).	Prerequisites: None.	140

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELR132	Distribution Panels, Wiring, and Circuit Protection in Electrical Systems	Course covers construction drawings and code related to conductors and cables (types, ratings), residential and commercial applications, wire sizes, utilities, meters, disconnects, breakers, grounding and bonding, rough-in wiring and circuit safety protection.	Prerequisites: None.	140
ELR133	Conduit, Raceways, and Termination in Electrical Systems	Course covers termination and the implementation of electricity in a facility. Considers topics related to box capacities, raceways, conduit sizes, termination practices, wire trays, and finish wiring.	Prerequisites: None.	120
ELR133DC	Conduit, Raceways, and Termination in Electrical Systems	Course covers termination and the implementation of electricity in a facility. Considers topics related to box capacities, raceways, conduit sizes, termination practices, wire trays, and finish wiring.	Prerequisites: None.	140
ELR234	Electric Power Distribution	Course covers the theory and applications of distribution of power from utilities to residential and commercial sites, including transformers and commercial electrical distribution equipment and services. Also includes safety, codes, and interpretation of construction drawings and specifications.	Prerequisites: None.	81
ELR234DC	Electric Power Distribution	Course covers the theory and applications of distribution of power from utilities to residential and commercial sites, including transformers and commercial electrical distribution equipment and services. Also includes safety, codes, and interpretation of construction drawings and specifications.	Prerequisites: None.	70
ELR235	Motors: Theory and Application	Course covers motor and motor controls in electricity. Explains how to select and install relays and troubleshoot control circuits. Distinctions between alternating current (AC) and direct current (DC) motors, motor speed control, design and operation characteristics, and connections and terminal markings	Prerequisites: None.	120
ELR235DC	Motors: Theory and Application	Course covers motor and motor controls in electricity. Explains how to select and install relays and troubleshoot control circuits. Distinctions between alternating current (AC) and direct current (DC) motors, motor speed control, design and operation characteristics, and connections and terminal markings	Prerequisites: None.	70
ELR236	Industrial Wiring Applications	Course covers a broad variety of electrical wiring applications, including healthcare facility, heating, ventilation, and air conditioning (HVAC), standby, emergency, and fire alarm systems.	Prerequisites: None.	81
ELR236DC	Industrial Wiring Applications	Course covers a broad variety of electrical wiring applications, including healthcare facility, heating, ventilation, and air conditioning (HVAC), standby, emergency, and fire alarm systems.	Prerequisites: None.	70

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELT100	Survey of Electronics	An introduction to the field of electronics for those who may not intend to specialize in electronics. Essentially nonmathematical in nature; includes familiarization with a wide range of electronic components. Application to electronic systems, such as radio transmitters and receivers - both AM(amplitude modulation) and FM(frequency modulation), television transmitters and receivers, logic control, and computers. Application also to automotive electronics	Prerequisites: None.	LEC 3.0 3.0 3.0
ELT101	Mathematics for Electronics I	Basic principles of Algebra with applications to the analysis of electronic circuits. Emphasis on the use of the calculator for conversions and DC(direct current) circuit problems	Prerequisites: None.	LEC 3.0 3.0 3.0
ELT102	Mathematics for Electronics II	The study of simultaneous equations, quadratic equations, trigonometric relationships, periodic functions and logarithms as applied to AC(alternating current) circuit analysis. Application of the scientific calculator to technical problem solving in electronics	Prerequisites: A grade of C or better in ELT101 or equivalent.	LEC 3.0 3.0 3.0
ELT113	Basic Electronics	Direct and alternating current electrical circuits. Theory and practical lab experience, using the appropriate test equipment and computer solutions. Ohm's Law, Kirchhoff's Laws, and various network theorems applied to the study and analysis of series, parallel, and series-parallel circuit configurations. Includes complex algebra, impedance, frequency response, and resonance.	Prerequisites: A grade of C or better in ELT102 or Corequisites: ELT102 or equivalent.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
ELT131	Digital and Logic Circuits	Digital concepts and fundamentals, number systems and codes, Boolean algebra and combinational logic, logic reduction techniques, and logic hardware. Memories and programmable logic arrays. Hands-on hardware and computer-aided logic design experiments.	Prerequisites: A grade of C or better in ELT113, or ELC119, or permission of Instructor.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
ELT195	Solid State Electronics	Characteristics and use of solid state devices in practical circuit applications. Circuit analysis techniques and computer simulations. Includes, diodes, transistors, four-layer devices, operational amplifiers, and interfacing devices	Prerequisites: A grade of C or better in ELT113 or permission of Department or Division.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
ELT243	Microprocessor Applications	Presents the microprocessor in computing and control applications. System hardware and software used to control the microprocessor system to perform input/output operations.	Prerequisites: A grade of C or better in ELE241.	L+L 3.0 5.0 5.0
ELT251	Electronic Instrumentation	Electronic instruments and their usage in measuring and analyzing electronic circuits. Includes both analog and digital meters, oscilloscopes, and digital logic analyzers. Covers automatic test equipment, various transducers, and reliability requirements.	Prerequisites: A grade of C or better in ELT195, or ELC120, or permission of Department or Division.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
ELT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
ELT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ELT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
ELT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ELT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ELT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
EMC101	CPR/Basic Cardiac Life Support	Designed to train students in the skills of cardiopulmonary resuscitation (CPR) to include mouth-to-mouth, mouth-to-mask, cardiac compression, stabilization of adult, infant, and child victims with airway obstruction, respiratory, and cardiac arrest.	Prerequisites: Admission into the Emergency Medical Technology program. Successful completion of RDG100 or higher or appropriate reading placement into CRE101.	6

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EMC104	Basic Emergency Medical Technology	Designed as the Emergency Medical Technician (EMT) lecture and lab to prepare students for scope of practice and standard of care with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies and non-emergencies. Scenario-based learning applied to the techniques of emergency medical care is in accordance with national and state curriculum. Students will participate in the simulated EMT practicum on campus, which demonstrates the skills, knowledge, and abilities learned in the lecture and lab.	Prerequisites: EMC101 or with Program Manager approval.	214
EMC105	Hazardous Materials Awareness and Operations	Basic methods of recognition and identification based upon the chemical and physical properties of hazardous materials; basic safety procedures when utilizing specific types of protective clothing and equipment; basic tactical information relating to scene management. Satisfies minimum standards for certification testing set forth by the current ProBoard and/or Arizona State Training and Certifying Authority.	Prerequisites: None.	40

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EMC108	Emergency Medical Services and Fire Preparatory Academy	This course is designed specifically for individuals seeking a career in the fire-medical service and addresses foundational emergency medical technology, hazardous materials, and firefighting content material, as well as meeting two of the prerequisites for the Fire Department Operations course also known as the "Fire Academy" (FSC102). These two prerequisites are Emergency Medical Technology (EMT/FSC104) and Hazardous Materials (FSC105). Upon successful completion of the course, the participant will be eligible to sit for the EMT and Hazardous Materials (Haz-Mat) certification examinations. The course meets current United States Department of Transportation (USDOT) national standard education guidelines for emergency medical technicians. Course teaches techniques of emergency medical care in accordance with national and state curriculum. Study of the human body, patient assessment, treatment of medically or traumatically compromised patients, special hazards, medical operations, intravenous (IV) monitoring, patient-assisted medication administration, automated external defibrillators (AEDs), and blood-glucose monitoring. The course meets the current Hazardous Materials First Responder certification requirements for the Arizona Center for Fire Service Excellence. The course will cover basic methods of recognition and identification based upon the chemical and physical properties of hazardous materials, basic safety procedures when utilizing specific types of protective clothing and equipment, and basic tactical information relating to scene management. Confined space operations in accordance with the National Fire Protection Agency.	Prerequisites: Admission into the Emergency Medical Services and Fire Preparatory Academy program. Successful completion of RDG100 or higher or appropriate reading placement into CRE101.	300
EMC110	Wildland Firefighter	Basic-level course for individuals with little or no experience in the wildland environment. Preparation for performing as a beginning-level wildland firefighter with an organized fire department engine or hand crew. Satisfies minimum standards for certification testing set forth by the National Wildland Coordinating Group (NWCG).	Prerequisites: None.	50
EMT101	Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers	Designed to provide the allied healthcare provider with the knowledge and skills to perform Basic Life Support (BLS) according to current guidelines for emergency cardiovascular care (ECC).	Prerequisites: None.	L+L 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EMT101AB	Basic Life Support/Cardiopulmonary Resuscitation (CPR) Practicum for Health Care Providers	Designed to assess the allied healthcare provider in the skills of Basic Life Support (BLS) according to current guidelines for emergency cardiovascular care (ECC).	Prerequisites: Successful completion of Healthcare Provider CPR AED Online Part 1 course from an American Heart Association (AHA) certified program.	L+L 0.25 0.25 0.25
EMT102AB	Emergency Medical Responder	A comprehensive course to train a lay person to provide care for patients suffering sudden illness or injury. For members of law enforcement agencies, industry, and the private sector.	Prerequisites: None.	L+L 3.0 3.0 3.0
EMT104	Emergency Medical Technology	Designed as the Emergency Medical Technician (EMT) lecture to prepare students for scope of practice and standard of care with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies and non-emergencies.	Prerequisites: Must be 18 years or older or permission of EMT Program Director and (A grade of C or better in CRE101, or 95 or higher on EdReady Critical Reading and Critical Thinking exam, or 261 or higher on Gen Accuplacer Reading Exam, or High School GPA 3.0 or higher within the previous 10 years, or Associate's Degree or higher). Corequisites: EMT104AB.	LEC 10.0 10.0 10.0
EMT104AA	Practical Skills Testing	Manipulative skills testing of specific skills identified by the scope of practice for EMT Basic Students. Successful completion qualifies the student for EMT Basic Written Exam for National Certification.	Prerequisites: None. Corequisites: EMT104.	LAB 0.5 0.5 0.5
EMT104AB	Applied Practical Studies for Emergency Medical Technology	Simulation of actual emergency responses, with practical application of techniques and skills covered in EMT curricula. Scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum. Practical application of anatomy, physiology, patient assessment, and treatment of medically or traumatically compromised patients, special hazards and medical operations. Also includes patient-assisted medication administration, semi-automatic external defibrillator and blood glucose monitoring. Students operate in outside, scenario based environments.	Prerequisites: None. Corequisites: EMT104.	LAB 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EMT104LL	Emergency Medical Technology Practicum	Designed as the simulated Emergency Medical Technician (EMT) practicum in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies. Provides scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum.	Prerequisites: A grade of C or better in EMT104 or permission of Instructor or Corequisites: EMT104.	LAB 2.0 3.5 3.2
EMT106	Ambulance Operations	Practical application of rules and regulations governing care and transport of patient. Inventory, methods of disinfection, and charge procedures covered. Practical and defensive driving techniques and maintenance of the ambulance demonstrated and practiced, according to the U.S. Department of Transportation (DOT) National Highway Traffic Safety Administration (NHTSA).	Prerequisites: EMT at any level of certification.	L+L 2.0 2.0 2.0
EMT108	Tactical Safety and Street Survival for EMTs	Principles of response to emergencies in potentially dangerous situations. Emphasis on recognizing and responding to potentially violent situations, including active crime scenes and domestic terrorism. Emphasis on personal protection, de-escalation, communication skills, defensive tactics, and interaction with local and national public safety and law enforcement professionals.	Prerequisites: Healthcare provider certification or licensure or police officer with POST certification. Level 1 DPS fingerprint clearance card or permission of Department or	L+L 3.0 3.0 3.0
EMT116	Emergency Medical Communications (EMD)	Designed to educate and train individuals as the emergency link among the community, health care providers, and law enforcement agencies. Comprehensive program to educate and train in procedures of communications, interrogation, assessment, and deployment. Includes interactive computer lab and scheduled observation with assignment at a dispatch center.	Prerequisites: A grade of C or better in EMT101 or Corequisites: EMT101 or any current American Red Cross or CPR for the Professional Rescuer or American Heart Association Basic Life Support Health Care Provider validation.	L+L 1.5 1.8 1.8
EMT120	Spanish For Emergency-Care Providers	Participative course for prehospital and other emergency-care providers. Vocabulary, pronunciations, voice inflections, phrases, conversational terms, and methods of interviewing the ill or injured victim. Cultural information to facilitate approach and interaction with the victim, family, and/or significant other. Documentation of the interview content on the prehospital encounter form.	Prerequisites: Certified EMT or licensed medical personnel.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EMT165	Pediatric Education for Prehospital Providers: Basic	An interactive, scenario-based course designed for Basic EMTs (Emergency medical technicians) who are not yet practicing in the field. Enables these EMTs to perform a rapid assessment of sick and injured children in a variety of different circumstances. Includes use of pediatric assessment triangle, developmental differences, injury prevention, basic airway management techniques, recognition of medical emergencies such as pediatric trauma, mechanism of injury, submersion events, children with special health care needs, abuse and neglect, child and family interactions, use of specialized equipment, and special issues in pediatric transportation. Treatment to children is in accordance with recommendations of the American Academy of Pediatrics.	Prerequisites: A grade of C or better in EMT104 or permission of Instructor.	L+L 2.0 2.87 2.87
EMT200	Refresher Course for Certified Emergency Medical Technicians	Designed to meet National and Arizona Department of Health Services (A-DHS) recertification for EMTs. Enhances the knowledge base of the Emergency Medical Technician (EMT) and reinforces basic skills competencies.	Prerequisites: Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer or permission of Instructor.	L+L 2.0 2.7 2.7
EMT200AA	EMT Certification Renewal Challenge	Designed to contribute to Arizona Department of Health Services (A-DHS) Bureau of Emergency Medical Services (B-EMS) recertification requirements for Emergency Medical Technician (EMT) according to the U.S. Department of Transportation (DOT) EMT National Curriculum and the Arizona EMT Refresher Curriculum Guidelines.	Prerequisites: Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer or proof of current registry with the National Registry of Emergency Medical Technicians (NREMT).	LEC 0.6 0.6 0.6
EMT200AB	EMT-Basic Certification Expanded Refresher Challenge	Designed to contribute to Arizona Department of Health Services (A-DHS) Bureau of Emergency Medical Services (B-EMS) recertification requirements for Emergency Medical Technician Basic (EMTB) according to the U.S. Department of Transportation (DOT) EMT-Basic National Curriculum and the Arizona EMT Basic Refresher Curriculum Guidelines.	Prerequisites: Current Basic Life Support American Heart Association Healthcare Provider CPR or equivalent and current EMT Basic certification in the state of Arizona Must be currently functioning as an EMT	LEC 1.0 1.0 1.0
EMT201	Interactive Basic EMT Refresher	Designed to contribute to Arizona Department of Health Services recertification requirements for Emergency Medical Technicians (EMT) according to the US Department of Transportation (DOT) EMT-Basic National Curriculum and the Arizona Basic EMT Refresher Curriculum Guidelines. Enhances the knowledge base of the EMT. Updates a wide variety of subjects including respiratory and cardiac emergencies, and interaction with advanced life support providers.	Prerequisites: (Current EMT Basic certification in the state of Arizona or proof of current registry with the National Registry of Emergency Medical Technicians [NREMT]) and validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer.	L+L 1.0 2.2 2.2

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EMT215	Stress and Emergency Services Professionals	Participative course designed to familiarize students with differences which exist in the socioeconomic, cultural, organizational, and technologic environments and the distress that can occur to emergency-care providers functioning in those arenas. Physiologic, psychologic and behavioral manifestations of distress as it relates to emergency responders. Explores distress management options with emphasis on individual techniques and organizational programs.	Prerequisites: Currently employed as prehospital-care provider or registered nurse working in the prehospital setting.	LEC 3.0 3.0 3.0
EMT230	Advanced Concepts for EMTs	Designed to meet Arizona Department of Health Services recertification requirements for EMTs. Enhances the knowledge base of the Emergency Medical Technician (EMT) and incorporates new information into daily practice. Updates a wide variety of subjects including medical and trauma emergencies, cardiac life support, interaction with advanced life support providers, and emergency scene management.	Prerequisites: Current EMT certification in the state of Arizona.	L+L 1.5 1.5 1.5
EMT238	Vehicular Extrication and Patient Stabilization	Participative course designed for the Emergency Medical Technicians (EMT). Incorporates new knowledge and skills necessary to access, extricate, and care for victims of crash incidents. Provides exposure to scene management, including size-up, disentanglement, victim stabilization for single and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures to selected victim scenarios.	Prerequisites: Basic EMT certification current enrollment in an EMT-Basic program nurse with emergency department experience or law enforcement personnel or permission of Instructor.	LEC 2.0 2.0 2.0
EMT245	Trauma Management I	Designed to instruct prehospital care personnel in the critical skills necessary to manage the trauma victim and the emergency scene through the Incident Command System (ICS). Enhances basic emergency medical technology (EMT) skills by focusing on emergency care interventions. Provides exposure to victim assessment, initial treatment, resuscitative techniques, victim stabilization, transportation of the victim to an emergency care facility, and documentation	Prerequisites: Basic EMT certification or nurse with emergency room experience or permission of Department or Division.	L+L 2.0 3.5 3.5
EMT258	Victimology and Crisis Management in Public Safety	Victimology, the criminal justice system, techniques of crisis intervention and management, and the importance of a multicultural and global perspective. Includes violent crimes, sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, developing effective coping skills of victims and responders, appropriate community resources, and the cultural responsiveness of the justice system.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EMT260	Advanced Airway Management for EMTs	Designed to instruct emergency care personnel in the critical skills necessary to establish and maintain an airway of the traumatized or medically compromised patient. Airway skills include oxygen therapy with all adjuncts, administration of pharmaceuticals via the endotracheal (ET)/pharyngeal tracheal lumen airway (PTLA), management of the airway as a route for medications, and invasive airway procedures. Content concurrent with Department of Transportation Guidelines and the American College of Surgeons Division on Trauma Standards of Care.	Prerequisites: Certified EMT or licensed registered nurse with emergency department experience; EMT or emergency department licensed registered nurse with Medical Control physician supervision according to Arizona Department of Health Services (A-DHS) Bureau of Emergency Medical Services (B-EMS).	L+L 2.0 2.0 2.0
EMT264	Vascular Access for EMTs	Includes review of anatomy of the circulatory system. Skills include peripheral intravenous cannulation techniques, fluid resuscitation, obtaining venous blood samples for laboratory analysis, infection control techniques for the safety of self and victim, and complications of intravenous cannulation; each and all with medical control. Content concurrent with American College of Surgeons Committee on Trauma, Standards of Care.	Prerequisites: (EMT-Basic or registered nurse with emergency department experience or Licensed Physician or Physician Assistant) or permission of Instructor.	L+L 1.0 1.0 1.0
EMT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
EMT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
EMT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENG100AA	American-English Spelling System	American-English spelling system rules, mnemonic devices.	Prerequisites: Appropriate English placement test score, or a grade of C or better in ESL097 or permission of Instructor.	LEC 1.0 1.0 1.0
ENG100AB	Vocabulary Development	Latin and Greek derivatives, development of competency and discrimination in word choice, specialized vocabulary.	Prerequisites: Appropriate English placement test score or a grade of C or better in ESL097 or permission of Instructor.	LEC 1.0 1.0 1.0
ENG100AC	The Mechanics of Written English	Review of the mechanics of written English, including punctuation, arbitrary marks and usages, capitalization, agreement, tense, and sentence patterns.	Prerequisites: Appropriate English placement test score or a grade of C or better in ESL097 or permission of Instructor.	LEC 1.0 1.0 1.0
ENG100AD	Grammar and Usage	The social aspects of grammar and usage, including appropriate levels of formal and informal language.	Prerequisites: Appropriate English placement test score or a grade of C or better in ESL097 or permission of Instructor.	LEC 1.0 1.0 1.0
ENG100AE	Composition Skills	Developing generative and evaluative writing skills using selected software programs.	Prerequisites: Appropriate English placement test score or a grade of C or better in ESL097 or permission of Instructor.	LEC 1.0 1.0 1.0
ENG101	First-Year Composition	Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total.	Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ESL097 or WAC101), or (a grade of B or better in ALT100), or (a grade of C in ALT100 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+), or (a grade of C or better in ESL202 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+).	LEC 3.0 3.0 3.0
ENG101LL	First-Year Composition Lab	Supplemental instruction for composition courses. Focus on developing effective writing processes to address a range of rhetorical situations.	Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ESL202. Corequisites: ENG101, or ENG107).	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENG102	First-Year Composition	Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total.	Prerequisites: A grade of C or better in ENG101.	LEC 3.0 3.0 3.0
ENG107	First-Year Composition for ESL	Equivalent of ENG101 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total.	Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ESL097 or WAC101), or (a grade of B or better in ALT100), or (a grade of C in ALT100 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+), or (a grade of C or better in ESL202 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+).	LEC 3.0 3.0 3.0
ENG107LL	First-Year Composition Lab for ESL	Equivalent of ENG101LL for students of English as a Second Language (ESL). Supplemental instruction for composition courses. Focus on developing effective writing processes to address a range of rhetorical situations.	Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ESL202. Corequisites: ENG101, or ENG107).	LAB 1.0 3.0 3.0
ENG108	First-Year Composition for ESL	Equivalent of ENG102 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total.	Prerequisites: A grade of C or better in ENG107.	LEC 3.0 3.0 3.0
ENG110	Approaching Big Problems	Language-based approach to inquiry. Explores how language frames and influences important issues and questions in today's world. Examines how language and other meaning-making practices shape the circulation of various social and cultural issues. Investigates the process of meaning-making, problem solving, and formulating responses to these issues. Exposes students to the varieties of work within the different concentrations in the field of English Studies.	Prerequisites: None.	LEC 3.0 3.0 3.0
ENG111	Technical and Professional Writing	Introduces students to the genres, style, and design of technical documents that are used in various professional fields. Includes examining the role of workplace writing, preparing documents appropriate to diverse audiences, and integrating data and graphics into work-related documents.	Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENG183	Basic Manuscript Writing: Fiction	Basic skills and techniques used by the professional fiction writer in writing fiction for publication, including characterization, plot development, writing dialogue, setting scenes, and establishing mood. Emphasis on writing scenes.	Prerequisites: None.	LEC 3.0 3.0 3.0
ENG200	Reading and Writing About Literature	Emphasis on critical analysis of various genres of literature; includes study of necessary terminology, introduction to methods of literary criticism, and practice in interpretation and evaluation	Prerequisites: A grade of C or better in ENG102.	LEC 3.0 3.0 3.0
ENG206	Introduction to Literary Studies	Introduces the terminology, methods, and objectives for interpreting and writing about a variety of literary texts. Focuses on the distinctive features of literature, key concepts in critical theory, close reading, and the use of scholarly and critical resources to interpret texts.	Prerequisites: A grade of C or better in ENG102 or ENG108.	LEC 3.0 3.0 3.0
ENG210	Creative Writing	Skills and techniques used in the production of marketable materials for contemporary publications that buy prose fiction, poetry, and expository articles.	Prerequisites: A grade of C or better in ENG102 or permission of Department or Division.	LEC 3.0 3.0 3.0
ENG211	Introduction to English Studies	Explores the broad nature of "texts," including literature, language, and other cultural productions and artifacts. Introduces key theories and approaches for analyzing and interpreting diverse literary and cultural texts.	Prerequisites: A grade of C or better in ENG102 or ENG108.	LEC 3.0 3.0 3.0
ENG213	Introduction to the Study of Language	Study of language as code; phonetics, phonology, morphology, syntax, semantics; language acquisition; historical and socio-linguistics	Prerequisites: A grade of C or better in ENG102 or ENG111 or permission of Instructor.	LEC 3.0 3.0 3.0
ENG215	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing to be research based.	Prerequisites: A grade of C or better in ENG102 or ENG111 or permission of Instructor.	LEC 3.0 3.0 3.0
ENG216	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers research based	Prerequisites: A grade of C or better in ENG102.	LEC 3.0 3.0 3.0
ENG217	Personal and Exploratory Writing	Using writing to explore one's self and the world one lives in; emphasis on journal writing as a source and inspiration for public writing	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
ENG235	Magazine Article Writing	Basic skills and techniques used by professional writers for publication in magazines. Includes analyzing markets, identifying article slant, research techniques, editing, and submission procedures. Emphasis on nonfiction.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENG298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ENG298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ENH110	Introduction to Literature	Introduction to international literature through various forms of literary expression; e.g., poetry, drama, essay, autobiographical fiction, short story, and novel. Provides a global overview of literature with special emphasis on diverse cultural contributions of women, African Americans, Asian Americans, Hispanic Americans, and Native Americans.	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH111	Literature and the American Experience	Introduction to the foundations and diversity of American culture through a survey of its literature, including minority and women writers. Exploration of various facets of American culture including frontier, regional, rural, and urban life; ethnic, racial, and immigrant experience; and political and social philosophies	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH112	Chicano Literature	Introduction to the works of Mexican-American writers. Samples poetry, fiction, and essays viewed in their relationship to American cultural heritage and to contemporary culture.	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH113	Writers/Directors and Current Issues	In-depth analysis of literary texts by contemporary writers/directors throughout the world, including essayists, journalists, playwrights, novelists, directors, short story writers, and/or poets. Examines perspectives representing a variety of cultures. Critical responses to current issues of worldwide interest examined, including topics as environment, technology, medicine, economics, politics, education, human rights, law and order.	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH114	African American Literature	Survey of major African American writers from Colonial period through the present. Analysis of trends and movements within African American literary history. Analysis of literary types and selected works.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENH117	Rap Literature: The Oral Tradition	Survey of selected rap poetry looking at the oral tradition of Africa, the Caribbean, and the United States as precursors to East Coast, West Coast, Southern, North Central, and International development of the genre. Investigation of cultural environments, historical events, competitions (the "battles"), artists' biographies, and parallel art forms as they relate to the analysis of the genre and its themes	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH120	The Literature of Science Fiction	Surveys the last one hundred and fifty years of Science Fiction literature. Investigates the similarities between Science Fiction and other imaginative literatures Examines the Science Fiction genre, sub genres, and themes from a variety of perspectives, as well as social issues	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH130	Mystery Fiction from the Nineteenth Century to the Present	A study of mystery fiction as a literary genre and as a reflection of culture through the writings of significant authors.	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH140	Representations of Society in Literature and Film	Explores how a particular field of endeavor is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates how narrative representation engages changing cultural and historical contexts as well as how it shapes social perceptions of fields of human endeavor. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement and eligibility for ENG101 as indicated by appropriate writing placement.	LEC 3.0 3.0 3.0
ENH140AA	Sports in Literature and Film	Explores how sports are and have been represented in narrative literature and film, using examples from a range of U.S. media. Investigates how narrative representation engages changing cultural and historical contexts as well as how it shapes social perceptions of fields of human endeavor. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement and eligibility for ENG101 as indicated by appropriate writing placement.	LEC 3.0 3.0 3.0
ENH140AB	Business in Literature and Film	Explores how business is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates how narrative representation engages changing cultural and historical contexts as well as how it shapes social perceptions of fields of human endeavor. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement and eligibility for ENG101 as indicated by appropriate writing placement.	LEC 3.0 3.0 3.0
ENH140AC	Science in Literature and Film	Explores how science is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates how narrative representation engages changing cultural and historical contexts as well as how it shapes social perceptions of fields of human endeavor. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement and eligibility for ENG101 as indicated by appropriate writing placement.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENH140AD	Art in Literature and Film	Explores how art is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates how narrative representation engages changing cultural and historical contexts as well as how it shapes social perceptions of fields of human endeavor. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement and eligibility for ENG101 as indicated by appropriate writing placement.	LEC 3.0 3.0 3.0
ENH140AE	Education in Literature and Film	Explores how education is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates how narrative representation engages changing cultural and historical contexts as well as how it shapes social perceptions of fields of human endeavor. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement and eligibility for ENG101 as indicated by appropriate writing placement.	LEC 3.0 3.0 3.0
ENH140AF	Law in Literature and Film	Explores how law is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates how narrative representation engages changing cultural and historical contexts as well as how it shapes social perceptions of fields of human endeavor Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement and eligibility for ENG101 as indicated by appropriate writing placement.	LEC 3.0 3.0 3.0
ENH140AG	Medicine in Literature and Film	Explores how medicine is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates how narrative representation engages changing cultural and historical contexts as well as how it shapes social perceptions of fields of human endeavor. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement and eligibility for ENG101 as indicated by appropriate writing placement.	LEC 3.0 3.0 3.0
ENH190	Introduction to US Ethnic Literature	Introduction to the US ethnic literatures of African Americans, Arab Americans, Asian Americans, Latinas/os, Native Americans, Mixed Race, and other emerging ethnic groups through various expressions. Examines the interconnections of the various experiences of racialized groups living in the US. Provides ethnic US literature a global context through study of the interconnections with the literatures of Africa, Asia, Latin America, and Oceania. Focus on literary production of at least four specific US ethnic groups and relevant international literatures.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ENG101 or ENG107.	LEC 3.0 3.0 3.0
ENH201	World Literature Through the Renaissance	Examines a selection of the world's literary masterpieces within their cultural contexts from ancient times through the Renaissance. Analyzes the influences of major literary philosophies, themes, genre, and styles. Assesses the contributions of major writers. Introduces the terminology of literary analysis	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH202	World Literature After the Renaissance	Includes a selection of the world's literary masterpieces from the Renaissance to modern times	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENH204	Introduction to Contemporary Literature	Examines the work of major writers in poetry, fiction and drama from 1945 to the present. Examines important movements that have developed within these genre since 1945	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH206	Nature and Environmental Literature	Investigates major themes in nature and environmental writing. Explores relationship between humanity and the environment as expressed through fiction, non-fiction, and poetry. Examines how literature drives attitudes and policies.	Prerequisites: None. CRE101 or equivalent as indicated by assessment recommended but not required.	LEC 3.0 3.0 3.0
ENH214	Poetry Study	Involves reading, discussing, and analyzing poetry of various forms and from selected periods	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH220	Gender, Media, and Culture	Introduction to gender and its intersections with race, ethnicity, class, sexuality, nationality, ability, and country of origin in media. Examines film, television, popular culture, advertising, gaming, print and digital media, music and other forms of media.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
ENH221	Survey of English Literature Before 1800	Emphasizes the social and political backgrounds as well as the form and content of English literature from Anglo-Saxon times to the end of the eighteenth century.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH222	Survey of English Literature After 1800	Emphasizes the social and political backgrounds as well as the form and content of English literature in the nineteenth and twentieth centuries.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH230	Introduction To Shakespeare	Introduces Shakespeare the playwright, the sonneteer, the linguist, and the citizen of the 17th century. Considers the major tragedies, comedies, histories, and sonnets; focuses on the use of language; and connects the writer to the time. Some emphasis on Shakespeare's influence through the centuries, noting parallels between the late 16th century and the late 20th century	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH231	Introduction to Shakespeare: The Early Plays	Introduces Shakespeare, the playwright and linguist, and the late 16th century. Considers representative comedies, histories, and tragedies from Shakespeare's early period, from 1590-1599. Focuses on the use of language and connects the writer to his historical era. Also considers Shakespeare's relevance to the present time.	Prerequisites: None. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH232	Introduction to Shakespeare: The Late Plays	Introduces Shakespeare, the playwright and linguist, and the early 17th century. Considers representative comedies, histories, tragedies, and romances from Shakespeare's late period, 1600-1611. Focuses on the use of language and connects the writer to his historical era. Also considers Shakespeare's relevance to the present time.	Prerequisites: None. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENH235	Survey of Gothic Literature	A study of the origins, common elements and characteristics, and historical development of Gothic literature with an exploration of the literary techniques and psychological aspects of the genre	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH241	American Literature Before 1860	Includes literature written prior to 1860 in the United States.	Prerequisites: A grade of C or better in ENG101.	LEC 3.0 3.0 3.0
ENH242	American Literature After 1860	Includes literature written after 1860 in the United States	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH245	J.R.R. Tolkien and C.S. Lewis: Battling Modernism	Focuses on the writings, language, themes, influences and vision of J.R.R. Tolkien and C.S. Lewis in contrast to the ideas and literature of the Modernist movement.	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH251	Mythology	Deals with the myths and legends of civilizations with the greatest influence upon the development of the literature and culture of the English speaking people, and compares those myths with myths from other cultures.	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH253	Contemporary Global Literature and Film	Characteristics of literary and cinematic mediums. Challenges of adapting literature to film. Global examination of historical, religious, socioeconomic, political, and colonial/post colonial themes depicted in Western and non-Western literature and film (e. g., Africa, Asia, and Latin America) outside the United States. Use of narrative in each medium and how it translates various global/international perspectives and cultural assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film.	Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.	LEC 3.0 3.0 3.0
ENH254	Literature and Film	Presents works of literature and their film versions and analyzes distinguishing techniques of each medium.	Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.	LEC 3.0 3.0 3.0
ENH255	Contemporary U.S. Literature and Film	A discussion of the strengths and weaknesses of literature created by U.S. authors and film created by U.S. or other filmmakers. Includes the challenges of adapting literature to film; addressing the racial, ethnic, sex, sexuality, gender, class, and religious differences among cultures and mediums; the use of narrative in each medium and how it translates various cultural values and assumptions particular to U.S. society and culture; the specific genres present in literature and film; and the cultural metaphors and symbols used in literature and film.	Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.	LEC 3.0 3.0 3.0
ENH256	Shakespeare on Film	Presents cinematic versions of Shakespeare's plays and explains and analyzes how the dramatist's major tragedies, comedies, histories and romances have been presented on film.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENH259	American Indian Literature	Contemporary American Indian forms of literary expression. Selected oral traditions of American Indians. Trends and movements within American Indian literary history	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH260	Literature of the Southwest	Investigates major themes in Southwestern American literature including the Western myth, minority roles in the region's literature, control of nature versus primacy of nature, and growth. Both prose and poetry are examined with an emphasis on contemporary Southwestern writing	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH261	Indigenous Women's Literature of the Americas	Explores contemporary voices of Indigenous women authors and artists in the Americas as expressed in poetry, fiction, nonfiction, drama, and oral traditions. Focuses on themes relevant to Indigenous women and examines the trends and movements within Indigenous peoples and women's literary history. Examines themes relevant to Indigenous women such as racial and gender oppression, reservation life, acculturation, and their sociopolitical activism in the Americas.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
ENH275	Modern Fiction	Includes novels and short stories of modern writers which reflect significant themes of our time	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH277	Narrative Genres	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH277AA	Dark Futures: Dystopian Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH277AB	Whodunnits: Mystery Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENH277AC	Happily Ever: Children's Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH277AD	Stuff Blows Up: Action Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH277AE	Tour of Duty: War Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH277AF	Heroic Quests: Fantasy Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH277AG	Out There: Science Fiction Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH277AH	Facing Fear: Horror Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENH277AI	Make 'Em Laugh: Comedy Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH277AJ	Love and Passion: Romance Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH277AK	The Wild Frontier: Western Narrative	Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.	LEC 3.0 3.0 3.0
ENH280	Topics in American Literature	Exploration of selected topic(s) in American Literature. Focuses on a theme, genre, era, technique, or critical approach. Includes reading and interpretation of literature from a variety of cultures within the United States.	Prerequisites: A grade of C or better in (ENG101 or ENG107) or permission of Instructor.	LEC 3.0 3.0 3.0
ENH284	19th Century Women Writers	Investigates major themes in literature by women writing in the 19th century including the nature of women's lives in the family, in work situations, and in society. Poetry, prose, essays and drama are examined with an emphasis on common themes	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH285	Contemporary Women Writers	Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women's lives regardless of age, creed, or ethnic background	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH291	Children's Literature	Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH292	Literature for Adolescents	Reviews selected literature written for adolescents. Develops and applies literary criteria for the evaluation of adolescent literature	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH294	Multicultural Folktales	Study of multicultural folktales, exploring the impact of the oral tradition in American society and showing classroom applications	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ENH295	Banned Books and Censorship	History, motivations, and effects of censorship in a democratic society. Censorship and book banning as a method of silencing diverse voices. Critical analysis of banned or challenged literature for children and adults.	Prerequisites: None.	LEC 3.0 3.0 3.0
ENH298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ENV101	Introduction to Environmental Science	Introduces the interconnected nature of environmental science and solutions to environmental issues.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
ENV119	Introduction to Geospatial Technology for Environmental Science	Introduction to geospatial technology concepts and applications including map reading, aerial photography interpretation, and remote sensing. Hands-on experience investigating the local environment with an air photo browser, remote imaging viewer, and a geographic information system.	Prerequisites: None.	L+L 4.0 4.0 4.0
ENV219	Geospatial Technology for Environmental Sciences I	Hands-on experience using Geographic Information Systems (GIS), Remote Sensing (RS), and Global Positioning Systems (GPS) with applications using local environmental data.	Prerequisites: A grade of C or better in ENV119 or Corequisites: ENV119, or permission of Instructor.	L+L 4.0 4.0 4.0
ENV225	Our Changing Planet	Evaluates biogeochemical cycles and energy flows supporting life on Earth using the scientific method. Integrates core concepts of atmospheric science, geology, hydrology, ecology, and soil science to provide a foundational understanding of the critical zone and its relationship to environmental issues. Examines the influences of human activity on the functioning of the critical zone with consideration of management best practices and restoration actions for long-term sustainability. Emphasizes the communication of scientific information.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
ENV273	Geospatial Technology for Environmental Sciences II	Advanced geospatial techniques including Geographic Information System (GIS) data integration, surface creation and analysis, 3D displays, and animation using local environmental data	Prerequisites: A grade of C or better in ENV219 or permission of Instructor.	L+L 4.0 4.0 4.0
ENV295	Geospatial Technology for Environmental Sciences Projects	Completion of a self-paced geospatial technology project.	Prerequisites: A grade of C or better in ENV273 or permission of Instructor.	L+L 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EPD205	Science, Technology, Engineering, and Mathematics (STEM) Education	A basic introduction to Science, Technology, Engineering, and Mathematics (STEM) education in the United States. Emphasis on the understanding of state and national educational acad standards, the importance of the role of higher education in closing the achievement gap and effective strategies for improving teaching in the STEM disciplines. Includes examples of successful school programs along with practical applications for teachers in the classroom and the involvement of community colleges in the STEM Education landscape.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0
EPD212AA	Elementary Art Methods and Curriculum Development	Overview and practical application of teaching elementary art. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0
EPD212AB	Secondary Art Methods and Curriculum Development	Overview and practical application of teaching secondary art. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0
EPD216AA	Elementary Physical Education Methods and Curriculum Development	Overview and practical application of teaching elementary physical education. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0
EPD216AB	Secondary Physical Education Methods and Curriculum Development	Overview and practical application of teaching secondary physical education. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EPD225	Foundations of Gifted Education and Identification of Gifted Learners	Students explore definitions of giftedness, ways of identifying gifted and talented students, and types of programs and services developed for this population. Students address issues in educating gifted and talented students.	Prerequisites: Must hold a provisional or standard early childhood, elementary, secondary or special education teaching certificate.	LEC 3.0 3.0 3.0
EPD226	Social and Emotional Needs of Gifted and Talented Students	Students explore the intellectual, social, emotional, developmental, and educational characteristics of gifted and talented students.	Prerequisites: Must hold a provisional or standard early childhood, elementary, secondary or special education teaching certificate and a grade of C or better in EPD225 or (permission of Department or Division chairperson).	LEC 3.0 3.0 3.0
EPD227	Methods and Models for Differentiating Curriculum for Gifted Learners	Students explore the theory and practice of teaching methods and differentiating curriculum and instruction for gifted learners.	Prerequisites: Must hold a provisional or standard early childhood, elementary, secondary or special education teaching certificate and a grade of C or better in EPD225 (or permission of Department or Division chairperson).	LEC 3.0 3.0 3.0
EPD228	Creativity and Critical Thinking Skills in Gifted Education	Students explore the concept of creativity, including theories and characteristics. Brain research on critical thinking and implications for gifted education is examined.	Prerequisites: Must hold a provisional or standard early childhood, elementary, secondary or special education teaching certificate and a grade of C or better in EPD225 (or permission of Department or Division chairperson).	LEC 3.0 3.0 3.0
EPD250	Teaching Elementary Number Sense and Operations Grades K-8	Focus on knowledge and skills for number sense and operations grades K-8. Covers learning environments, teaching resources, and use of technology in the presentation of numeration, number theory and computation. Emphasis on State Academic Math and Common Core Standards. Includes practical application of teaching strategies for elementary students as well as teachers of mathematics.	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of Department or Division.	LEC 6.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EPD251	Teaching Geometry and Measurement Grades K-8	Focus on knowledge and skills for geometry and measurement concepts for grades K-8. Covers geometric properties, transformation of shapes, coordinate geometry and measurement. Emphasis on State Academic Math and Common Core Standards. Includes practical application of teaching strategies for elementary students as well as teachers of mathematics.	Prerequisites: A grade of C or better in EPD250.	LEC 3.0 3.0 3.0
EPD252	Teaching Patterns, Algebra and Functions Grades K-8	Focus on knowledge and skills for patterns, algebra and functions grades K-8. Covers learning environments, teaching resources, and use of technology in the presentation of algebraic notation, properties, relations and functions, equations and inequalities. Emphasis on State Academic Math and Common Core Standards. Includes practical application of teaching strategies for elementary students as well as teachers of mathematics.	Prerequisites: A grade of C or better in EPD250.	LEC 6.0 6.0 6.0
EPD253	Teaching Data Analysis, Probability and Discrete Mathematics Grades K-8	Focus on knowledge and skills for data analysis, probability and discrete mathematics concepts for grades K-8. Covers statistics, sampling, systemic listing and counting, and vertex edge graphs. Emphasis on State Academic Math and Common Core Standards. Includes practical application of teaching strategies for elementary students as well as teachers of mathematics.	Prerequisites: A grade of C or better in EPD250.	LEC 3.0 3.0 3.0
EPD254	Mathematics Classroom Assessment	A thorough examination of techniques and strategies for assessment in the mathematics classroom. Focus on formative and summative assessments.	Prerequisites: A grade of C or better in EPD250, EPD251, EPD252, and EPD253.	LEC 3.0 3.0 3.0
EPD255	Research-Based Practices, Pedagogy, and Instructional Leadership in Mathematics	Designed to provide strategies that may be used when assuming leadership roles in mathematics. Focus on examining research-based practices, pedagogy, and techniques of instructional leadership in mathematics. Examination of academic math standards and common core standards.	Prerequisites: A grade of C or better in EPD250, EPD251, EPD252, EPD253, and EPD254.	LEC 3.0 3.0 3.0
EPD256	Science, Technology, Engineering, and Mathematics (STEM) Education and Technology	Overview of the current status of Science, Technology, Engineering, and Mathematics (STEM) education and technology in the United States and The Standards for Technological Literacy developed by the International Technology Education Association (ITEA). Emphasis on the impact of technology and its interdependence with the other STEM fields in engineering, science, and mathematics. Topics include: technology systems, processes and concepts, energy and power, communication, biotechnology, manufacturing, construction, and transportation technologies. Strategies for practical application in the classroom along with lesson plan development also covered.	Prerequisites: A grade of C or better in EPD205.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EPD257	Science, Technology, Engineering, and Mathematics (STEM) Education and Science	Overview of the current status of Science, Technology, Engineering, and Mathematics (STEM) education and science in the United States and the National Science Education standards. Emphasis on techniques associated with the scientific inquiry-based approach to teaching and learning science, models-based science teaching, and STEM science student research. Topics include the scientific 'process' skills, project-based learning, the 5E instructional model, and the interdisciplinary connection of science to other STEM fields. Strategies for practical application in the classroom along with lesson plan development also covered.	Prerequisites: A grade of C or better in EPD205.	LEC 3.0 3.0 3.0
EPD258	Science, Technology, Engineering, and Mathematics (STEM) Education and Engineering	Overview of the current status of Science, Technology, Engineering, and Mathematics (STEM) education and engineering in the United States. Emphasis on the underlying principles of engineering education and project-based learning. Topics include a brief history of engineering and its disciplines, technical communication skills, problem solving and teamwork, ethics, and engineering systems with modeling and design elements. Strategies for practical application in the classroom along with lesson plan development also covered.	Prerequisites: A grade of C or better in EPD205.	LEC 3.0 3.0 3.0
EPD259	Science, Technology, Engineering, and Mathematics (STEM) Education and Mathematics	Overview of the current status of Science, Technology, Engineering, and Mathematics (STEM) education and mathematics in the United States and the Mathematics Common Core Standards. Emphasis on techniques associated with the inquiry-based approach to teaching and learning mathematics, project-based learning, and the interdisciplinary connection of mathematics to other STEM fields. Strategies for practical application in the classroom along with lesson plan development also covered.	Prerequisites: A grade of C or better in EPD205.	LEC 3.0 3.0 3.0
EPD270	Theoretical and Research Foundations of Language and Literacy	Focus on scientifically-based research as the foundation for classroom reading instruction. Emphasis on the five major areas of reading: phonemic awareness, phonics, fluency, vocabulary, and comprehension. Application of techniques for organizing and implementing explicit, systematic instruction in each of these areas, and methods of regularly assessing student's performance in reading and language arts.	Prerequisites: Must hold a valid Arizona Elementary, Secondary, Special Education, or Early Childhood teaching certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EPD271AA	Essential Elements of Elementary Reading and Writing Instruction K-8	Overview of the interrelated critical components of reading and writing instruction. Focus on developmental stages, benchmarks, and research-based instructional strategies to effectively teach literacy in the elementary grades.	Prerequisites: Must hold a valid Arizona Elementary, Secondary, Special Education, or Early Childhood teaching certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0
EPD271AB	Essential Elements of Adolescent Reading and Writing Instruction 6-12	Focus on the theories, methods, and models of the essential elements needed to develop and improve reading and writing skills of adolescents.	Prerequisites: Must hold a valid Arizona Elementary, Secondary, Special Education, or Early Childhood teaching certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0
EPD272AA	Elements of Elementary Content Area Reading and Writing K-8	Focus on practical and effective methods and strategies for the teaching of reading and writing in the elementary content area based on research-based principles and theories.	Prerequisites: Must hold a valid Arizona Elementary, Secondary, Special Education, or Early Childhood teaching certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0
EPD272AB	Elements of Adolescent Content Area Reading and Writing 6-12	Focus on practical and effective methods and strategies for the teaching of reading and writing in the adolescent content area based on research-based principles and theories.	Prerequisites: Must hold a valid Arizona Elementary, Secondary, Special Education, or Early Childhood teaching certificate, or permission of Department or Division.	LEC 3.0 3.0 3.0
EPD274	Reading Assessment	Focus on assessment practices and systems including examining assessments, data collection and analysis, diagnosing reading difficulties, developing student growth plans, and utilizing data to provide appropriate effective instruction to increase literacy success for all students.	Prerequisites: Must hold a valid Arizona Elementary, Secondary, Special Education, or Early Childhood teaching certificate, or permission of Department or Division.	LEC 6.0 6.0 6.0
EPD276	The Teacher Leader	Focus on K-12 teachers' skills as recognized teacher leaders. Includes reading, summarizing, and analyzing current educational research and theory about the teacher leader. Examination of the effect of informal and formal roles of the teacher leader in the schools. Also covers discovery of personal philosophies of leadership and plans for enacting leadership within participant's own school sites.	Prerequisites: Must hold a valid Arizona Elementary, Secondary, Special Education, or Early Childhood teaching certificate, or permission of Department or Division.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EPD277AA	Reading Field Experience K-5	Focus on the practical application of current philosophical theories, methods, and models of assessment and instruction for remediation of reading.	Prerequisites: A grade of C or better in EPD270, EPD271AA, EPD272AA, EPD274, EPD276, and must hold a valid Arizona Elementary, Secondary, Special Education, Early Childhood teaching certificate, or permission of Department or	LAB 3.0 3.0 0.0
EPD277AB	Reading Field Experience 6-12	Focus on the practical application of current philosophical theories, methods, and models of assessment and instruction for remediation of reading.	Prerequisites: A grade of C or better in EPD270, EPD271AB, EPD272AB, EPD274, EPD276, and must hold a valid Arizona Elementary, Secondary, Special Education teaching certificate, or permission of Department or Division.	LAB 3.0 3.0 0.0
EPD287	Science, Technology, Engineering, and Mathematics Education (STEM) Education Capstone Project	Organized and tailored around completed coursework in Science, Technology, Engineering, and Mathematics (STEM) education. Structured to provide a capstone experience by providing opportunities for individualized research and study guided by professional expertise. Allows for best opportunities of independent study and individualized learning to maximize teacher development and knowledge in the STEM fields. Final project required. Includes a development plan for immediate classroom use with appropriate grade level lesson plans and activities, teaching strategies, and techniques in a STEM field.	Prerequisites: A grade of C or better in EPD256, EPD257, EPD258, and EPD259.	LEC 3.0 3.0 3.0
EPS150	Introduction to Entrepreneurship	Overview of entrepreneurship. Includes the entrepreneurial process and the skills required to be successful, including starting, planning, financing, marketing, and managing a business.	Prerequisites: None.	LEC 3.0 3.0 3.0
EPS151	Project-Based Entrepreneurship: Community Solutions	Practical experience in applying core entrepreneurial skills and knowledge in a real-world context including innovation and creativity exercises. Application of knowledge and skills from earlier coursework to develop and present solutions to real-world situations currently faced by Entrepreneurs, Community-Based Organizations, Civic or Government Organizations, or College Departments.	Prerequisites: A grade of C or better in EPS150 or permission of Instructor.	LEC 3.0 3.0 3.0
EPS160	New Venture Creation	Process of starting a new venture including evaluating specific business opportunities identifying financing alternatives, and defining start-up issues.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EPS161	New Venture Law and Finance	Introduction to the principles of legalization and capitalization of a new business venture. Includes the processes required to organize, register, finance, launch and protect a business.	Prerequisites: None.	LEC 3.0 3.0 3.0
EPS162	Introduction to Social Entrepreneurship	Introduction to the history, theory, and emerging activities of social entrepreneurship. Includes management skills for social entrepreneurial organizations, scaling of social impact, and social performance measurement. Emphasis on social capital, microfinance, and evaluation of social entrepreneurial opportunities.	Prerequisites: None.	LEC 3.0 3.0 3.0
EPS165	New Venture Feasibility Analysis	Introduction to the industry's market and competitive structure. Includes the technical skills to develop a competitive strategy for entry into the business segment. Covers the market potential evaluation, niche identification, analysis of competition, and development of customer profiles. Also involves development of a marketing strategy and sales projections for new business ventures.	Prerequisites: None.	LEC 2.0 2.0 2.0
EPS180	Technology Business Planning	Fundamentals of identifying new technologies and innovations for profitable commercial feasibility. Determination of capabilities, resources, and interests of the entrepreneur. Evaluation and selection of technology opportunities. Creation of business concept and plan. Customer development and business models. Finances, venture capital and accounting. Marketing and sales. Legal formation and intellectual property. Operations and resource management. Growth, harvest and success.	Prerequisites: None.	LEC 3.0 3.0 3.0
EPS195	Business Start-Up and Planning	Development of a feasibility approach to strategic decision making concerning new venture start-up. Includes development of a business feasibility study and a preliminary business plan.	Prerequisites: None.	LEC 2.0 2.0 2.0
EQS105	Principles of Equine Science	Breeds, colors and markings; horse selection; basic conformation; structures of the hoof; footfall sequences; vision, managed health program; nutrition principles; management practices, Arizona issues and history and evolution of the horse.	Prerequisites: Permission of Instructor.	LEC 3.0 3.0 3.0
EQS120	Equine Anatomy and Physiology	Study of structure and function of the equine. Includes cell structure, anatomy and physiology of major systems with emphasis on skeletal, muscular, and digestive systems. Incorporates detailed discussion and identification of various anatomical parts.	Prerequisites: A grade of C or better in EQS105 or permission of Department or Division.	L+L 4.0 5.0 5.0
EQS130	Equine Business and Law	Practices and records used in the equine business. Includes record keeping systems and basic accounting principles; taxes; personnel management practices; computer programs for record keeping and operations management. Addresses legal aspects and laws unique to equine businesses.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EQS140	Equine Behavior	Equine behavior modification using the horse's natural behavior patterns. Emphasis on intelligence level, vision, emotions, hearing, and attention span of the horse.	Prerequisites: A grade of C or better in EQS105 or permission of Department or Division.	LEC 3.0 3.0 3.0
EQS162	Equine and Stable Management I	Focus on daily stable operations in the care and management of horses. Practical experience in basic horse husbandry, horsemanship, and stable management. Development of ground handling skills and use of lunge line and round penning techniques. Topics include feeding, watering, stable sanitation, grooming, bathing, vaccines, parasite control, safety, horse behavior, health, wounds and their treatments, and record keeping.	Prerequisites: A grade of C or better in EQS105 or permission of Department or Division.	L+L 3.0 4.0 4.0
EQS162VT	Equine Management for the Veterinary Technician	A hands-on introduction to daily stable operations in the care and management of horses. Practical experience with various assigned horses in basic horse husbandry, horsemanship, and stable management. Development of ground handling skills during various activities related to the care of horses. Effective use of lunge line and round penning techniques. Topics include feeding, watering, stable sanitation, grooming, bathing, lameness exams, vaccines, blood draws, parasite control, safety, horse behavior, health, wounds and their treatments, veterinary forms and recordkeeping.	Prerequisites: Veterinary Technician student currently enrolled in Mesa Community College (MCC) Veterinary Technology Program or student currently enrolled in Scottsdale Community College (SCC) Equine Science Program on track with Mesa Community College (MCC) Veterinary Technology Program upon	L+L 2.0 4.0 4.0
EQS195	Equine Therapies I	Designed to acquaint students with equine therapies for major muscle groups, the skeletal system and the hoof of the horse. The relationship that exists between the listed systems, equine locomotion and lameness problems will be discussed. Discussion, demonstration, and/or practical hands-on opportunities of equine therapy techniques will be focus of the class.	Prerequisites: A grade of C or better in EQS120 and EQS264, or permission of Department or Division.	L+L 3.0 6.0 6.0
EQS200	Principles of Equine Nutrition	Basic principles of equine nutrition and digestion. Proper selection, evaluation and utilization of feeds as well as the feeding and care of the equine in various stages of production, growth and performance. Emphasis on nutrient content and ration evaluation, general health and feed management. Identifies specific nutritional needs of each class of equine and formulates feeding programs based on these specific needs.	Prerequisites: A grade of C or better in EQS120 or permission of Department or Division.	LEC 3.0 3.0 3.0
EQS220	Equine Reproduction	Reproductive anatomy and physiology; care and management of the breeding stallion; breeding procedures and artificial insemination. Care of pregnant mare; foaling procedures.	Prerequisites: A grade of C or better in EQS120 or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EQS225	Equine Health and Disease Management	Aspects of equine health and disease prevention. Emphasis on preventive maintenance. Preventive medicine and necessary managerial practices needed to keep the equine athlete, broodmare, or family horse in good health.	Prerequisites: A grade of C or better in EQS120 or permission of Department or Division.	LEC 3.0 3.0 3.0
EQS250	Equine Evaluation	Fundamental relationship between good conformation and ability of the horse to remain sound and useful. Includes basic skeletal structure, common deviations in range of motion and evidence of lamenesses. Breed conformation standards and performance events for the more common breeds.	Prerequisites: A grade of C or better in EQS120 or permission of Department or Division.	L+L 3.0 4.0 4.0
EQS264	Equine and Stable Management II	Advanced practical experience in horse and stable management. Practical and supervisory experience in daily stable operations that increase skill and knowledge level in the care and management of horses. Topics include nutrition, diseases and their prevention, environmental issues parasite, pests and rodent control, safety, horse handling, wounds and their treatments, injury and treatments, inventory control, record keeping, and industry-standard operating procedures.	Prerequisites: A grade of C or better in EQS162, or permission of Department or Division.	L+L 3.0 4.0 4.0
EQS275	Equine Lameness	A continuing study of equine skeletal anatomy with emphasis on the normal function of front and hind legs and the hoof. Covers methods of evaluating various deviations that present as lameness in horses; how conformation, gait, and lameness relate to performance, physical and behavior issues; the protocol of equine gait assessments on actual horses; and how to diagram the footfalls of the horse. Topics include the body's response to injury, forms of therapy, types of conditioning, and rehabilitative techniques for returning horses to usefulness and performance.	Prerequisites: A grade of C or better in EQS250, or permission of Department or Division.	L+L 4.0 4.0 4.0
EQS280	Equine Science Internship	Equine industry work experience at faculty approved site. Focus of internship is immersion in an area of interest in or related to equine industry.	Prerequisites: A grade of C or better in EQS264 or permission of Department or Division.	LAB 3.0 15.0 0.0
EQS283	Special Event Internship	Hands-on career track experience before, during and after a major equine event. Emphasis on event coordination and management issues.	Prerequisites: A grade of C or better in EQS105 or permission of Department or Division.	LAB 1.0 2.0 0.0
EQS285	Equine Science Practicum	Equine industry work experience at faculty approved site.	Prerequisites: A grade of C or better in EQS264 or permission of Department or Division.	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EQS295	Equine Therapies II	Designed to train students with advanced equine therapy methods to relieve common conditions and pathologies for the musculoskeletal system. Identifying biomechanics, variations and abnormalities, muscle tension, joint stress, common injuries and lameness. Identifying and assessing the relationship between conformational flaws, range of motion and lameness as they align with the performance of specific disciplines. Discussion and demonstration with practical hands-on training of advanced equine therapy methods. Designed to train students to work in the field as an Equine Massage Practitioner with the ability to evaluate common conditions, and carry out a treatment plan, that will relieve muscle tension and pain, increasing circulation, flexibility and range of motion in the horse.	Prerequisites: A grade of B or better in EQS195 or permission of Department or Division.	L+L 3.0 6.0 6.0
EQS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ESL002	Basic English as a Second Language II	Listening, speaking, reading, and writing in English at a high beginning level. Focus on survival skills related to life in the United States. Continuing development of grammatical patterns.	Prerequisites: A grade of C or better in ESL001 or permission of Instructor.	LEC 6.0 6.0 6.0
ESL010	English as a Second Language I: Grammar	First level of English as a Second Language (ESL) grammar. Emphasis on present and past verbs, basic parts of speech, simple sentence structure, and conventions.	Prerequisites: Appropriate ESL placement test score.	LEC 3.0 3.0 3.0
ESL011	English as a Second Language I: Listening and Speaking	Emphasis on listening and speaking skills involving survival skills. Asking and answering questions related to work, shopping, and personal safety.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL002.	LEC 3.0 3.0 3.0
ESL012	ESL I-Writing with Oral Practice	Emphasis on basic conventions of writing in English. Includes introduction to the alphabet, capitalization, punctuation, and simple sentence structure.	Prerequisites: Appropriate ESL placement test score or permission of Instructor.	LEC 3.0 3.0 3.0
ESL013	Vocabulary for ESL I	Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities.	Prerequisites: Appropriate ESL placement test score or permission of Instructor.	L+L 1.0 1.0 1.0
ESL016	Reading English as a Second Language I	Designed for students who are learning English as a second language. Skills needed to become proficient readers in English. Sound symbol relationships of the English alphabet. Essential vocabulary for daily communication both in isolation and context. Development of reading comprehension skills.	Prerequisites: Appropriate ESL placement test score.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ESL020	English as a Second Language II: Grammar	Second level of English as a Second Language (ESL) grammar. Emphasis on present, past, and future verbs, modals, compound sentence structure, and identifying errors.	Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL010.	LEC 3.0 3.0 3.0
ESL021	English as a Second Language II: Listening and Speaking	Emphasis on listening and speaking skills involving social exchange. Asking and answering questions, using tag questions. Practice with question and answer patterns. Polite questions and responses.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL010 or ESL011 or ESL012 or RDG010.	LEC 3.0 3.0 3.0
ESL022	ESL II-Writing with Oral Practice	Emphasis on basic writing skills, accompanied by recitation of short writings. Sentence patterns and introduction of paragraph writing.	Prerequisites: Appropriate ESL course placement score or a grade of C or better in ESL012 or permission of Instructor.	LEC 3.0 3.0 3.0
ESL023	Vocabulary for ESL II	Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities.	Prerequisites: Appropriate ESL placement test score or permission of Instructor.	L+L 1.0 1.0 1.0
ESL026	Reading English as a Second Language II	Designed for students who are learning English as a second language. Continued development of vocabulary and reading comprehension skills.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL016 or permission of Instructor.	LEC 3.0 3.0 3.0
ESL030	English as a Second Language III: Grammar	Third level of English as a Second Language (ESL) grammar. Emphasis on simple, progressive, and perfect verbs, complex sentence structure, paragraph building, and error correction.	Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL020.	LEC 3.0 3.0 3.0
ESL031	English as a Second Language III: Listening and Speaking	Emphasis on listening and speaking skills related primarily to the academic environment. Asking questions, working in small groups, using college resources, informal oral presentation.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL020 or ESL021 or ESL022 or ESL026.	LEC 3.0 3.0 3.0
ESL032	ESL III-Writing with Oral Practice	Emphasis on complex sentence patterns in writing and speech. Introduction to the prewriting and writing process in a college setting.	Prerequisites: Appropriate ESL course placement score or a grade of C or better in ESL022 or permission of Instructor.	LEC 3.0 3.0 3.0
ESL033	Vocabulary for ESL III	Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities.	Prerequisites: Appropriate ESL placement test score or permission of Instructor.	L+L 1.0 1.0 1.0
ESL036	Reading English as a Second Language III	Designed for students who are learning English as a second language. Instruction for more advanced vocabulary and reading comprehension skills.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL026 or permission of Instructor.	LEC 3.0 3.0 3.0
ESL040	English as a Second Language IV: Grammar	Fourth level of English as a Second Language (ESL) grammar. Emphasis on verb forms, modals, participles, gerunds and infinitives, clauses, and paragraph writing.	Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL030.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ESL041	English as a Second Language IV: Listening and Speaking	Emphasis on academic skills. Listening to lectures, notetaking, peer interaction, accessing and using media resources, formal oral presentations.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL030 or ESL031 or ESL032 or ESL036.	LEC 3.0 3.0 3.0
ESL042	ESL IV-Writing with Oral Practice	Emphasis on paragraph writing and oral recitation of complex sentences and paragraphs. Introduction to the prewriting and writing process for short essays.	Prerequisites: Appropriate ESL course placement score or a grade of C or better in ESL032 or permission of Instructor.	LEC 3.0 3.0 3.0
ESL046	Reading English as a Second Language IV	Developed for students of English as a second language. Development of advanced vocabulary, comprehension skills, and culture awareness.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL036 or permission of Instructor.	LEC 3.0 3.0 3.0
ESL049	General Vocational English as a Second Language	General English speaking, listening, reading, and writing skills needed for use at work.	Prerequisites: Appropriate ESL placement test score, or a grade of "C" or better in ESL010, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL050	Review Grammar For ESL	Review of English as a Second Language (ESL) grammar. Emphasis on verb forms, parts of speech, and sentence structure.	Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL040, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL050AA	Basic Review Grammar for ESL	Review of the use of English verbs and word placement in sentences for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English.	Prerequisites: Appropriate ESL placement test score, or a grade of C or better in ESL010 or permission of Instructor.	L+L 1.0 1.0 1.0
ESL050AB	Intermediate Review Grammar for ESL	Review of auxiliary verbs and the comparative and superlative for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English.	Prerequisites: Appropriate ESL placement test score, or a grade of "C" or better in ESL020, or permission of Instructor.	L+L 1.0 1.0 1.0
ESL050AC	Advanced Review Grammar for ESL	Review of verbals and gerunds for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English.	Prerequisites: Appropriate ESL placement test score, or a grade of "C" or better in ESL030, or permission of Instructor.	L+L 1.0 1.0 1.0
ESL051	Pronunciation Improvement for ESL Speakers	Individualized pronunciation practice and drills for English as a second language (ESL) speakers.	Prerequisites: Appropriate ESL course placement score, or a grade of C or better in (ESL020 or ESL021 or ESL022 or ESL026) or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ESL053	Phonics	Designed for students who are learning English as a second language. Includes the study of the speech sounds used in English as represented by the written symbols of the alphabet; recognition of spelling patterns; resulting pronunciation; and spelling.	Prerequisites: Appropriate ESL course placement score, or a grade of C or better in (ESL020, or ESL021, or ESL022, or ESL026), or permission of Instructor.	LEC 3.0 3.0 3.0
ESL054	American Culture	Reading and writing about American culture including history, institutions and sports, and entertainment.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL040 or ESL046 or permission of Instructor.	LEC 3.0 3.0 3.0
ESL054AA	American Culture: History	Reading and writing about American history.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL040 or ESL046 or permission of Instructor.	L+L 1.0 1.0 1.0
ESL054AB	American Culture: Institutions and Customs	Reading and writing about American cultural institutions and customs.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL040 or ESL046 or permission of Instructor.	L+L 1.0 1.0 1.0
ESL054AC	American Culture: Sports and Entertainment	Reading and writing about American sports and entertainment.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL040 or ESL046 or permission of Instructor.	L+L 1.0 1.0 1.0
ESL061	Informal Conversational and Written English for Non-native Speakers	Practice speaking and writing English in informal settings. Emphasis on friendly conversational techniques and effective use of the computer and the Internet to communicate in a friendly, relaxed manner.	Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL020 or ESL021 or ESL022 or RDG020.	LEC 3.0 3.0 3.0
ESL071	Advanced Pronunciation and Oral Reading for ESL	Pronunciation practice and review, spelling of English sounds, and oral reading for stress and intonation patterns in English.	Prerequisites: A grade of C or better in ESL051 or permission of Instructor.	LEC 3.0 3.0 3.0
ESL077	Preparatory Academic Writing I for ESL	Emphasizes preparation for college level composition and related reading tasks with a focus on communicating through complete, grammatically correct writing, organized to communicate a central idea.	Prerequisites: Appropriate writing placement test score or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ESL087	Preparatory Academic Writing II for ESL	Emphasizes preparation for college-level composition and related reading tasks with a focus on critical writing, reading, and thinking skills and processes.	Prerequisites: Appropriate ESL course placement score or a grade of C or better in ESL042 or ESL202 or permission of ESL Coordinator.	LEC 3.0 3.0 3.0
ESL097	Preparatory Academic Writing III for ESL	Emphasizes preparation for first year composition with a focus on critical writing, reading, and thinking skills and processes at an increased level of academic complexity.	Prerequisites: A grade of C or better in ESL087 or permission of Department or Division Chair.	LEC 3.0 3.0 3.0
ESL101	English as a Second Language I	Beginning language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: Appropriate ESL placement score or permission of Instructor.	LEC 6.0 6.0 6.0
ESL101AA	English as a Second Language IA	Beginning language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: Appropriate ESL placement score or permission of Instructor.	LEC 3.0 3.0 3.0
ESL101AB	English as a Second Language IB	Beginning language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: Appropriate ESL placement score or permission of Instructor.	LEC 3.0 3.0 3.0
ESL102	English as a Second Language II	Low-intermediate language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL101, or (ESL101AA and ESL101AB), or appropriate placement score, or permission of Instructor.	LEC 6.0 6.0 6.0
ESL102AA	English as a Second Language IIA	Language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL101, or (ESL101AA and ESL101AB), or appropriate placement score, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL102AB	English as a Second Language IIB	Language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL101, or (ESL101AA and ESL101AB), or appropriate placement score, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL110	Beginning to Low-Intermediate English Listening and Speaking	Beginning to low-intermediate English language listening and speaking skills on familiar topics. Focus on the development of an appropriate degree of accuracy, fluency, and spontaneity to allow for interactions appropriate to this level.	Prerequisites: Appropriate ESL placement score or permission of Instructor.	LEC 3.0 3.0 3.0
ESL140	Beginning to Low-Intermediate English Grammar	Beginning to low-intermediate grammar for English language learners. Emphasis on use of language in familiar contexts.	Prerequisites: Appropriate ESL placement score or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ESL201	English as a Second Language III	High-intermediate language instruction for English language learners to build proficiency in academic and professional listening, speaking, reading, and writing. Focuses on integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL102, or (ESL102AA and ESL102AB), or appropriate ESL placement score, or permission of Instructor.	LEC 6.0 6.0 6.0
ESL201AA	English as a Second Language IIIA	High-intermediate language instruction for English language learners to build proficiency in academic and professional listening, speaking, reading, and writing. Focuses on integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL102, or (ESL102AA and ESL102AB), or appropriate ESL placement score, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL201AB	English as a Second Language IIIB	High-intermediate language instruction for English language learners to build proficiency in academic and professional listening, speaking, reading, and writing. Focuses on integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL102, or (ESL102AA and ESL102AB), or appropriate ESL placement score, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL202	English as a Second Language IV	Advanced language instruction for English language learners to further develop proficiency in academic and professional listening, speaking, reading, and writing with an introduction to information literacy. Emphasizes integrated reading and writing skills for use in research and presentation.	Prerequisites: A grade of C or better in ESL201, or (ESL201AA and ESL201AB), or appropriate ESL placement score, or permission of Instructor.	LEC 6.0 6.0 6.0
ESL202AA	English as a Second Language IVA	Advanced language instruction for English language learners to further develop proficiency in academic and professional listening, speaking, reading, and writing with an introduction to information literacy. Emphasizes integrated reading and writing skills for use in research and presentation.	Prerequisites: A grade of C or better in ESL201, or (ESL201AA and ESL201AB), or appropriate ESL placement score, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL202AB	English as a Second Language IVB	High-intermediate language instruction for English language learners to build proficiency in academic and professional listening, speaking, reading, and writing. Focuses on integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL201, or (ESL201AA and ESL201AB), or appropriate ESL placement score, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL210	High-Intermediate to Advanced English Listening and Speaking	High-Intermediate to advanced English language listening and speaking skills on academic, professional, and socio-cultural topics. Focus on the development of accuracy, fluency, and spontaneity to allow for constructive interactions.	Prerequisites: A grade of C or better in ESL102, or appropriate ESL placement score, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL240	High-Intermediate to Advanced English Grammar	High-intermediate to advanced grammar for English language learners. Emphasis on use of language for different situations.	Prerequisites: A grade of C or better in ESL102, or appropriate ESL placement score, or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ESL250	Vocational English	Overview of job-related vocabulary, language skills, and intercultural competence for English language learners to use in pursuing, attaining, and maintaining employment.	Prerequisites: A grade of C or better in ESL102, or (ESL102AA and ESL102AB), or appropriate ESL placement score, or permission of Instructor.	LEC 3.0 3.0 3.0
ESL298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
ESL298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
ESL298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ESP180	College and Career Readiness	This college and career readiness course is designed to prepare students for the rigors and expectations of post-secondary education. Students will learn essential professional skills required for success in the workplace, as well as learn vital academic skills required for success in the classroom. Students will be introduced to educational pathways for career exploration, learn how to write a professional resume, cover letter, conduct mock interviews, and gain a better understanding of post-secondary funding options.	Prerequisites: Admission into the Emergency Medical Technology program. Successful completion of RDG100 or higher or appropriate reading placement into CRE101.	40
EST102	Aesthetics Essentials	As students begin their training in Aesthetics, they will begin to develop and demonstrate proficiencies in effective client communication, interpersonal skills, and will learn how to deliver an effective skin care facial treatment and client pre and post consultations. Topics will also include sanitation, Arizona laws, client care, and facial care.	Prerequisites: Admission to the Aesthetics program, or Program Manager's approval.	200

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EST110	Advanced Aesthetics	Theory and application of advanced skin care modalities, resurfacing, and cosmetic chemistry. Hair removal techniques, makeup application, and an introduction to body treatments are also included. Application of theory and skills through treatment services provided to the public. Focus on communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB).	Prerequisites: EST102 with a grade of 80% or better, or Program Manager's approval.	200
EST115	Aesthetics Mastery	Focus on theories and performance of comprehensive professional aesthetics treatments for the public including communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB). Overview of business planning and employment in the field including marketing, job search strategies, professional development, and self promotion. BCB licensure examination preparation.	Prerequisites: EST110 with a grade of 80% or better, or Program Manager's approval.	200
ETH210	Multicultural Representation in the History of STEM	Aims to fill a gap by exploring the perspectives, experiences, and contributions of individuals from various cultural backgrounds in the study of science, technology, engineering, and mathematics (STEM). Analyzes and synthesizes how different cultures have shaped scientific knowledge, examining the impact of diversity on innovation and problem-solving, and addressing barriers faced by underrepresented groups in STEM fields.	Prerequisites: None.	LEC 3.0 3.0 3.0
ETL220	Online Teaching and Learning I	Application of and experience using an online teaching and learning environment from a student`s perspective to inform the design and support of an online course environment. Application and evaluation of online learning principles and tools for teaching and learning. Identification and development of online facilitation knowledge and skills. Introduction to the best practices in content building, course design and delivery.	Prerequisites: Permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ETL221	Online Teaching and Learning II	Experience with creating an online or hybrid duplicative course module structure in an online teaching and learning environment using evidence-based practices in course design. Develop learning objectives and module map based on curricular principles. Using instructional design techniques develop and align materials, activities, assignments and assessments to learning objectives. Discuss and develop active learning strategies for presenting content, facilitating discussions, creating assignments and administering assessments in the online environment.	Prerequisites: A grade of C or better in ETL220 or permission or Instructor.	LEC 3.0 3.0 3.0
EXS101	Introduction to Exercise Science	Introductory course that will provide the student with a general overview of the key theories and concepts, professions, and research areas associated with the field of Exercise Science. Educational pathways and career options will also be examined.	Prerequisites: None.	LEC 3.0 3.0 3.0
EXS123	Active for Life	Uses a variety of behavior change strategies to help fit physical activity into a busy schedule. Addresses the root causes of physical inactivity and focuses on the skills needed to establish a lifelong habit of physical activity	Prerequisites: None.	L+L 2.0 4.0 4.0
EXS125	Introduction to Exercise Physiology	Principles of exercise science applied to fitness instruction. Major factors related to the function of the human body will be examined/introduced with an emphasis on exercise physiology and functional anatomy.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.	LEC 3.0 3.0 3.0
EXS138	Starting a Fitness Business	Overview of starting a fitness business. Skills for becoming a successful and effective fitness business owner.	Prerequisites: None.	LEC 1.0 1.0 1.0
EXS146	Introduction to Exercise Testing	Introductory course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of common evidence-based assessments for apparently healthy populations.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor. Prior completion of or concurrent enrollment in EXS125 is recommended.	L+L 1.0 2.0 2.0
EXS215	Resistance Training and Recovery Techniques	Fundamental methods for safe and effective instruction of resistance, functional, and athletic conditioning exercises. Application of foundational principles of physiology and kinesiology. Overview of warm-up, cooldown, and recovery techniques.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.	L+L 3.0 4.0 4.0
EXS217	Cardiorespiratory and Flexibility Training	Fundamental methods for safe and effective instruction of cardiorespiratory and flexibility training exercises. Application of foundational principles of physiology and kinesiology.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EXS220	Personal Trainer Practicum	Integration of knowledge, skills and abilities developed in the prerequisite classes to develop best practices as a fitness professional. Assessment of clients' baseline fitness; development and implementation of a safe and appropriate exercise program. This capstone classroom experience is for students in the personal training certificate program prior to internship.	Prerequisites: A grade of C or better in EXS112, EXS125, EXS130, and FON105.	L+L 3.0 3.0 3.0
EXS246	Advanced Exercise Testing	Advanced course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of evidence-based assessments for apparently healthy and athletic populations. Pharmacology, special populations, and environmental conditions are also examined.	Prerequisites: A grade of C or better in EXS146 or permission of Instructor.	L+L 2.0 3.0 3.0
EXS250	Applied Kinesiology	Anatomical and physiological fundamentals and applications of human movement. Emphasizes the relationship between anatomical structure and function of the musculoskeletal system. Examines neuromuscular aspects of human motion and fundamental stabilization and movement of the extremities and spine. Analyzes kinesiological aspects of functional movement in the human body, and identifies normal and abnormal human movement patterns.	Prerequisites: A grade of C or better in (BIO160 or BIO201) and EXS125 and (EXS130 or EXS216).	LEC 4.0 4.0 4.0 LAB 0.0 2.0 2.0
EXS255	Program Design: Muscular Fitness and Performance	Advanced principles of muscular fitness, sports performance, and recovery techniques including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments also examined.	Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.	L+L 3.0 4.0 4.0
EXS257	Program Design: Cardiorespiratory Fitness	Advanced principles of cardiorespiratory fitness and weight management including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments are also examined.	Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.	L+L 3.0 4.0 4.0
EXS270	Exercise Science Internship	A capstone experience in a fitness or health related facility. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EXS270AA	Exercise Science Internship	A capstone experience in a fitness or health related facility. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or	LAB 1.0 1.0 0.0
EXS270AB	Exercise Science Internship	A capstone experience in a fitness or health related facility. 160 hours of designated work per credit.	Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or	LAB 2.0 2.0 0.0
EXS275	Sport Science Internship	A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or	L+L 3.0 3.0 0.0
EXS275AA	Sport Science Internship	A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or	L+L 1.0 1.0 0.0
EXS275AB	Sport Science Internship	A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or	L+L 2.0 2.0 0.0
EXS280	Special Topics in Exercise Science	Conceptual and research basis of current topics in exercise science.	Prerequisites: None.	LEC 2.0 2.0 2.0
EXS280AA	Special Topics in Exercise Science	Conceptual and research basis of current topics in exercise science.	Prerequisites: None.	LEC 0.5 0.5 0.5
EXS280AB	Special Topics in Exercise Science	Conceptual and research basis of current topics in exercise science.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
EXS282AA	Service-Learning Experience in Exercise Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
EXS282AC	Service-Learning Experience in Exercise Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
EXS290	Introduction to Evidence-Based Practice	Introduction to Evidence-Based Practice (EBP) as a framework for logical reasoning and informed decision-making in professional settings, particularly in the movement sciences. Students formulate professional questions, acquire and appraise relevant evidence, synthesize findings, and explore practical applications. Specific emphasis on the use of data to inform recommendations and consideration of audience, purpose and context to communicate effectively in both written and oral presentations.	Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor. EXS101 OR HES100 OR FON100 OR FON241 recommended.	LEC 3.0 3.0 3.0
EXS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
EXS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
EXS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
FAC101	HVAC for Residential Systems I	Introduction to major components and functions of residential heating, ventilation, and air conditioning (HVAC) systems, to include heat flow and basic electrical concepts.	Prerequisites: None.	L+L 4.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FAC115	Motors, Controls and Wiring Diagrams	Principles of three-phase motors. Wye and delta wiring. Calculation of motor current draw. Sequence of operation, wiring diagram and electrical components associated with industrial equipment. Procedures for evaluating electrical problems. Safety stressed.	Prerequisites: None.	LEC 3.0 3.0 3.0
FAC115LL	Motors, Controls and Wiring Diagrams Lab	Drawing wiring diagrams, wiring systems and checking electrical circuits. Troubleshooting electrical problems of three-phase motors and controls. Safety stressed.	Prerequisites: None.	LAB 1.0 3.0 3.0
FAC186	Electro-Mechanical Devices	Concepts, principles, maintenance, and troubleshooting of mechanical and electro-mechanical devices. Mechanical alignment of shafts, pillow blocks, gears, and couplers on mechanical equipment. Bearings removal and installation. Installation and troubleshooting of pump seals. Vernier calipers, micrometers, tachometers. Use and operation of air flow hoods for air balancing. Belt drive systems and set up and operation of variable frequency drives. Cooling tower water treatment controls and chemical additives.	Prerequisites: A grade of C or better in HVA130 or permission of Department.	L+L 3.0 5.0 5.0
FAC210	Facilities Air Conditioning Systems	Fundamental principles of air conditioning including all-air, all-water (hydronic) and air-water combination systems. Overview of the physical principles, including air distribution systems and heating and cooling load calculation. System components and application theory for boilers, chillers, pumps, fans, and cooling towers. Theory and application of central air conditioning systems, air cleaning and humidification devices, pressure boosting, heat storage, expansion and pressurization equipment. Properties of water, pressure distribution in hydronic systems, flow in pipes, pressure drop/head loss, pump applications and pressurization of open and closed hydronic systems. Fundamentals of low and high temperature water systems.	Prerequisites: A grade of C or better in HVA130 or permission of Department.	L+L 4.0 6.0 6.0
FAC220	Controls and Instrumentation	Control theory and terminology, pneumatics, electrical, and electronic control devices, flow control devices, elementary and advanced control systems. Electric and electronic control systems, programmable logic controls, and facilities management systems. Process and terms used in instrumentation, methods of heat transfer, calculations for heat temperature, and heat transfer. Measuring and calculating pressure, fluid flow, measuring humidity, control action, and instrumentation symbols.	Prerequisites: A grade of C or better in FAC/HVA210 or permission of Department. Xref: FAC210	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FAC231	Codes	Local codes, Federal Housing Administration and Urban Development standards. Acceptable building practices based on the Uniform Building Code, National Electric Code, Uniform Mechanical Code, and the Uniform Plumbing Code. Impact of American with Disabilities Act (ADA) on new and existing facilities.	Prerequisites: None.	L+L 3.0 5.0 5.0
FAC235	Commercial Air and Water Test and Balance	Specific types of duct distribution systems, fans, coil types and applications. Characteristics of Heating Ventilation and Air Conditioning (HVAC) piping systems. Specific types of pumps and applications. Air and water flow measuring and control devices. Collection and analysis of data specific to air handling systems. Principles of fluid dynamics, thermal loading factors, system design, and component performance. Test and balance plans for air and water systems.	Prerequisites: A grade of C or better in HVA210.	L+L 4.0 6.0 6.0
FAC240	Fire Protection Systems	Building occupant safety requirements including industry standards, regulations, building codes, fire codes and life safety codes. Fundamentals of fire protection system operation, inspection and maintenance. Principles of life safety systems including fire door and walls, smoke control systems, and exit components.	Prerequisites: A grade of C or better in OSH106AC.	LEC 3.0 3.0 3.0
FAC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
FAC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
FAC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FCS110	Influences on Young Children's Development	Overview of the influences on young children's development. Covers the principles, patterns, and assessment of child growth and development and a survey of the influences on development including routines, curriculum, environments, guidance, and child centered learning strategies to accommodate individual differences.	Prerequisites: None.	LEC 3.0 3.0 3.0
FCS120	Developmentally Appropriate Environments for Young Children	Overview of policies, practices and procedures, legal, and regulatory standards of the Arizona Department of Health and Childcare licensing. Covers program planning and evaluation methods to ensure environments are developmentally appropriate for children zero to age eight and for continuous improvement efforts. Emphasis on health and safety practices, human resource and risk management policies, and physical facility requirements.	Prerequisites: None.	LEC 3.0 3.0 3.0
FCS130	Supporting Young Children and Their Families	Explores communication, collaboration, advocacy, ethics, and leadership needed to support young children and their families. Covers strategies designed to nurture these concepts utilizing technology, professional development, quality indicators, and mutually beneficial connections.	Prerequisites: None.	LEC 3.0 3.0 3.0
FCS250	Portfolio Development and Professional Writing	Techniques of portfolio development to document prior learning gained through experience, training, and/or previous education. Includes study of learning styles and levels, analysis of personal and vocational experiences, synthesis of these with competencies for specific courses, and integration of the above with other material to create a portfolio to be introduced for evaluation for credit.	Prerequisites: A grade of C or better in 12 credit hours of CFS and/or FCS coursework or permission of Program Director.	LEC 3.0 3.0 3.0
FCS260	Family and Consumer Science Internship	Work experience in community-based, family-focused service and/or educational organizations. 80 hours of designated work per credit.	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 0.0
FLA240	Foreign Language Teaching Methods	Introduction to methods and techniques for second-language teaching. Principles and procedures for building language proficiency, including the assessment of practical experience through mini-teaching situations	Prerequisites: None.	LEC 3.0 3.0 3.0
FMP105	Studio Production	Multiple camera studio production for corporate, film, cable, and broadcast applications. Basic single and multi-camera production techniques, talent and camera blocking, set design, scriptwriting; shooting; lighting, audio and video recording; production crew team member experience, pre-production planning and budgeting and decision-making.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
FMP108	Video Production	Foundations of media production, including single camera shooting, audio recording, lighting, and editing.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FMP111	Screenwriting I	Provides a foundation in screenwriting for film and television, including introduction to story theory, character development, and screenplay format.	Prerequisites: None.	LEC 3.0 3.0 3.0
FMP111AA	Scripting for the Media	Provides an overview of screenwriting for short documentaries, podcasts, training films, commercials and public service announcements (PSAs).	Prerequisites: None.	LEC 3.0 3.0 3.0
FMP114	Audio Production	Focus on audio in the production of media projects. Emphasis on location-based, studio and sound room for corporate, cable and broadcast applications. Concepts covered include: microphones and audio recording equipment; audio production techniques using shotgun microphones or lavaliers while in the field; audio recording in the sound room, multi-track recording, and mixdown; audio editing using a non-linear computer program; music libraries; sound effects; and editing in audio post-production.	Prerequisites: A grade of C or better in FMP105 or FMP108.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
FMP115	Introduction to Editing for Media	Introduction to editing for media on a nonlinear editing system.	Prerequisites: None.	L+L 3.0 4.0 4.0
FMP117	Introduction to Cinematography	Introductory workshop focusing on basic film and video camera operation and lighting. Emphasis on the role of the cinematographer, basic camera operation and lens selection, introduction to cinematic storytelling to include interpreting the script, basic lighting techniques, exposure meters, film stocks, and planning for the editing style.	Prerequisites: A grade of C or better in FMP108, or FMT136, or permission of Instructor.	L+L 3.0 5.0 5.0
FMP125	Podcasting	Overview of evolution and key elements of podcasting. Focuses on development and creation of original podcasts, including pre-production, post-production, and peer review techniques.	Prerequisites: None.	L+L 3.0 4.0 4.0
FMP134	Pre-Production for Film and Media	Introduction to elements of pre-production for film, television, and commercial productions. Focuses on aesthetics, writing, budgeting, and selecting cast and crew. Features pre-production meetings to establish style, location, production design, shot list/storyboard, sound design, and shooting schedule. Pre-production of one narrative or collaborative commercial project required. Working as crew on one class shoot required.	Prerequisites: A grade of C or better in FMT100, or FMP108, or permission of Department or Division.	L+L 3.0 4.0 4.0
FMP151	TV and New Media Production	Introduction to multi-camera television production in studio and on location. Emphasizes teamwork and group production through a variety of program types.	Prerequisites: A grade of C or better in FMP105, or FMT100, or permission of Instructor.	L+L 3.0 4.0 4.0
FMP170	Introduction to Documentary Filmmaking	An in-depth study into the art, ethics and process of documentary filmmaking.	Prerequisites: None. ENG101 or ENG107 strongly recommended.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FMP202	Directing	Techniques for directing and blocking talent. Techniques for working with location and studio crews. Field and studio multi-camera production equipment usage. Advanced single and multi-camera shooting styles for corporate, cable and broadcast productions. Advanced post-production techniques for audio, video special effects for editing. The role of the director/producer in pre-production planning for the shoot. Advanced scriptwriting, script breakdowns, production forms, budgeting, and developing positive client relationships.	Prerequisites: A grade of C or better in FMP105.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
FMP204	Advanced Video Production	Advanced techniques of digital video production from concept to delivery with an emphasis on production in the field.	Prerequisites: A grade of C or better in FMP108.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
FMP206	Production Design	Intermediate workshop on Film Production Design focusing on areas such as script breakdowns for design elements, theories for symbolic and iconic visual content, color and lighting theory, miniatures and model construction and other aspects of production design.	Prerequisites: A grade of C or better in (FMP108 and [FMP134 or FMT134]), or FMT136, or permission of Instructor.	LEC 3.0 3.0 3.0
FMP208	Production Company Management	The coordination and supervision of the personnel involved in the production team; preparation of charge-back system; facility budgets in equipment, personnel, and operation; interaction with senior management.	Prerequisites: None.	LEC 3.0 3.0 3.0
FMP211	Screenwriting II	Advanced workshop in screenwriting for feature films and television.	Prerequisites: A grade of C or better in FMP111 or permission of Instructor.	L+L 3.0 4.0 4.0
FMP214AA	Video Production Internship	Video production work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Instructor.	L+L 1.0 1.0 0.0
FMP214AB	Video Production Internship	Video production work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Instructor.	L+L 2.0 2.0 0.0
FMP214AC	Video Production Internship	Video production work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Instructor.	L+L 3.0 3.0 0.0
FMP215	Digital Video Effects	Basics of video-production including the use of colors, textures, and shapes in the preparation of graphics for video production. Graphics design using the rules of good design and techniques for interaction with Producer/Directors. Story boarding and animation techniques, character generation. Video special effects creation and design, logo and photo import into video productions.	Prerequisites: A grade of C or better in FMP108 or FMP115 or permission of Instructor. FMP115 strongly recommended for students in AAS/3570 Film and Media Production. AVC/MMT184 strongly recommended. Xref: AVC184	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
FMP216	Screenwriting III	Advanced workshop in narrative screenwriting for film and television.	Prerequisites: A grade of C or better in FMP211.	L+L 3.0 7.0 7.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FMP260	Film and Media Producing and Financing	Guides the independent film/video producer through basic business aspects of production. Examines methods of setting up a production company, strategies for financing and distribution, and approaches to packaging a film/video project. Includes development of a prospectus on a specific film/video project.	Prerequisites: None.	L+L 3.0 4.0 4.0
FMP270	Documentaries for Social Change	Advanced study and practical application of nonfiction film production. Focuses on diverse voices and styles of short social documentaries, philosophical and ethical issues faced by the filmmaker, technical production skills, and considerations for marketing and distribution.	Prerequisites: A grade of C or better in (FMP108 and FMP115), or FMT136, or permission of Instructor.	L+L 4.0 6.0 6.0
FMP275	Advanced Portfolio Production	Advanced workshop in portfolio development for Producers, Directors, Cinematographers, Production Designers, Editors, and Screenwriters.	Prerequisites: Permission of Instructor.	L+L 4.0 7.0 7.0
FMP294AA	Special Topics in Motion Picture, Television, Documentary, and New Media Production	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	LEC 1.0 1.0 1.0
FMP294AB	Special Topics in Motion Picture, Television, Documentary, and New Media Production	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	LEC 2.0 2.0 2.0
FMP294AC	Special Topics in Motion Picture, Television, Documentary, and New Media Production	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	LEC 3.0 3.0 3.0
FMP298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FMP298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
FMP298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
FMT100	Introduction to Production	Introduction to the major production components of a multimedia project.	Prerequisites: None.	L+L 3.0 3.0 3.0
FMT107	Career Pathways in the Media	Emphasis on theories of broadcasting, how the media functions in our society, the business structure of the U.S. media environment, the cultural import and potential impact of the programming and films, and the growth of new communications technologies.	Prerequisites: None.	LEC 3.0 3.0 3.0
FMT117	Introduction to Cinematography	Introductory workshop focusing on basic film and video camera operation and lighting. Emphasis on the role of the cinematographer, basic camera operation and lens selection, introduction to cinematic storytelling to include interpreting the script, basic lighting techniques, exposure meters, film stocks, and planning for the editing style.	Prerequisites: A grade of C or better in FMP108, or FMT136, or permission of Instructor.	L+L 3.0 5.0 5.0
FMT118	Lighting for Film, TV, and Media	Introductory workshop focusing on lighting for video and film productions. Emphasis on the role of the cinematographer in developing a look and mood for a production and to tell a story through the use of light and color.	Prerequisites: None.	L+L 3.0 5.0 5.0
FMT120	Introduction to Sound Design for Film and Video	Basic principles of recording and mixing sound for film and video. Includes voice-over, automatic dialog replacement (ADR), foley, ambience, special effects and music. Emphasis on analog and digital recording techniques in the field as well as in a controlled environment.	Prerequisites: A grade of C or better in (FMT100 and FMT136) or permission of Instructor.	LEC 3.0 3.0 3.0
FMT121	Story Theory for Film, Television and Media	Introduction to story theory and structure as it applies to screenwriting for feature films, television programs (one-hour dramas and sitcoms) and related media.	Prerequisites: None.	LEC 3.0 3.0 3.0
FMT123	Feature Screenwriting: First Draft	Intermediate workshop focused in writing initial draft of a narrative feature film screenplay.	Prerequisites: A grade of C or better in FMT121.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FMT124	Television Screenwriting: Writers Room	Intermediate workshop focused on understanding the collaborative nature of series/television (TV) story development (i.e., writers room) and writing initial draft of a spec script for an existing TV one-hour drama or half-hour sitcom.	Prerequisites: A grade of C or better in FMT121.	L+L 3.0 6.0 6.0
FMT134	16mm Film Workshop: Pre-Production	Introduction to elements of pre-production for motion picture and television. Focuses on aesthetics, scriptwriting, budgeting, and selecting cast and crew. Features pre-production meetings to establish style, location, art design, shot sheet/storyboard, sound design, shooting schedule and film stock/video tapes. Pre-production of one film project and one video project required. Working as crew on one class shoot required.	Prerequisites: A grade of C or better in FMP105, or FMT100, or permission of Department or Division.	L+L 3.0 4.0 4.0
FMT135	16mm Film Workshop: Production	Introduction to elements of production for motion picture and television. Focuses on directing, crew responsibilities, camera operation, lenses, lighting and sound recording. Production of one film shoot and one video shoot required.	Prerequisites: A grade of C or better in FMT134, or permission of Department or Division.	L+L 3.0 3.0 3.0
FMT136	16mm Film Workshop: Post-Production	Introduction to elements of post-production for motion picture and television. Focuses on editing, titles, sound design and marketing strategies. Post-production and marketing of one film and one video required.	Prerequisites: A grade of C or better in FMT135 or permission of Department or Division.	L+L 3.0 3.0 3.0
FMT151	TV and New Media Production	Introduction to multi-camera television production in studio and on location. Emphasizes teamwork and group production through a variety of program types.	Prerequisites: A grade of C or better in FMP105, or FMT100, or permission of Instructor.	L+L 3.0 4.0 4.0
FMT206	Production Design	Intermediate workshop on Film Production Design focusing on areas such as script breakdowns for design elements, theories for symbolic and iconic visual content, color and lighting theory, miniatures and model construction and other aspects of production design.	Prerequisites: A grade of C or better in (FMP108 and [FMP134 or FMT134]), or FMT136, or permission of Instructor.	LEC 3.0 3.0 3.0
FMT217	Advanced Cinematography	Advanced workshop focusing on film and video camera operation and lighting. Emphasis on the role of the cinematographer and camera department, in-depth camera operation and lens selection, advanced cinematic storytelling to include interpreting the script, advanced lighting techniques, exposure meters, film stocks, and planning for the editing style. In-depth analysis of on-set communication and collaboration between the Cinematographer and other key crew members.	Prerequisites: A grade of C or better in FMP/FMT117 and (FMP204 or FMT241), or permission of Instructor. Xref: FMP117	L+L 3.0 5.0 5.0
FMT220	Advanced Sound Design for Film and Video	Explores techniques and advanced applications used in designing sound using original student footage on a non-linear editing system.	Prerequisites: A grade of C or better in FMT/MUC120 or permission of Instructor. Xref: FMT120	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FMT223	Feature Screenwriting: The Rewrite	Advanced workshop focused in rewriting narrative feature film screenplay, developing an individual writing voice and understanding the professional feature writing landscape.	Prerequisites: A grade of C or better in FMT123.	L+L 3.0 6.0 6.0
FMT224	Television Screenwriting: Original TV Pilot	Advanced workshop focused on creating an original television series concept, writing an original pilot script for the series, developing an individual writing voice and understanding the professional television writing landscape.	Prerequisites: A grade of C or better in FMT121.	L+L 3.0 6.0 6.0
FMT230	Motion Picture Directing	Theory and practice in directing the motion picture. Includes overview of the roles and responsibilities of the film director, examples of film directing, and practice sessions in analyzing a script, creating a scene, working with actors, conducting rehearsals, planning the camera movements and overseeing elements of a production.	Prerequisites: A grade of C or better in (FMT117, FMT/MUC120, FMT121 and FMT241) or permission of Instructor. Xref: FMT120	L+L 4.0 4.0 4.0
FMT241	AVID Media Composer Editing	Editing on a Media Composer non-linear editing system, including timeline editing, trimming, dialog and action editing, refining audio, basic multi-layer motion, and 3D effects; also covers basic and intermediate color correction, intermediate and three-dimension titling, working with tape and file based media, and media management.	Prerequisites: A grade of C or better in FMT136 or permission of Instructor.	L+L 4.0 6.0 6.0
FMT242	Professional Portfolio for Film, TV, and Media	Explores techniques and applications used in editing an individual project on an editing system.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.	L+L 2.0 4.0 3.4
FMT242AA	Professional Portfolio in Screenwriting	Explores techniques and applications used in screenwriting for an individual project.	Prerequisites: A grade of C or better in FMT223 or FMT224.	L+L 2.0 4.0 3.4
FMT243	Introduction to Video Compositing and Title Animation	Introduction to computer-based video compositing and title animation.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.	L+L 4.0 6.0 6.0
FMT244	Film Finishing	Introduction to editing system and applications.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.	L+L 4.0 6.0 6.0
FMT248	Advanced Film Production Techniques	Advanced workshop in the techniques of film production. Emphasizes real world simulation of production departments.	Prerequisites: A grade of C or better in (FMP/FMT117 and FMT/MUC120) or permission of Instructor. Xref: FMP117	L+L 4.0 6.0 6.0
FMT251	Advanced Studio Production	Advanced video production within a studio environment.	Prerequisites: A grade of C or better in (FMP/FMT117, FMT121, FMT151, and FMT241) or permission of Instructor. Xref: FMP117	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FMT260	Motion Picture Producing and Production Management	Introduction to functions specific to producing, production management, and business affairs for film, television, and new media productions.	Prerequisites: A grade of C or better in FMT136.	L+L 3.0 3.0 3.0
FMT263	Film Style, Theory and Analysis	Survey of the development of the art and theory of motion pictures, including study and criticism of stylistic elements. Tailored toward teaching different approaches and techniques of filmmaking as demonstrated in a variety of historic film movements. Designed for students focusing on filmmaking.	Prerequisites: A grade of C or better in FMT136 or permission of Instructor.	LEC 4.0 4.0 4.0
FMT270	Documentaries for Social Change	Advanced study and practical application of nonfiction film production. Focuses on diverse voices and styles of short social documentaries, philosophical and ethical issues faced by the filmmaker, technical production skills, and considerations for marketing and distribution.	Prerequisites: A grade of C or better in (FMP108 and FMP115), or FMT136, or permission of Instructor.	L+L 4.0 6.0 6.0
FMT280	The Art of Editing	A lab intensive post-production course. Emphasizes the art of editing movie and television media and the development of editing skills. Editing products, including demo reels, from instructor provided or student provided quality raw footage.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.	L+L 3.0 5.0 5.0
FMT283	Advanced Non-Linear Editing Techniques	Explores techniques and advanced applications used in creating and editing an advanced project on a non-linear editing system.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.	L+L 4.0 6.0 6.0
FMT283AA	Advanced Non-Linear Editing Techniques: AVID	Explores techniques and advanced applications used in creating and editing an advanced project on a non-linear editing system.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.	L+L 4.0 6.0 6.0
FMT294AA	Special Topics in Motion Picture, Television, Documentary, and New Media Production	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	LEC 1.0 1.0 1.0
FMT294AB	Special Topics in Motion Picture, Television, Documentary, and New Media Production	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	LEC 2.0 2.0 2.0
FMT294AC	Special Topics in Motion Picture, Television, Documentary, and New Media Production	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FMT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
FMT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
FMT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FMT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
FMT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
FMT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
FMT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FON100	Introductory Nutrition	Introduction to the science of food and human nutrition. Current sustainable dietary recommendations and applications for maximizing well-being and minimizing risk of chronic disease throughout the life cycle. An overview of the nutrients, emphasizing the importance of energy and fluid balance, and optimal functioning of the digestive system. Understanding factors that influence food intake in different cultures. Methods for evaluating credibility of nutrition claims, a focus on modern food safety and technology practices, and a worldview of nutrition are included. Emphasis is on personal dietary behavior change for a holistic life of wellness.	Prerequisites: None.	LEC 3.0 3.0 3.0
FON100LL	Introductory Nutrition Laboratory	Introduction to nutrition using anthropometric, biochemical, clinical, and dietary analysis. Includes the use of qualitative and quantitative methodology to determine nutritional status. Emphasis on self-evaluation of energy balance, weight regulation and personal health.	Prerequisites: None.	LAB 1.0 3.0 3.0
FON104	Certification in Food Service Safety and Sanitation	Preparation for and certification in a national food sanitation and safety program. Emphasis on food from purchasing, receiving, and storing to preparation, holding, and serving. Focuses on safe and sanitary food service facilities and equipment, employee habits and personal hygiene, and role of management in safety and sanitation. Includes time-temperature principles, foodborne illnesses, pest control, accident prevention, standards for cleaning and sanitizing, and regional regulations and standards.	Prerequisites: None.	LEC 1.0 1.0 1.0
FON125	Introduction to Professions in Food, Nutrition, and Dietetics	Overview and discussion of career opportunities in the fields of food, nutrition, and dietetics. Includes information about history, ethics, standards of practice, communication and counseling skills. Emphasis on how to become a Registered Dietitian Nutritionist or a Dietetic Technician Registered.	Prerequisites: None.	LEC 1.0 1.0 1.0
FON135	Sustainable Cooking	Basic cooking techniques for healthful and enjoyable eating. Emphasis on strategies for maximizing the use of whole, local, and nutrient-dense food while focusing on applying the dietary recommendations for optimal health to food choices. Opportunities to learn about sustainable food living and identifying resources that enable people to be more in control of their food supply. Covers issues of diversity as related to sustainable food systems and equitable access to food.	Prerequisites: None.	L+L 3.0 4.0 4.0
FON142AB	Science of Food	Exploration and application of scientific principles of food; experiences with ingredient functionality and application in cooking techniques.	Prerequisites: None.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FON143	Food and Culture	Understanding diet in the context of culture. Historical, religious, and sociocultural influences on the development of cuisine, meal patterns, eating customs, cooking methods, and nutritional status of various ethnic groups. Traditional and contemporary food habits. Health and social impact of changes in diet. Preparation of cultural foods.	Prerequisites: None.	L+L 3.0 3.0 3.0
FON161	Sustainable Food Production Systems	Overview of the global food system. Covers historical events impacting current food production model and the effects food systems have on the environment, health, and communities. Also covers conventional agriculture and food safety concerns. Emphasis on the movement towards sustainable food systems.	Prerequisites: None.	LEC 3.0 3.0 3.0
FON163	Sustainable Kitchen Practices	Overview of sustainable kitchen practices. Covers energy efficient appliances and equipment, as well as electricity and water conservation practices. Includes environmentally friendly kitchen products and methods for disposal of waste. Researching food sources, purchasing locally, and building relationships, and promoting local food equity are also covered. Emphasis in preparing organic, seasonal, and local foods, and developing sustainable menus.	Prerequisites: None.	L+L 3.0 5.0 5.0
FON165	Sustainable Food Entrepreneurship	Overview of the process for starting a small food business. Covers stages for introducing a variety of food products into the market, food safety, and sanitation requirements. Includes business and marketing strategies, processing, labeling, and distribution requirements for different food product types such as dairy, meat, poultry, and fish. Covers the importance of diversity, equity, and inclusion for the sustainable food entrepreneur. Also covers available resources for small food business support.	Prerequisites: None.	LEC 3.0 3.0 3.0
FON207	Introduction to Nutrition Services Management	Principles, knowledge, and techniques required for effective nutrition services management. Includes nutrition service issues in relation to health care trends, leadership skills, management theories and styles, food service manager responsibilities, and laws which pertain to nutrition service operations.	Prerequisites: A grade of C or better in (MAT055, MAT056, and MAT057), or (MAT090, or MAT091, or MAT092), or satisfactory mathematics placement.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FON210	Sports Nutrition and Supplements for Physical Activity	Principles of nutrition applied to fitness, exercise, and sports. Dietary guidelines as applied to body metabolism, fuel utilization, hydration, and other unique needs for exercise and sports. Includes dietary guidelines for weight or endurance training, glycogen loading, the pre-game meal, and glycogen recovery with an emphasis on maximizing fitness, performance, and safety. Discussion of supplements and their effects on performance enhancement.	Prerequisites: A grade of C or better in FON100 or FON241.	LEC 3.0 3.0 3.0
FON225	Research in Complementary and Alternative Nutrition Therapies	Introduction to basic research methods and statistics as applied to complementary and alternative nutrition therapies. Emphasis on the analysis and interpretation of health-related research.	Prerequisites: A grade of C or better in MAT092 or equivalent or satisfactory score on district placement exam.	LEC 3.0 3.0 3.0
FON230	Nutrition for Special Populations	Nutritional changes and appropriate management across the lifespan to maximize health and longevity. Addresses needs of those individuals with particular dietary restrictions, requirements or deficiencies. Includes special dietary needs of those diagnosed with common pathologies such as heart disease, diabetes.	Prerequisites: A grade of C or better in FON100, or FON241, or permission of Instructor.	LEC 3.0 3.0 3.0
FON241	Principles of Human Nutrition	Scientific principles of human nutrition. Emphasis on scientific literacy and the study of nutrients for disease prevention. Includes macronutrients and micronutrients, human nutrient metabolism and nutrition's role in the health of the human body throughout the life cycle. Addresses nutrition principles for prevention of nutrition-related health conditions.	Prerequisites: None.	LEC 3.0 3.0 3.0
FON241LL	Principles of Human Nutrition Laboratory	Self-evaluative laboratory experience to complement FON241, Principles of Human Nutrition using anthropometric, biochemical, clinical, and dietary analysis. Includes the use of qualitative and quantitative methodology to determine nutritional status and evaluate methodological applications.	Prerequisites: A grade of C or better in FON241 or Corequisites: FON241.	LAB 1.0 3.0 3.0
FON242	Introduction to Medical Nutrition Therapy	Introduction to fundamental principles of medical nutrition therapy. Introduces the study of nutritional therapy of disease and evidence-based practice in prevention and nutritional management of diseases. Nutrition care planning for chronic diseases is taught via a variety of methods including case studies. This course applies foundational skills in the application of the Nutrition Care Process (NCP) for diet therapy implementation and documentation. Includes strategies to promote dietary adherence and the development of educational programs for a diverse adult population.	Prerequisites: A grade of C or better in BIO160 and FON241.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FON244AA	Food Service Management Practicum	Classroom preparation and training, under the instruction and supervision of a registered dietitian. Application of principles, knowledge, and skills required in the delivery of nutrition services for food service management including food service operations, quantity food production, procurement, organizing and management principles, facility design and equipment, financial management, food safety and sanitation, menu planning, and marketing.	Prerequisites: A grade of C or better in (FON125, FON142AB, FON207, and FON242) and permission of Program Director. Corequisites: FON244AB.	LEC 2.0 2.0 2.0
FON244AB	Food Service Management Practicum Laboratory	Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge, and skills required in the delivery of nutrition services for food service management including food service operations, quantity food production, procurement, organizing and management principles, facility design and equipment, financial management, food safety and sanitation, menu planning, and marketing.	Prerequisites: A grade of C or better in (FON125, FON142AB, FON207, and FON242) and permission of Program Director. Corequisites: FON244AA.	LAB 2.5 10.0 0.0
FON245AA	Medical Nutrition Therapy Practicum	Classroom preparation and training, under the instruction and supervision of a registered dietitian. Understanding of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Comprehension of nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention.	Prerequisites: A grade of C or better in (FON125, FON242, and HCC145AA) and (MAT092, or equivalent, or satisfactory score on district placement exam) and permission of Program Director. Corequisites: FON245AB.	LEC 2.0 2.0 2.0
FON245AB	Medical Nutrition Therapy Practicum Laboratory	Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Perform nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention.	Prerequisites: A grade of C or better in (FON125, FON242, and HCC145AA) and (MAT092, or equivalent, or satisfactory score on district placement exam) and permission of Program Director. Corequisites: FON245AA.	LAB 2.5 10.0 0.0
FON246AA	Community Nutrition Practicum	Classroom preparation and training, under the instruction of a registered dietitian. Understanding of principles, knowledge and skills required in the delivery of nutrition services in community-based agencies, outpatient health care settings, and social service agencies. Includes knowledge and understanding of nutrition intervention and wellness promotion for individuals and groups across the lifespan, i.e. infants through geriatrics with a diversity of cultural, religious and social backgrounds.	Prerequisites: A grade of C or better in (FON125 and FON242) and permission of Program Director. Corequisites: FON246AB.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FON246AB	Community Nutrition Practicum Laboratory	Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge and skills required in the delivery of nutrition services in community-based agencies, outpatient health care settings, and social service agencies. Includes nutrition intervention and wellness promotion for individuals and groups across the lifespan, i.e. infants through geriatrics with a diversity of cultural, religious and social backgrounds.	Prerequisites: A grade of C or better in (FON125 and FON242) and permission of Program Director. Corequisites: FON246AA.	LAB 2.0 10.0 0.0
FON247	Weight Management Science	The comprehensive study of obesity as a disease of modern society due to multiple determinants. Use of evidence-based data and methods to assess and manage weight in various settings. Use of client-centered counseling strategies, including behavior change theories. Focus on discovering successful healthful long-term weight management strategies.	Prerequisites: A grade of C or better in FON100 or FON241 or permission of Instructor.	LEC 3.0 3.0 3.0
FON250	Nutrition and Dietetic Exam Review	This course is intended to prepare dietetic students for the national exam for the nutrition and dietetic technician, registered (NDTR) credential. An emphasis in food service and medical nutrition therapy will be reviewed to prepare students for national exam content. In addition, nutrition science principles and community nutrition will be covered. The current NDTR study guide will be used to guide exam preparation.	Prerequisites: Permission of Program Director.	LEC 1.0 1.0 1.0
FON270AA	Applied Nutrition Experience for Personal Trainers and Coaches	Applied nutrition course customized around the interests and needs of the individual student enrolled in the Nutrition Certificate for Personal Trainers and Coaches. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of six (6) credits of FON courses with a grade of C or better, and permission of Department/Division Chair and/or the Program Director.	L+L 1.0 1.8 0.0
FON298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FON298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
FOR105	Forensic Science: Physical Evidence	Scientific analysis and examination of physical evidence for forensic purposes. Covers fingerprints, shoe prints, tool marks, glass, soil and mineral evidence, firearms identification, paint chips, and arson and explosive evidence. Includes the history of forensic science, functions of the crime lab and criminalist career specialties	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
FOR106	Forensic Science: Biological Evidence	Scientific analysis and examination of biological evidence for forensic purposes. Covers blood, bloodstains, other biological fluids and stains, hair, DNA, toxicological evidence, controlled substances and alcohol. Includes the history of forensic science, functions of the crime lab, and criminalist career specialties	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
FOR286	Principles of Forensic Science	This course examines the diverse disciplines and techniques used by forensic scientists in the major sections recognized by the American Academy of Forensic Sciences (AAFS), which include anthropology, criminalistics, digital and multimedia services, general, engineering and applied sciences, jurisprudence, odontology, pathology/biology, psychiatry, and behavioral science, questioned documents and toxicology. Students will participate in laboratory activities that demonstrate best practices and applications in these disciplines, including ethical practices and experiences in case reporting and providing expert testimony.	Prerequisites: A grade of C or better in (BIO181 or BIO181XT) and [(CHM150 or CHM151) and CHM151LL] or CHM150AA or CHM151AA or permission of Instructor or Department or Division Chair.	LEC 4.0 4.0 4.0 LAB 0.0 3.0 3.0
FRE101	Elementary French I	Basic grammar, pronunciation and vocabulary of the French language. Includes the study of French culture, practice of listening, speaking, reading and writing skills.	Prerequisites: None.	LEC 4.0 4.0 4.0
FRE101AA	Elementary French I	Basic grammar, pronunciation and vocabulary of the French language. Includes the study of French culture, practice of listening, speaking, reading and writing skills.	Prerequisites: None.	L+L 4.0 5.0 5.0
FRE102	Elementary French II	Continued study of grammar and vocabulary of the French language along with the study of French culture. Emphasis on speaking, listening, reading and writing skills.	Prerequisites: A grade of C or better in FRE101 or FRE101AA or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FRE102AA	Elementary French II	Continued study of grammar and vocabulary of the French language along with the study of French culture. Emphasis on speaking, listening, reading and writing skills.	Prerequisites: A grade of C or better in FRE101 or FRE101AA or permission of Department or Division. Completion of prerequisites within the last three years is required.	L+L 4.0 5.0 5.0
FRE115	Beginning French Conversation I	Conversational French. Basic sentence structure, pronunciation and vocabulary necessary to develop speaking ability in French. Designed for students seeking speaking and listening abilities with little emphasis on grammar	Prerequisites: None.	LEC 3.0 3.0 3.0
FRE116	Beginning French Conversation II	Continued development of speaking and listening skills for effective communication in French.	Prerequisites: A grade of C or better in FRE115 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
FRE201	Intermediate French I	Review of essential grammar of the French language and study of French culture. Continued practice and development of reading, writing, and speaking skills.	Prerequisites: A grade of C or better in (FRE102 or FRE102AA) or two years of high school French with an average of C or better or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
FRE202	Intermediate French II	Review of grammar, continued development of French language skills, and continued study of the French culture.	Prerequisites: A grade of C or better in FRE201 or three years of high school French with an average of C or better. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
FRE225	Intermediate French Conversation I	Continued development of skills in conversational French for business or travel.	Prerequisites: A grade of C or better in FRE116 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
FRE226	Intermediate French Conversation II	Development of intermediate level skills in conversational French for business and travel.	Prerequisites: A grade of C or better in FRE225 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FRE265	Advanced French I	In-depth exploration of a selected theme related to French culture. Involves reading selections from French literature, writing reports, and discussions in French. Emphasis on enhancing reading, writing and speaking skills.	Prerequisites: A grade of C or better in FRE202 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
FRE266	Advanced French II	Continuation of FRE265, Reading selections from French literature, written reports, and discussions in French designed to further develop reading, writing and speaking skills.	Prerequisites: A grade of C or better in FRE265 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
FSC101	Introduction to Fire Service Selection and Entry	Overview of the application and selection processes used by various fire departments and fire service organizations. Focus on the skills and abilities required for entry-level positions in the fire department, including oral and written communication skills, mathematical and mechanical skills, problem-solving skills, and physical agility and stamina. Elements of fire service culture and their effects on personal growth and interpersonal relationships. Major components of written application processes, requirements, preparation of resumes and their effect on employment prospects. Preparation for the interview to include communications skills, mental preparation techniques, behaviors, and the importance of the interview in the pre-employment process.	Prerequisites: None.	L+L 4.0 5.0 5.0
FSC102	Fire Department Operations	Introductory fire science course primarily designed for the fire department recruit. Includes firefighting skills, equipment, and administrative policies, fire department operations, personnel policies, and International Fire Service Accreditation Congress Practical Skills Testing. Satisfies minimum standards for certification testing set forth by the current Arizona State Training and Certifying Authority.	Prerequisites: A grade of C or better in FSC105, FSC130, and permission of Instructor. Corequisites: (FSC134 or FSC234) and FSC174.	L+L 11.0 19.6 19.6
FSC103	Advanced Firefighter	Comprehensive review of Fire Department Standard Operating Procedures, Evaluation of Fitness and Conditioning as they relate to fire ground skills. Emphasis on physical development and hands on activities providing participants with skills necessary to safely operate on the fire ground and at emergency scenes.	Prerequisites: Successful completion of the Fire Operations Academy Certified Firefighter I and II through Arizona Fire Marshal and current PASS on Candidate Physical Ability Test (CPAT).	L+L 7.0 10.6 10.6

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC105	Hazardous Materials Awareness and Operations	Basic methods of recognition and identification based upon the chemical and physical properties of hazardous materials; basic safety procedures when utilizing specific types of protective clothing and equipment; basic tactical information relating to scene management. Satisfies minimum standards for certification testing set forth by the current ProBoard and/or Arizona State Training and Certifying Authority.	Prerequisites: None.	L+L 3.0 3.0 3.0
FSC106	Introduction to Fire Protection	History and evaluation of fire department organization. Role of the fire service in the community. Responsibilities of the fire administrator including organization, departmental functions, interdepartmental relationships, management of buildings and equipment; techniques of fire-fighting. Also includes emergency medical services and fire prevention	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC108	Fundamentals of Fire Prevention	Fundamentals of fire prevention. Includes techniques, procedures, regulations, and enforcement. Also includes discussion of hazards in ordinary and special occupancies. Field trips and lectures from industry also included	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC109	Emergency Response Team for Industry	Common industrial hazards related to chemicals, gases, fire, energy sources, and spills. Emergency response procedures to control and conclude hazardous incidents	Prerequisites: None.	LEC 3.0 3.0 3.0 LAB 0.0 2.6 2.6
FSC110	Wildland Firefighter	Basic-level course for individuals with little or no experience in the wildland environment. Preparation for performing as a beginning-level wildland firefighter with an organized fire department engine or hand crew. Satisfies minimum standards for certification testing set forth by the National Wildland Coordinating Group (NWCG).	Prerequisites: None.	L+L 3.0 3.0 3.0
FSC111	Emergency Vehicle Driver Operator	Emergency vehicle operators training including the problems facing operators; the personal qualities of emergency vehicle operator candidates; legal responsibilities of operators; and physical forces involved in driving an emergency vehicle. Includes hands-on training in an emergency response vehicle	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC112PS	Public Safety Emergency Telecommunications	In-depth coverage of established techniques and procedures for handling routine and emergency public safety telephone calls and radio (contact) communications. Nationally recognized procedures for processing 9-1-1 emergency calls, field unit safety, injury scenarios, and demonstrating positive public relations. Fundamental skills and responsibilities for fire, emergency medical, and law enforcement complaint report processing as well as federal laws regarding proper processing, retention, and dissemination of security information. Definitions of terms unique to fire suppression, emergency medical, and law enforcement situations common within the public safety sector.	Prerequisites: None.	L+L 3.0 3.0 3.0
FSC113	Introduction to Fire Suppression	Introduction to the characteristics and behavior of fire, fire hazard properties of ordinary materials, extinguishing agents, firefighter safety, fire suppression organization and equipment, and basic fire fighting tactics.	Prerequisites: None.	LEC 3.0 3.0 3.0 LAB 0.0 1.0 1.0
FSC114	Hazardous Materials First on the Scene/Awareness Level	Designed to assist first responders involved in potential hazardous materials incident. Provides an overview of capabilities and limitations of first responders in the recognition and detection of hazardous materials, safety considerations, and pre-emergency planning	Prerequisites: None.	LEC 0.5 0.5 0.5
FSC115	Community Emergency Response Team (CERT): Level I	Basic skills, including instruction in teamwork and disaster simulations, needed to help oneself, family, and neighbors in the event of a community disaster in accordance with the Federal Emergency Management Agency (FEMA) guidelines.	Prerequisites: None.	LEC 1.5 1.5 1.5
FSC117	Fire Apparatus	Principles of care, maintenance and operation of fire apparatus and pumps. Includes pump construction and accessories, pumping techniques, power development, and transmission. Driving, troubleshooting and producing effective fire streams	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC118	Fire Hydraulics	Review of basic mathematics. Hydraulic laws and formulas as applied to the fire service. Application of formulas and mental calculations to hydraulic problems, water supply variables, and discharge requirements for pumpers	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC119	Introduction Fire Service Ethics	Ethical issues, standards, and philosophical consideration of moral problems encountered in fire service. Ethical responsibility of fire service personnel and those they serve	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC125	Hazardous Materials Emergency Scene Management	Emphasis on detection and identification of dangers associated with the release of hazardous materials. Step-by-step guide to the management of response resources for the purpose of mitigating a hazardous materials incident	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC126	Refresher Training for Hazardous Materials First Responder Operational	Review of fundamentals of containment, prevention, and knowledge of basic hazard and risk assessment techniques. Topics include protective clothing, containing and controlling specific hazards, vapor suppression, and cooling of tanks. Meets the requirements of Department of Labor Part III; Occupational Safety and Health Act 29; Code of Federal Regulations Part 1910; Hazardous Wast Operational and Emergency Response; Final Rule March 6, 1989 governing Refresher Training.	Prerequisites: A grade of C or better in FSC105.	L+L 1.0 1.0 1.0
FSC127	Codes/Regulations and Contingency Planning for Hazardous Materials Response	Multifaceted approach to the management of a hazardous materials accident at private public sector facility. Includes planning requirements and considerations, fixed-site pre-plan preparation. Overview of federal statutes and national codes used to establish safety, health, and environmental standards for chemical utilization. Highlights Occupational Safety and Health Administration, Department of Transportation, Environmental Protection Agency, Uniform Building Code, Uniform Fire Code, and National Fire Protection Association regulations. Application of laws, regulations, and rules by agencies enforcing legal mandates in chemical compliance, both public and private	Prerequisites: None.	LEC 1.0 1.0 1.0
FSC128	Hazardous Materials Air Monitoring/Breathing Protection	Fundamentals of emergency air monitoring and respiratory protection used in response to hazardous materials releases. Theory and practical application. Includes use of monitoring instruments in conjunction with respiratory protection systems for tactical and risk analysis work; respiratory protection devices and their physiological effects; all state and federal laws pertaining to respiratory protection	Prerequisites: None.	LEC 1.0 1.0 1.0
FSC129	Physical Properties of Hazardous Materials	Practical application of physical properties of hazardous materials for risk and hazard analysis. Working knowledge of chemicals, exposure, and physical property nomenclature for the selection of proper decontamination methods and proper personal protective clothing and equipment	Prerequisites: None.	LEC 1.0 1.0 1.0
FSC130	Fitness for Firefighters/CPAT	Skills and abilities required for entry level position in the fire service including physical ability, and stamina. Opportunity to take the accredited International Association of Fire Fighters (IAFF) Candidate Physical Ability Test (CPAT) at the end of the course at a IAFF licensed agency.	Prerequisites: None.	L+L 1.0 1.5 1.5
FSC131	Introduction to Urban Technical Rescue	Practical application of safe rescue practices for urban technical rescue. Includes ropes and rope systems, trench rescue, confined-space rescue, swiftwater rescue, and rescue from collapsed structures	Prerequisites: None.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC132	Personal Protective Equipment for Emergency Spill Control at Hazardous Materials Incidents	Fundamentals of personal protective equipment and practical application of theoretical information. Includes the design, components, interface, use, application, and materials of chemical protective clothing; thermal limitations of chemical protective clothing in flammable and toxic atmospheres; physiological and psychological effects of wearing these types of garments. Fundamentals of basic emergency spill control, identification, response teams, safety, and decontamination	Prerequisites: None.	LEC 1.0 1.0 1.0
FSC134	Fitness and Conditioning for Firefighters	Overview of all aspects of fitness for current and prospective firefighters. Includes physical and mental aspects of performance for optimal achievement on fire department agility tests and fire fighting tasks; individual conditioning strategies, nutritional guidelines, protective clothing concepts, and basic exercise principles. Pre-employment, evaluation, and lifelong fitness and conditioning.	Prerequisites: None.	L+L 3.0 4.6 4.6
FSC136	Women Firefighter Preparation	Designed for women firefighter candidates. Includes firefighting techniques and procedure, physical/mental conditioning, health concerns, occupational opportunities, and mentorship programs.	Prerequisites: A grade of C or better in FSC134 or Corequisites: FSC134 or permission of Instructor.	L+L 2.0 2.87 2.87
FSC139	Emergency Response to Terrorism	Fundamentals of emergency response to suspected terrorist events. Historical perspective of terrorist activities and methods by which responders can identify and protect themselves and the public from these threats. Coordination of responding agencies.	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC146	Disaster Recovery Operations	Specialized knowledge and skills for the emergency manager in developing programs and activities associated with disaster recovery assistance and mitigation actions that reduce losses from future disasters.	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC147	Emergency Preparedness	Emergency preparedness related to natural and manmade disasters. Planning concepts and the planning process; awareness and education programs and strategies for the general community as well as business and industries.	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC148	Fundamentals of Emergency Management	Emergency management systems including career opportunities, function, tasks and responsibilities of the emergency management program manager, role of the emergency manager in mitigation, preparedness, response, and recovery. Past civil defense and current emergency management systems since evolution from World War II.	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC149	Hazard Mitigation	Knowledge and skills required to develop programs to reduce losses from future disasters, emergencies, and other extreme events caused by natural and man-made hazards.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC152	Engine Company Officer	Overview of all aspects of engine company operations including the activities and responsibilities performed by the captain as well as mechanisms for developing a personal supervisory style. Designed for the aspiring company officer or anyone having the opportunity for the role of a company officer	Prerequisites: None.	LEC 1.0 1.0 1.0
FSC153	Minimum Company Standards for Fire Fighters	Comprehensive review of Standard Operating Procedures as they relate to fire ground skills. Emphasis placed on hands on activities allowing participants to practice necessary skills to safely operate on the fire ground and vehicle accident scenes.	Prerequisites: Successful completion of the Fire Operations Academy and current Candidate Physical	L+L 2.0 4.0 4.0
FSC158	Advanced Education for Probationary Firefighter	Preparation to advance skill level of the probationary firefighter. Includes preparation for ambulance operations, driver's training and safety issues, fire ground operations, and fire department organizational structure. Hands-on application of skills and concepts	Prerequisites: Permission of Instructor.	LEC 3.0 3.0 3.0
FSC159	Ladder Operations	Comprehensive training for members of fire department ladder companies. Emphasis on safety, progressive skills, and equipment review.	Prerequisites: Permission of Instructor.	L+L 1.0 1.0 1.0
FSC160	Advanced Driver Training Instructor Certification	Comprehensive instructor certification course based on information and resources from the National Fire Protection Association Standard for Driver Apparatus; the Arizona Department of Transportation Standards, Commercial Drivers License Requirements; General Motors Advanced Drivers Training; National Highway Traffic and Safety Administration; and the Occupational Health and Safety Administration. Covers compensation for inertia, defensive driving skills, and collision avoidance techniques. Differences between driving passenger vehicles top-heavy or high-profile vehicles. Focuses on competency of instructor in ability to teach principles and demonstrate skills necessary to operate fire department apparatus	Prerequisites: Permission of Instructor.	LEC 1.2 1.2 1.2
FSC161	Advanced Driver Training Instructor Re-Certification	Comprehensive recertification for all previously certified Advanced Driver Training (ADT) instructors. Focuses on safety, review of driving skills, comprehension of course dialogue, and instructor presentation skills based on standards established by National Fire Protection Association (1002-Standard for Driver Apparatus); Arizona Department of Transportation, Commercial Drivers License (CDL); General Motors Advanced Driver Training; National Highway Traffic and Safety Administration; and the Occupational Health and Safety Administration	Prerequisites: Permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC162	Utility Truck Operation	Comprehensive review of skills, responsibilities, apparatus familiarization, mechanical and technical aptitudes, and fire department standard operating procedures specific to safe and effective operation of utility trucks. Focuses on practical application of classroom instruction to insure competency of engineers in performing all utility truck/scene support operator responsibilities	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0
FSC163	Respiratory Protection Refresher	Use of respiratory protection, including regulations, hazard recognition, limitations of respirators, maintenance requirements, and importance of annual fit testing. Complies with 29CFR (Code of Federal Regulations) 1910.134 Occupational Safety and Health Administration (OSHA) Regulation for Respiratory Protection refresher training	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0
FSC167	Fire Captain Academy	Roles and responsibilities of a company officer within the fire department system with emphasis on practical application and preparation for the role of company officer in a move-up or out-of-class status. Emphasis on customer service, safety, crew development, discipline, community involvement, and specific engine and ladder company officer functions. Includes fire and emergency medical simulations.	Prerequisites: Permission of Instructor.	LEC 6.0 3.0 3.0 LAB 0.0 3.0 3.0
FSC174	Functions of Command	Basic functions of command in the fire service. Includes brief history and future trends of incident command. Analysis of recent local, national, and international tactical and strategic concerns. Utilizes a Command Training Center to provide real-time, computer- and prop-enhanced simulations.	Prerequisites: Permission of Instructor. Corequisites: FSC102.	L+L 2.0 3.0 3.0
FSC175	Fireground Survival	On-deck procedures, focusing on implementation, tasks and responsibilities, logistics, and their impact on tactics, strategy, and scene safety. Assignment of Rapid Intervention Company (RIC) responsibilities to the on-deck company. Fireground survival skills	Prerequisites: Permission of Instructor.	L+L 0.5 0.7 0.7
FSC200	Fire Service Instructor-Level I	Designed to prepare students for Level I Training Officer as defined by the National Fire Protection Association (NFPA) 1041 standards. Includes methods of delivering instructional materials, preparation of lesson plans, instructional aids and evaluation instruments; techniques and strategies for organizing the learning environment and management of recordkeeping are also included.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC201	Fire Service Instructor-Level II	Designed to prepare students for Level II Training Officer as defined by the National Fire Protection Association (NFPA) 1041 standards. Continued knowledge and skills in methods of delivering instructional materials, preparation of lesson plans, instructional aids and evaluation instruments; techniques and strategies for organizing the learning environment and management of recordkeeping are also included.	Prerequisites: A grade of C or better in FSC200 or permission of Program Director or Instructor.	LEC 3.0 3.0 3.0
FSC202	Supervisory Training for Firefighters	Administrative methods applied to the fire service, departmental organization, and personnel management. Includes fire alarm signaling systems, fire service planning, and relationships with other city departments	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC204	Firefighting Tactics and Strategy	Methods of coordinating personnel, equipment, and apparatus on the fireground. Practical methods of controlling and extinguishing structural and other types of fires. Includes simulation exercises.	Prerequisites: A grade of C or better in FSC113 or permission of Instructor or current employment as a firefighter and/or Firefighter I and II Certification and/or related experience as determined by the	LEC 3.0 3.0 3.0
FSC205	Command Strategies for Major Emergencies	Effective methods of managing major emergency incidents including multiple alarm structural fires, high rise fires, major brush fires, complex hazardous materials incidents and multi-casualty medical incidents. Includes incidents that require the commitment of resources based on a transitional situation and/or managing the effective interaction between numerous agencies to achieve control	Prerequisites: A grade of C or better in FSC204.	LEC 3.0 3.0 3.0
FSC208	Firefighter Safety and Building Construction	Actions necessary to provide for the safety of firefighters operating on the fireground. Effects that fire and heat may have on various types of building construction resulting in the loss of structural integrity. Includes signs and symptoms of structural damage.	Prerequisites: A grade of C or better in FSC113 or permission of Instructor or current employment as a firefighter and/or Firefighter I and II Certification and/or related experience as determined by the	LEC 3.0 3.0 3.0
FSC209	Fire Investigation I	Methods of determining point of fire origin, path of fire travel, and fire cause. Includes recognizing and preserving evidence; interviewing witnesses; arson laws and types of arson fires; and court testimony, reports, and records.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC209LL	Fire Investigation I Lab	Practical application of fire investigation techniques. Includes use of the scientific method to investigate various types of fires as well as fire patterns, explosions and evidence documentation. Also covers scene management and examination procedures in addition to report writing and spoliation concerns.	Prerequisites: A grade of C or better in FSC209.	LAB 1.0 2.0 2.0
FSC210	Fire Investigation II	Focus on practical skills for fire investigators. Emphasis on hands-on application with practice examining and recording the fire/arson scene. Includes class room and field exercises on each section.	Prerequisites: A grade of C or better in FSC209 or permission of Instructor.	L+L 3.0 3.0 3.0
FSC211	Fire Investigation III	Focus on case building for fire investigators. Emphasis on hands-on application, practice examining and recording the fire/arson scene. Includes field exercises with arson task force to investigate a crime scene.	Prerequisites: A grade of C or better in FSC210 or permission of Instructor.	L+L 3.0 3.0 3.0
FSC212	Fire Investigation IV	Skills and information for those responsible for fire investigation. Focus on courtroom and testimony. Includes continuing arson task force team assignment.	Prerequisites: A grade of C or better in FSC211 or permission of Instructor.	L+L 3.0 3.0 3.0
FSC213	Hazard Categorization (HAZ CAT)	Fundamentals of basic chemical identification for field application. Includes demonstration of sampling techniques, safety, key charts, test descriptions and use, and flow charts for tactical application at hazardous materials incidents	Prerequisites: None.	LEC 1.0 1.0 1.0
FSC214	Human Resource Management in Fire Service	Management of fire service personnel functions. Includes selection procedures, employee discipline, performance ratings, elements of supervision. Labor relations and related personnel responsibilities	Prerequisites: A grade of C or better in FSC202 or four years in the fire service.	LEC 3.0 3.0 3.0
FSC215	Customer Service in the Public Sector	Examines the personal and practical skills needed to enhance customer service in the public sector with an emphasis on application, basic management requirements, and training	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC216	Fundamentals of Flammable Hazardous Materials	Fundamentals of chemistry used in fire service, chemistry of flammable hazardous materials, containers used to store and transport flammable hazardous materials, and equipment and materials used in controlling emergencies involving flammables. Also includes tactics for hazardous materials emergencies, and laws at federal, state, and local levels pertaining to the use, storage, and transportation of hazardous materials and hazardous wastes.	Prerequisites: A grade of C or better in FSC105.	LEC 3.0 3.0 3.0
FSC217	Dangerous and Explosive Hazardous Materials	The chemistry of reactive and unstable hazardous materials, the toxicology of dangerous chemicals, and the measures taken to protect responders, the community, and the environment of chemical accidents. Also includes an introduction to field sampling of unknown substances.	Prerequisites: A grade of C or better in FSC216.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC220	Fire Officer	Administrative methods applied to the fire service, departmental organization, and personnel management. Includes Incident Management System, fire service planning, and relationships with other agency departments.	Prerequisites: Full time Certified Fire Fighter I & II, or Fire Instructor I, or permission of Instructor.	L+L 5.0 6.0 6.0
FSC221	Ladder Company Officer	Overview of all aspects of ladder company operations including activities, expectations, and responsibilities required of the ladder captain. Designed for the company officer who aspires to the role of ladder company officer	Prerequisites: None.	LEC 1.0 1.0 1.0
FSC224	Incident Command Systems	Methods for managing emergency incidents including command, control and coordination of response to all types of incidents, including hazardous materials, natural hazards, fire and multiple causality incidents. Emphasis on stabilization and protecting life, property, and environment	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC225	Hazard Zone Command	Provides the knowledge, skills and abilities for incident commanders to manage local, National Incident Management System (NIMS) Type 4 and 5 incidents. Prepares Fire Service Company and Command Officers to standardize local incident operations across their organization. The Hazard Zone Command course includes theory and simulation-based case studies. After successful completion of the course, the student will receive Blue Card certification for a period of three (3) years.	Prerequisites: Firefighter 1 and 2 certification and (a minimum of 5 years of fire service field experience or permission of Instructor).	L+L 5.0 6.0 6.0
FSC226	Incident Safety Officer	Comprehensive review of the critical factors that threaten the safety and well being of operating firefighting crews with an emphasis on the role an Incident Safety Officer has in recognizing, minimizing and mitigating threats. Focus on the Principles and types of construction, building dating, Smoke and Fire size-up, unique building types and standard company operations within Incident Management System providing the framework for effective Incident Safety Officer actions and overall impact on fire ground safety. Safety of Fire companies operating on every other type of incident in which a Command Structure is established, focus on the scope of an Incident Safety Officer	Prerequisites: Rank of Fire Captain or Chief Officer.	LEC 3.0 3.0 3.0
FSC230	Fire Officer Leadership II	Management techniques which develop leadership and leadership effectiveness. Written and verbal communication skills, fire service excellence goals, counseling and problem solving methods. Role-playing and case studies emphasized throughout	Prerequisites: Permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC231	Battalion Chief Academy	Examine the many roles and responsibilities required of a chief officer. Manage emergency incidents, explore personal and professional growth, view department issues more globally, manage personnel more effectively, manage conflict resolution for positive outcomes, and define leadership.	Prerequisites: None. FSC202 and FSC204 are suggested but not required.	L+L 3.0 5.0 5.0
FSC234	Fitness and Wellness for Firefighter Candidates	Focus on fitness and wellness for firefighter candidates.	Prerequisites: Permission of Instructor.	L+L 3.0 4.6 4.6
FSC238	Vehicular Extrication and Patient Stabilization	Participative course designed for the Emergency Medical Technicians (EMT). Incorporates new knowledge and skills necessary to access, extricate, and care for victims of crash incidents. Provides exposure to scene management, including size-up, disentanglement, victim stabilization for single and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures to selected victim scenarios.	Prerequisites: Basic EMT certification current enrollment in an EMT-Basic program nurse with emergency department experience or law enforcement personnel or permission of Instructor.	LEC 2.0 2.0 2.0
FSC240	Incident Command Officer	Preparation of Incident Command officers in handling local community's emergency situations	Prerequisites: Chief Officer or permission of Instructor.	L+L 3.0 3.0 3.0
FSC258	Victimology and Crisis Management in Public Safety	Victimology, the criminal justice system, techniques of crisis intervention and management, and the importance of a multicultural and global perspective. Includes violent crimes, sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, developing effective coping skills of victims and responders, appropriate community resources, and the cultural responsiveness of the justice system.	Prerequisites: None.	LEC 3.0 3.0 3.0
FSC259	Advanced Ladder Operations	Comprehensive training for members of fire department ladder companies. Emphasis on application of techniques, incorporating safety, progressive skills, and equipment review.	Prerequisites: Permission of Instructor.	L+L 8.0 8.5 8.5
FSC260	Technical Rope Rescue (RR) 1, 2, 3	Concepts, techniques, and skills needed to support technical rope rescue. Meets Arizona Fire Marshal Office requirements for RR1, RR2, RR3 and National Fire Protection Association (NFPA) 1670 Operational Rope Rescue	Prerequisites: A grade of C or better in FSC131 or permission of Instructor.	L+L 3.0 3.6 3.6
FSC261	National Fire Protection Agency Rope Technician	Advanced anchor construction, use of elevated anchor points on difficult edges, horizontal rope systems, and study of force multipliers commonly experienced during high angle rope rescue. Meets the certification requirements for the NFPA (National Fire Protection Agency) 1670 for Operational Rope Rescue and NFPA 1006 for Technical Rescue Rope Technician.	Prerequisites: A grade of C or better in FSC260 or (the Office of the Arizona State Fire Marshal's Ropes 1 2 and 3 class) or permission of Instructor.	L+L 3.0 3.6 3.6

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC271	Aircraft Rescue Fire Fighter (ARFF)-Basic	Basic level course for aircraft rescue firefighters. Preparation for performing standard aircraft rescue and firefighting procedures, including roles and responsibilities, basic airport configuration and design, aircraft types, hazardous cargo, safety precautions and use of materials.	Prerequisites: Permission of Program Director.	LEC 3.0 3.0 3.0
FSC272	Aircraft Rescue Fire Fighter (ARFF) - Advanced	Advanced level course for certification of aircraft rescue firefighters. Integrating, performing and evaluation of standard firefighting skills for airport configuration and design, aircraft types, hazardous cargo, safety procedures and materials used.	Prerequisites: A grade of C or better in FSC271.	L+L 3.0 4.0 4.0
FSC273	Aircraft Rescue Fire Fighter (ARFF)-Driver	Driver training course for aircraft rescue firefighters. Preparation for performing standard driving procedures for aircraft rescue and firefighting. Includes but not limited to proper handling of apparatus, equipment and tools used in aircraft rescues and communication with tower and other response units.	Prerequisites: A grade of C or better in (FSC272 or current employment as an airport firefighter) and permission of Instructor.	L+L 2.0 2.5 2.5
FSC274	Aircraft Rescue Fire Fighter (ARFF) - Incident Command	Incident command certification of aircraft rescue firefighter performing and evaluating standard firefighting skills for airport firefighters. Includes but not limited to aircraft types, hazardous cargo, and safety procedures and materials.	Prerequisites: A grade of C or better in FSC273 or permission of Program Director.	LEC 3.0 4.0 3.7
FSC275	Aircraft Rescue Fire Fighter (ARFF) Certification Renewal	Designed to provide recertification for the performance of standard aircraft rescue and firefighting procedures and skills for airport firefighters. Includes but not limited to airport configuration and design, aircraft types, hazardous cargo, safety procedures and materials used.	Prerequisites: A grade of C or better in (FSC272 or current employment as an airport firefighter) and permission of Instructor.	L+L 3.0 4.0 4.0
FSC276	Terrorism Liaison	Provides knowledge and skills required for the Terrorism Liaison Officer (TLO) role to coordinate and communicate with various fire, police, and military agencies in managing threat vulnerability and other emergency disasters.	Prerequisites: Permission of Program Director.	L+L 4.0 4.0 4.0
FSC277	Threat Vulnerability Assessment	Provides a historical perspective of threats and the activities and methods used by first responders to identify and mitigate future threats. Introduces and examines threat vulnerability of critical infrastructure within jurisdictions. Provides assessment techniques for responding agencies.	Prerequisites: Permission of Program Director.	L+L 1.0 1.0 1.0
FSC278	Hostile Intent and Intervention Training	Provides knowledge and skills required to detect and anticipate terrorist activities as a member of a Hostile Intent and Intervention Team (HIIT).	Prerequisites: Permission of Program Director.	L+L 2.0 2.0 2.0
FSC279	Field Intelligence Team Training	Provides knowledge and skills required for situational awareness of suspicious activities and the deployment of first responders for mitigation and investigation for the Field Intelligence Team (FIT).	Prerequisites: Permission of Program Director.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC280	Terrorism Hazmat First Responder Training	Provides knowledge and skills to understand the chemistry of reactive and unstable hazardous materials, the toxicology of dangerous chemicals, and the measures taken to protect the safety of responders, the community, and the environment of chemical accidents. Also includes an introduction to field sampling of unknown substances for the Field Intelligence Team (FIT) and the Hostile Intent and Intervention Team (HIIT).	Prerequisites: Permission of Program Director.	L+L 4.0 4.0 4.0
FSC282AA	Service-Learning Experience in Fire Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
FSC282AB	Service-Learning Experience in Fire Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
FSC282AC	Service-Learning Experience in Fire Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
FSC290AA	Arson Investigation	Investigative techniques used in analyzing suspected arson scenes, motives, and collection of physical evidence	Prerequisites: None.	LEC 1.0 1.0 1.0
FSC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
FSC296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
FSC296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
FSC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
FSC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
FSC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
FYE101	Introduction to College, Career and Personal Success	Focus on student success through exploration of academic, career and life skills. Includes study of goal-setting/success strategies, academic mindset and financial literacy. Develop an education/career plan utilizing career assessments and other college resources.	Prerequisites: None.	LEC 1.0 1.0 1.0
FYE103	Exploration of College, Career and Personal Success	Focus on student success through exploration of academic, career, and life skills. Includes study of goal-setting/success strategies, academic mindset, interpersonal skills, financial literacy, self-care strategies, diverse perspectives, and campus tools and resources. Develop an education/career plan utilizing career assessments and other college resources.	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS103	Principles of Banking	History, characteristics and significance of American banking system, includes types of accounts, banking services and the relationship of commercial banks to their depositors	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GBS109	Introduction to Esports Management	Introduction to Esports will introduce the business, economics, operations and marketing of the Esports industry. Historical and cultural implications will be examined from the early days of competitive video gaming, to today's billion dollar industry. Global awareness and diverse cultural viewpoints and trends will be studied as they relate to the Esports industry. This course will introduce students to the numerous business opportunities to work and grow in the dynamic Esports industry.	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS110	Human Relations in Business and Industry	Exploration of fundamental theories and concepts of human relations in business and industry. Particular emphasis is placed on developing effective interpersonal relationships and leadership skills within an organization	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS120	Workplace Communication Skills	Reviews planning, organization, development, and evaluation of written and oral communication in business settings, including informative and persuasive messages.	Prerequisites: None.	L+L 3.0 3.0 3.0
GBS126	Writing Resumes	Planning, organizing, and writing a professional resume. Focus on presentation skills including format and language	Prerequisites: None.	L+L 1.0 1.7 1.7
GBS131	Business Calculations	Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS132	Personal and Family Financial Security	Principles and practices of personal and family financial planning, includes savings, budgeting, credit, buying versus renting, and general principles of consumerism.	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS151	Introduction to Business	Characteristics and activities of current local, national, and international business. An overview of economics, marketing, management and finance	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS175	Professional Development	Examines personal qualities and professional skills needed to find a good job. Explores techniques required to build a successful career	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS205	Legal, Ethical, and Regulatory Issues in Business	Legal theories, ethical issues and regulatory climate affecting business policies and decisions.	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS206	Business Law (UCC)	Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letter of credit, bank deposits, and collections	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS207	Business Law (General Corporate)	Legal and ethical aspects of agency, partnerships, corporations, bankruptcy, antitrust, securities, and other regulations of business	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS211	Legal, Ethical and Regulatory Issues of the Internet Studies	Legal, ethical and regulatory issues of the Internet environment, including personal, commercial and business electronic transactions in cyberspace.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GBS220	Quantitative Methods in Business	Business applications of quantitative optimization methods in operations management decisions.	Prerequisites: A grade of C or better in (MAT150 or MAT151 or MAT152) or satisfactory score on the District math placement test.	LEC 3.0 3.0 3.0
GBS221	Business Statistics	Business applications of descriptive and inferential statistics, measurement of relationships, and statistical process management. Includes the use of spreadsheet software for business statistical analysis.	Prerequisites: A grade of C or better in GBS220 or MAT217 or MAT218.	LEC 3.0 3.0 3.0
GBS233	Business Communication	Internal and external business communications, including verbal and nonverbal techniques	Prerequisites: A grade of C or better in ENG101 or ENG107 with grade of C or better or permission of Department or Division.	LEC 3.0 3.0 3.0
GBS261	Investments I	Evaluation of various investment forms including study of inflation, taxation, government securities, stocks and bonds, real estate and retirement plans. Securities industry knowledge and skills for individuals to prepare for careers in Financial Services. Includes capital markets, types of products and their risks, trading, customer accounts, prohibited activities, and regulatory agencies and their functions. Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for entry-level positions in the security industry.	Prerequisites: None. Corequisites: Concurrent enrollment in GBS261LL recommended but not required.	LEC 3.0 3.0 3.0
GBS261LL	Securities Industry Essentials (SIE) Exam Prep	Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for prospective securities industry professionals. Focuses on reviewing key concepts, practicing skills, and preparing to successfully demonstrate existing knowledge on the SIE certification exam. The course is designed to provide an overview of exam topics and study and test-taking strategies. It also will include structured study time, group discussions, and the use of practice exams to assess test readiness.	Prerequisites: None. Corequisites: Concurrent enrollment in GBS261 recommended but not required.	L+L 1.0 1.0 1.0
GBS270AA	Business Internship	General business work experience in a business or industry. Eighty hours of designated work per credit per semester. Maximum of 3 credits allowed	Prerequisites: Permission of Department or Division.	LAB 1.0 1.0 0.0
GBS270AB	Business Internship	General business work experience in a business or industry. Eighty hours of designated work per credit totaling 160 hours per semester. Maximum of 3 credits allowed	Prerequisites: Permission of Department or Division.	LAB 2.0 2.0 0.0
GBS270AC	Business Internship	General business work experience in a business or industry. Eighty hours of designated work per credit.	Prerequisites: Permission of Department or Division.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GBS282AA	Volunteerism General Business: Service Learning Experience	Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: A grade of C or better in GBS151 and permission of Instructor.	LAB 1.0 1.0 0.0
GBS294	Consumer Credit	Consumer lending by financial institutions	Prerequisites: None.	LEC 3.0 3.0 3.0
GBS296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
GBS296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
GBS296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GBS296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
GBS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
GBS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
GBS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
GCU102	Human Geography: Spatial Relationships Between Humans and Culture with Their Environment	Systematic study of the interaction of humans with their environment. Global spatial patterns of various cultures, economic, social, political, urban and perceptual environments.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GCU113	United States and Arizona Social Studies	Overview of government, history, and geography of the United States and Arizona. Includes the relationship of Arizona to the U.S. government as well as the influences and developments that have shaped U.S. and Arizona history. Also covers geographical systems, regions, and study techniques.	Prerequisites: None.	LEC 3.0 3.0 3.0
GCU121WG	World Geography: People, Places, and Culture	Description and analysis of spatial variations in culture, social, economic, and political phenomena in major world regions. Emphasis on the major cultural realms of Europe, Asia, North Africa / Middle East, Sub-Saharan Africa, Oceania, Latin America and Anglo America.	Prerequisites: None.	LEC 3.0 3.0 3.0
GCU194	Special Topics in Cultural Geography	Detailed study of specific regions, topics, or current issues in cultural geography. Topics may include origins, diffusion, and division of cultural areas. Examines cultural patterns and spatial organization which may include population, religion, economic, social and political characteristics. Studies interrelationships between humans and the physical environment (i.e. environmental ecosystems, physical processes and natural resources).	Prerequisites: None.	LEC 3.0 3.0 3.0
GCU221	Arizona Geography: Landforms, Climate, Water, People, and Culture	The historical to modern development of Arizona. The spatial patterns of geology, weather, climate, vegetation, water, human settlement, demographics, culture, and economic factors affecting the past, present and future of Arizona.	Prerequisites: None.	LEC 3.0 3.0 3.0
GCU282AA	Service-Learning Experience in Cultural Geography	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
GCU282AB	Service-Learning Experience in Cultural Geography	Unpaid Service-Learning (SL) experience completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
GCU282AC	Service-Learning Experience in Cultural Geography	Unpaid Service-Learning field experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
GCU298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GCU298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
GCU298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
GER101	Elementary German I	Basic grammar, pronunciation and vocabulary of the German language. Includes the study of German culture, practice of listening, speaking, reading and writing skills.	Prerequisites: None.	LEC 4.0 4.0 4.0
GER102	Elementary German II	Continued study of grammar and vocabulary of the German language along with the study of German culture. Emphasis on German language skills.	Prerequisites: A grade of C or better in GER101 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
GER201	Intermediate German I	Review of essential grammar of the German language and study of the German culture. Continued practice and development of reading, writing, and speaking skills.	Prerequisites: A grade of C or better in GER102 or two years of high school German or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 4.0 4.0 4.0
GER202	Intermediate German II	Continued development of German language skills and continued study of the German culture.	Prerequisites: A grade of C or better in GER201 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
GIS205	Geographic Information Technologies	Introduces modern geographic information technologies, including cartography, Geographic Information System (GIS), remote sensing, global positioning systems, and statistical analyses.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GIS211	Geographic Information Science I	Introduces students to digital map creation including vector and raster data, map elements, and design, symbology, and the geo database using Environmental Systems Research Institute (ESRI) desktop and online mapping environments.	Prerequisites: A grade of C or better in GIS205 or permission of Instructor.	L+L 4.0 4.0 4.0
GIS220	Introduction to ArcPy Scripting	Students will learn how to automate geoprocessing tasks and apply scripting fundamentals using the ArcGIS Python-based scripting language ArcPy. The course emphasizes problem solving using geoprocessing analysis, identifying system integration and data management tasks, determining programming tools and order based upon workflow analysis.	Prerequisites: A grade of C or better in GIS211.	LEC 3.0 3.0 3.0
GIS222	Geographic Information Science II	Geographic Information Science (GIS) as a basis for microcomputer spatial analysis and synthesis. Includes digitizing, database organization, spatial retrieval and graphics.	Prerequisites: A grade of C or better in GIS211 or permission of Instructor.	LEC 3.0 3.0 3.0
GIS223	Introduction to Digital Image Processing	Uses and application of remote sensing and imagery in Geographic Information Systems (GIS). Uses and application of Global Positioning Systems to GIS and remote sensing.	Prerequisites: None.	LEC 3.0 3.0 3.0
GLG101	Physical Geology: Dynamic Earth Lecture	Introduction to Earth's materials, surface and internal geologic processes, plate tectonics and geologic time.	Prerequisites: None.	LEC 3.0 3.0 3.0
GLG101IN	Physical Geology: Dynamic Earth	Introduction to Earth's materials, surface and internal geologic processes, plate tectonics and geologic time. Includes practical experience in rock and mineral identification, topographic maps, and applied problems in geology.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
GLG102	Historical Geology: Primordial to Present Lecture	The origin and history of the Earth, its dynamic geographic and climatic changes. Evolution and sequence of life recorded in the fossil record; tectonic evolution of major continents through time.	Prerequisites: None.	LEC 3.0 3.0 3.0
GLG102IN	Historical Geology: Primordial to Present	The origin and history of the Earth, its dynamic geographic and climatic changes. Evolution and sequence of life recorded in the fossil record; tectonic evolution of major continents through time.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
GLG103	Physical Geology: Dynamic Earth Lab	Includes practical experience in rock and mineral identification, topographic maps, and applied problems in geology.	Prerequisites: None.	LAB 1.0 3.0 3.0
GLG104	Historical Geology: Primordial to Present Lab	The study of minerals, rocks, fossils, geologic maps and structures.	Prerequisites: None.	LAB 1.0 3.0 3.0
GLG105	Introduction to Planetary Science	A survey of solar system objects and their geologic evolution, surfaces, interiors, and atmospheres, and the methods used to study them; weekly laboratory for data analysis and experiments; possible weekend field trip.	Prerequisites: None.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GLG106	Life in the Universe	Introduction to the search for life in the universe for the non-science major. Earth's location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets.	Prerequisites: A grade of C or better in MAT090 or MAT091 or MAT092 or completion of higher level mathematics course, or satisfactory score on placement exam.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
GLG107	Life in the Universe Laboratory	Astronomy, Biology, and Planetary Science laboratory.	Prerequisites: A grade of C or better in AST/GLG106 and permission of Instructor or Department or Division. Xref: AST106	LAB 1.0 3.0 3.0
GLG110	Geological Disasters and the Environment	Acquaints students with the use and importance of geological studies as they apply to the interactions between people and the earth. Includes geological processes and hazards such as earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources.	Prerequisites: None.	LEC 3.0 3.0 3.0
GLG110IN	Geological Disasters and the Environment	Acquaints students with the use and importance of geological studies as they apply to the interactions between people and the Earth. Includes geological processes and hazards such as earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
GLG111	Geological Disasters and the Environment Lab	Introduction to geological processes and concepts. Application of basic geologic knowledge to evaluate, interpret and propose solutions for a variety of current and past geology-related environmental disasters and hazards.	Prerequisites: None.	LAB 1.0 3.0 3.0
GLG121	Geology of the Grand Canyon	Introduction to the physiography and geology of the Grand Canyon. Includes a hiking field trip to the Grand Canyon.	Prerequisites: None. GLG103 suggested but not required.	L+L 1.0 2.0 2.0
GLG140	Introduction to Oceanography	Investigates the marine environment in terms of basic scientific concepts. Emphasizes the impact of ocean pollutants, climate fluctuations, and resources from the sea	Prerequisites: None.	LEC 3.0 3.0 3.0
GLG140IN	Introduction to Oceanography	Introduces students to the physical, chemical, and geological conditions that regulate global ocean phenomena. Topics covered include history of oceanography, physical and chemical properties of ocean water, air-sea interactions, current, wave, and tidal phenomena, origins of the oceans, geologic processes and features, biological influences, and environmental issues. Laboratory exercises are included to provide experimental learning opportunities.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GLG229AB	Field Studies for Educators	Field trips to selected geological areas in Arizona in order to collect and/or observe geological phenomena. Designed for pre-college teachers.	Prerequisites: None.	LAB 2.0 10.0 2.0
GLG229AC	Field Studies for Educators	Field trips to selected geological areas in Arizona in order to collect and/or observe geological phenomena. Designed for pre-college teachers.	Prerequisites: None.	LAB 3.0 15.0 3.0
GLG230AA	Field Geology of the Southwest	Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena.	Prerequisites: None. GLG103 suggested but not required.	LAB 1.0 5.0 1.0
GLG230AB	Field Geology of the Southwest	Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena.	Prerequisites: None. GLG103 suggested but not required.	LAB 2.0 10.0 2.0
GLG230AC	Field Geology of the Southwest	Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena.	Prerequisites: None. GLG103 suggested but not required.	LAB 3.0 15.0 3.0
GLG231AA	Special Topics in Geology	Exploration of important topics in geology. Specific topic varies.	Prerequisites: None.	LEC 0.5 0.5 0.5
GLG231AB	Special Topics in Geology	Exploration of important topics in geology. Specific topic varies.	Prerequisites: None.	LEC 1.0 1.0 1.0
GLG231AC	Special Topics in Geology	Exploration of important topics in geology. Specific topic varies.	Prerequisites: None.	LEC 2.0 2.0 2.0
GLG231AD	Special Topics in Geology	Exploration of important topics in geology. Specific topic varies.	Prerequisites: None.	LEC 3.0 3.0 3.0
GLG280	Geology of Arizona Lecture	Acquaints students with the physical and historical geology of Arizona, including the origin of present-day land forms and outstanding modern geologic features and processes now in operation	Prerequisites: None.	LEC 3.0 3.0 3.0
GLG281	Geology of Arizona Lab	May accompany GLG280. Examples of specific geologic processes and local areas. May require field trips	Prerequisites: None.	LAB 1.0 3.0 3.0
GLG282AA	Volunteerism for Geology: A Service Learning Experience	Service-learning field experience within human service organizations, government offices, public schools, or hospitals.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GLG296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
GLG296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
GLG296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GLG296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
GLG298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
GLG298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
GLG298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
GPH111	Physical Geography: Atmosphere, Lithosphere, Water And Hazards Lecture	Earth's physical processes and impacts on human environments via the atmosphere, biosphere, lithosphere and hydrosphere. Topics and practical experiences include severe weather, climate change, biomes / ecosystems, landform processes; mountain building and erosion by rivers, glaciers, waves, wind and using various topographic mapping data.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GPH112	Physical Geography: Climate, Landforms, Water and Hazards Laboratory	Earth's physical processes and impacts on the human environment via the atmosphere, biosphere, lithosphere and hydrosphere. Practical experiences include earth-sun relationships, weather, climate, biomes, landform processes; mountain building and erosion by rivers, glaciers, waves, wind and using various topographic mapping data.	Prerequisites: A grade of C or better in GPH111 or Corequisites: GPH111.	LAB 1.0 3.0 3.0
GPH113	Physical Geography: Atmosphere, Lithosphere, Water, and Hazards	Earth's physical processes and impacts on human environments via the atmosphere, biosphere, lithosphere and hydrosphere. Topics and practical experiences include severe weather, climate change, biomes / ecosystems, landform processes; mountain building and erosion by rivers, glaciers, waves, wind, and using various topographic mapping data.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
GPH194	Special Topics in Physical Geography	Detailed study of specific regions, topics, or current issues in physical geography. Emphasis on relationships within and between the atmosphere, lithosphere, hydrosphere, biosphere, and how humans relate to their environment. Topics may include environmental ecosystems, physical processes (i.e., weather, climate, geomorphology, oceanography), natural resources and the impacts of human population (i.e., pollution, politics, religion, economic activities).	Prerequisites: None.	LEC 3.0 3.0 3.0
GPH210	Society and Environment	Principles of physical geography relating to environmental problems pertinent to contemporary society. Pollution, maladjusted land use, resource exploitation	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
GPH211	Landform Processes	Geographic characteristics of landforms and earth surface processes emphasizing erosion, transportation, deposition and implications for human management of the environment.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
GPH212	Introduction to Meteorology I	Atmospheric processes and elements. General and local circulation, heat exchange and atmospheric moisture.	Prerequisites: None.	LEC 3.0 3.0 3.0
GPH213	Climate and Weather	Study of atmospheric phenomena over periods of time measured in months, years or longer. Includes average weather conditions, infrequent and unusual types of weather, and the influence of weather on the cultural and human landscape.	Prerequisites: None.	LEC 3.0 3.0 3.0
GPH214	Introduction to Meteorology Laboratory I	Explores meteorological operations, including temperatures, precipitation, weather systems, and weather forecasting.	Prerequisites: None. Corequisites: GPH212.	LAB 1.0 3.0 3.0
GPH215	Climate and Weather Laboratory	A mathematical, statistical, and spatial analysis of climatological phenomena.	Prerequisites: None. Corequisites: GPH213.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GPH230	Climate Change	Investigates natural and human effects on global, regional, and local scale climate variability; explores climate reconstruction, chronology, and theory from paleoclimate through modern times, and discusses implications for climate futures.	Prerequisites: None.	LEC 3.0 3.0 3.0
GPH267	Extreme Weather and Climate	Emphasis on interaction of physical and cultural geography in potentially hazardous weather and climate processes. Exploration of hazard risk analysis.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
GPH282AA	Service-Learning Experience in Physical Geography	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
GPH282AB	Service-Learning Experience in Physical Geography	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
GPH282AC	Service-Learning Experience in Physical Geography	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
GPH298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
GPH298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
GPH298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GRK101	Elementary Classical Greek I	Introduction to the basic grammar and vocabulary of Ancient Greek. Includes introductory study of Ancient Greek culture. Practice reading and translating Ancient Greek as well as basic translation of English to Ancient Greek.	Prerequisites: None.	LEC 4.0 4.0 4.0
GRK102	Elementary Classical Greek II	Continued study of the grammar and vocabulary of Ancient Greek and Ancient Greek culture. Emphasis on reading and translating Ancient Greek to English, culminating in the reading of unadapted ancient texts.	Prerequisites: A grade of C or better in GRK101 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
GST201	Game Studies	Introduces concepts, tools, and topics necessary to studying and understanding games, whether analog or digital, as closed systems for definition, analysis, design, development, play, critique, and revision. Surveys games from around the world and introduces concepts, tools, and topics necessary to studying and understanding them, whether analog or digital, as closed systems for definition, analysis, design, development, play, critique, and revision.	Prerequisites: A grade of C or better in (RDG100 or RDG100LL) or (RDG100AA and RDG100AB and RDG100AC) or RDG111 or RDG112 or RDG113 or eligibility for ENG101 as indicated by appropriate writing assessment test score.	LEC 3.0 3.0 3.0
GST202	Games, Culture and Aesthetics	Considers games as artifacts and expressions of our basic consciousness, humanity, and potential. Explores through the lens of world cultures such concepts as values, power relations, gender roles, arts, aesthetics, and desire. Compares games across cultural, temporal, geographic, and linguistic divides, for the purpose of examining and appreciating the experiences, contributions, and values of diverse populations, as conveyed through the global phenomenon of games.	Prerequisites: A grade of C or better in (RDG100 or RDG100LL) or (RDG100AA and RDG100AB and RDG100AC) or RDG111 or RDG112 or RDG113 or eligibility for ENG101 as indicated by appropriate writing assessment test score.	LEC 3.0 3.0 3.0
GST245	Games for Teaching and Learning	Survey of past and present games for teaching and learning from multiple cultures and continents. Exploration of the potential for games to help us: face challenges; solve problems; enhance our quality of life; and render our experience of the world in a more meaningful way. Applies theories of learning to determine best practices in game design, development, and production. Demonstrates how to align instructional content with appropriate game-based mechanics and thinking. Culminates in the prototype of a game for teaching and learning.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113) or satisfactory score on District reading placement exam or permission of Instructor.	LEC 3.0 3.0 3.0
GTC104	Manufacturing Processes	Introduces students to manufacturing processes used in conversion of raw materials into useful products. Presents the basic manufacturing processes in logical groups, based on similarities of purpose and applications	Prerequisites: None.	L+L 4.0 7.0 7.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GTC106	Industrial Safety	Safety, health management, and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, management responsibilities, and OSHA 10 certification.	Prerequisites: None.	LEC 2.0 2.0 2.0
GTC106AA	Industrial Safety	Safety, health management and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, and management's responsibilities.	Prerequisites: None.	L+L 2.0 3.0 3.0
GTC107	Technical Mathematics I	Mathematical principles to include basic operations, significant digits, exponents, square roots and order of operations. Solve problems using arithmetic, signed numbers, percentages, fractions, exponents, and square root. Use of hand held calculator. Technology related problems	Prerequisites: None.	LEC 3.0 3.0 3.0
GTC108	Technical Mathematics II	Fundamental algebraic operations. Problem solving involving metric measurement, gears, pulleys, simple mechanism problems. Areas and volume calculations of geometric figures. Essentials of trigonometry for solving right and oblique triangles.	Prerequisites: A grade of C or better in GTC107 or permission of Instructor.	LEC 3.0 3.0 3.0
GTC121	Construction Estimating I	Fundamentals of determining quantities of material, equipment and labor for given project. Includes procedures used in applying proper unit costs to these items	Prerequisites: None.	LEC 3.0 3.0 3.0
GTC123	Construction Estimating II	Details of job estimates. Includes unit cost considerations and subcontracting. Emphasis on bid preparation	Prerequisites: A grade of C or better in GTC121 or permission of Department or Division.	LEC 3.0 3.0 3.0
GTC127	Beginning Woodworking	Introduction to woodworking fundamentals and applications. Familiarization with the basic woodworking tools emphasizing the safe and proper use of woodworking hand tools and stationary and portable power tools. Class projects develop a working project plan, identify material needs, cost analysis, basic construction of the project, and basic finishing techniques	Prerequisites: None.	L+L 3.0 4.0 4.0
GTC128	Intermediate Woodworking	Further development and application of basic woodworking skills. Complex projects with emphasis on planning and calculating and buying needed materials. Introduction of jointery, complex fitting, more advanced finishing, and wood carving.	Prerequisites: A grade of C or better in GTC127 or previous woodworking experience.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GTC129	Manufacturing Welding	Technical theory, safety considerations, and application of shop and welding processes commonly used in manufacturing, including oxyacetylene welding, brazing, and cutting, SMAW (Elec ARC), GMAW (MIG), GTAW (TIG) and plasma cutting	Prerequisites: None.	L+L 3.0 8.0 8.0
GTC130	Furniture Construction I	Process of building a piece of furniture including calculating and buying needed material, using tools properly and safely (hand tools and machines), jointery, wood preparation and basic finishing techniques.	Prerequisites: A grade of C or better in GTC128 or previous woodworking experience and permission of Instructor.	L+L 3.0 6.0 6.0
GTC131	Furniture Construction II	Continuation of GTC130 including special set-ups on machines, special joints, adhesives, special finishes, panel doors, panel drawers, metal drawer guides and plastic laminates.	Prerequisites: A grade of C or better in GTC130 or permission of Instructor.	L+L 3.0 6.0 6.0
GTC132	Wood Finishing	Introduction to the materials, processes, and sequences used in applying a variety of finishes to various wood types. Includes abrasives, stains, fillers, surface coats, tools and equipment, and basic refinishing techniques.	Prerequisites: None.	L+L 3.0 4.0 4.0
GTC144	Introduction to Cabinetmaking	Techniques and projects to produce complex cabinet projects. Includes project planning, working from plans, material cost analysis, and advanced finishing techniques.	Prerequisites: A grade of C or better in GTC130 and permission of Instructor.	L+L 3.0 5.0 5.0
GTC145	Advanced Cabinetmaking	Further exploration of advanced woodworking techniques on complex projects.	Prerequisites: A grade of C or better in GTC144 and permission of Instructor.	L+L 3.0 5.0 5.0
GTC181	Introduction to Fluid Power	Develops an understanding of the fundamental laws and principles of fluids together with consideration of such fluid devices as valves, cylinders, pumps, sizes of lines, and simple hookups. Includes both hydraulics and pneumatics	Prerequisites: A grade of C or better in ELE101 or equivalent.	L+L 3.0 6.0 6.0
GTC182	Building Construction Methods I	Basics of building construction from job site selection through exterior finish of the shell. Focuses mainly on residential construction for the consumer. Includes blueprints, estimating materials and labor, work scheduling, job layout, foundations, framing, and exterior finish. Energy conservation, safety, and building codes discussed throughout the course	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GTC185	Electro-Mechanical Devices	Concepts, principles, maintenance, and troubleshooting of mechanical and electro-mechanical devices; mechanical alignment of shafts, pillowblocks, gears, and couplers on mechanical breadboard; transmission devices including lead screws, linkages, worm and worm wheels, gear trains, speed reducers, chain drives, and belt drives; principles of lubrication; operation of dc(direct current), ac(alternating current), and stepping motors; application of tachometers, stepping motors, linear actuators, relays, solenoids, switches, contactors, starters, and fuses; selection and specification of components from manufacturer's catalogs.	Prerequisites: A grade of C or better in ELE101 or GTC108 or (MAT103AA and MAT103AB) or permission of Instructor.	L+L 4.0 6.0 6.0
GTC208	Statistical Process Control	Study of statistical process control concepts and methods. Extraction and application of specific parameters from data retrieved from a process	Prerequisites: A grade of C or better in ELE101 or GTC108 or permission of Department or Division.	LEC 3.0 3.0 3.0
GTC209	Automated Manufacturing	Evolution of automation in manufacturing from fixed (hard) automation to Computer Integrated Manufacturing (CIM) is presented with numerical control (NC); computer-aided design/computer-aided manufacturing (CAD/CAM); automated material handling; automation communication protocol. Manufacturing management strategies include statistical process control (SPC); material requirements planning (MRP); manufacturing resource planning (MRPII); and just-in-time (JIT). Hands-on experience with programmable logic controllers (PLC) and robotics included.	Prerequisites: A grade of C or better in ELT131 or ELE131 or equivalent.	L+L 3.0 6.0 6.0
GTC216	Properties of Materials	Study of manufacturing properties of materials, the behavior of materials under load, stress and strain and torsion and qualities of materials other than strength	Prerequisites: None.	LEC 3.0 3.0 3.0
GTC223	Advanced Machine Tools	Advanced machining practices; emphasis on application of machines and tool theory.	Prerequisites: A grade of C or better in GTC102 or MET231.	L+L 3.0 6.0 6.0
GTC236	CAD/CAM Computer Numerical Control (CNC) Programming	Programming of Computer Numerical Control (CNC) machine tools such as CNC Milling Machines, and Turning Centers. Utilizing Computer Aided Drafting and Computer Aided Manufacturing (CAD/CAM) for design and generation of part geometry. Verification of tool path using CAM graphics. Generate program media using a CAM post processor	Prerequisites: None.	L+L 3.0 6.0 6.0
GTC272	Automated Control Systems (PLC Applications)	The programmable logic controller as the control unit for the application of sensors, switches, and transducers. Motors, stepper motors, and other prime movers are controlled. Includes both on/off and analog devices.	Prerequisites: A grade of C or better in GTC/MIT209 or permission of Instructor. Xref: GTC209	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GTC273	Industrial Automation Controls and System Integration.	A study in application and implementation of industrial control systems including machine building and system integration	Prerequisites: A grade of C or better in GTC272.	L+L 3.0 6.0 6.0
GTC276	Solids Programming	Parametric modeling, CNC part production, model to CAM system integration, and solid model part representation. Applied CAD/CAM in the role of Computer Integrated Technology (CIM)	Prerequisites: A grade of C or better in GTC266.	L+L 3.0 6.0 6.0
GTC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
GTC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GTC296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
GTC296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
GTC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
GTC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
GTC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
HCC102	Introduction to Safe Patient Handling and Mobility	Introduction to the history and principles of safe patient handling and mobility (SPHM). Introduction to patient mobility bedside assessment. Use of safe patient handling equipment and principles for in-bed movement, transfers to and from stretchers and chairs, exercise, and safe ambulation. Use of equipment for home care. Review and application of body mechanics.	Prerequisites: None.	L+L 0.5 0.5 0.5
HCC109	CPR for Health Care Provider	Current American Heart Association standards for one and two rescuer cardiopulmonary resuscitation (CPR) and obstructed airway procedures on the adult, infant, and pediatric victim. Use of automatic, external defibrillation and resuscitation equipment.	Prerequisites: None.	LEC 0.5 0.5 0.5
HCC109AA	CPR for Healthcare Providers Practice and Testing	Knowledge and skills refreshment for renewal of a current American Heart Association (AHA) Healthcare Provider (HCP) card or completion of eLearning practice and testing. Including one and two rescuer Cardiopulmonary Resuscitation (CPR) and obstructed airway procedures on the adult, infant, and pediatric victim. Automated external defibrillation (AED) application and oxygenation/ventilation management.	Prerequisites: Valid Healthcare Provider CPR card at time of course or Part 1 Completion Certificate from an AHA HCP eLearning online course.	LEC 0.25 0.25 0.25
HCC130	Fundamentals in Health Care Delivery	Overview of current and recent development of health care professions, including career and labor market information, health care delivery systems, third party payers, and facility ownership. Health organization structure, patient rights and quality care. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Basic communication skills which facilitate inter-professional teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HCC145	Medical Terminology for Health Care Professionals	Medical terminology used in health care, with special care populations and in special services. Body systems approach to terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing terms using word parts. Medical abbreviations and symbols and term spelling.	Prerequisites: None.	LEC 3.0 3.0 3.0
HCC145AA	Medical Terminology for Health Care Professionals I	Introduction to medical terms used in health care. Body systems approach to selected terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using basic word parts. Selected medical abbreviations and symbols and term spelling.	Prerequisites: None.	LEC 1.0 1.0 1.0
HCC145AB	Medical Terminology for Health Care Professionals II	Selected medical terms used in health care. Body systems approach to more detailed terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using standard word parts. Selected abbreviations and symbols and term spelling.	Prerequisites: A grade of C or better in HCC145AA.	LEC 1.0 1.0 1.0
HCC145AC	Medical Terminology for Health Care Professionals III	Medical terminology used with special care populations and in special services. Includes obstetric, pediatric, mental health, diagnostic imaging, oncology, and surgery terms. Use of special care populations and special services word parts and term spelling.	Prerequisites: A grade of C or better in HCC145AA and HCC145AB or HCC146.	LEC 1.0 1.0 1.0
HCC146	Common Medical Terminology for Health Care Professionals	Common medical terms used in health care. Body systems approach to common terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing common terms using word parts. Common medical abbreviations and symbols and term spelling.	Prerequisites: None.	LEC 2.0 2.0 2.0
HCC164	Pharmacology for Allied Health	Chemical, generic, and trade names for drugs. Use of drug references. Pharmacological principles of drugs. Routes of drug administration. Federal and Arizona regulations. Classification of drugs. Abbreviations and symbols for drug measurement, administration, and prescription.	Prerequisites: A grade of C or better in HCC130, or work experience, or equivalent course education as evaluated by the Health Core Curriculum Coordinator.	LEC 0.5 0.5 0.5
HCC200	Basic Client Care for Allied Health	Safety procedures for the hospitalized client. Transfer, moving and positioning techniques. Client assessment methods and procedures. Protection of airways, drains, tubes, intravenous lines, and infusion pumps. Care of patient in traction and those with limitations to movement. Gloving, gowning, and sterile procedures.	Prerequisites: A grade of C or better in HCC130 or equivalent.	LAB 0.5 1.5 1.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HCC204	Clinical Pathophysiology	Causes of disease and their impact on the human body. Common physiologic effects of disease on body systems. Roles of the multidisciplinary health care team in the diagnosis and treatment of disease. Cultural implications in prevention and treatment of disease.	Prerequisites: A grade of C or better in HCC130 or equivalent, and (BIO160 or BIO201).	LEC 3.0 3.0 3.0
HCC208	Health Care Leadership	Introduction to concepts and skills required of health care leaders. Discussion of leadership styles and conflict management. Application of motivation, delegation, and communication techniques to teamwork and leadership.	Prerequisites: A grade of C or better in HCC130 or equivalent.	LEC 1.0 1.0 1.0
HCC218	Venous Access for Diagnostic Agents and Pharmaceuticals	Scope of practice and regulations governing venipuncture. Anatomy and physiology of the vascular system. Occupational Safety and Health Administration (OSHA) guidelines. Theory and practice of basic venipuncture for diagnostic agents and pharmaceuticals including equipment and procedures.	Prerequisites: A grade of C or better in HCC130, or work experience or equivalent course education as evaluated by the Health Core Curriculum Coordinator, or currently credentialed as a health care provider.	LAB 0.5 1.5 1.5
HCC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
HCC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
HCC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HCR100	Care of the Medically Complex Child	Course content will cover the orientation materials and fundamental concepts of foster parents caring for a medically complex child. The course will cover the common disorders and disease processes of children while providing basic knowledge to caregivers.	Prerequisites: None.	LEC 1.0 1.0 1.0
HCR210	Clinical Health Care Ethics	An introduction to health care ethics with emphasis on analysis and ethical decision making at both the clinical and health policy levels for health care professionals. Theoretical foundation of bioethics reviewed within historical and contemporary contexts.	Prerequisites: A grade of C or better in ENG102 or ENG108 or permission of Instructor.	LEC 3.0 3.0 3.0
HCR220	Introduction to Nursing and Health Care Systems	Introduction to the social, political, and economic contexts of the nursing profession and health care systems in the United States.	Prerequisites: A grade of C or better in ENG102 or ENG108 or permission of Instructor.	LEC 3.0 3.0 3.0
HCR230	Culture and Health	Relation between cultures of diverse groups and health/illness. Emphasis on cross-cultural communication, including awareness of own cultural influences and indigenous and complementary healing practices.	Prerequisites: None.	LEC 3.0 3.0 3.0
HCR240	Human Pathophysiology	Chemical, biological, biochemical, and psychological processes as a foundation for the understanding of alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered.	Prerequisites: A grade of C or better in BIO202 or BIO205, or permission of Instructor.	LEC 4.0 4.0 4.0
HCR240AA	Human Pathophysiology I	Chemical, biologic, biochemical, and psychological processes as a foundation for the understanding of alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered.	Prerequisites: A grade of C or better in BIO202 or BIO205 or permission of Instructor. Corequisites: HCR240AB or permission of Instructor.	LEC 2.0 2.0 2.0
HCR240AB	Human Pathophysiology II	Chemical, biologic, biochemical, and psychological processes as a foundation for the understanding of alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered.	Prerequisites: A grade of C or better in BIO202 or BIO205 or permission of Instructor. Corequisites: HCR240AA or permission of Instructor.	LEC 2.0 2.0 2.0
HCR298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HCR298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
HCR298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
HCS100	Fundamentals of Surgical Services	Preparation for the Certified Registered Central Service Technician (CRCST) role. Central Service work flow, job responsibilities, growth and development in the field, anatomy and physiology, microbiology for Central Service regulations and standards, infection prevention and control, tools for cleaning, decontamination, cleaning and decontamination, disinfection, sterile packaging and storage, processing, sterilization, management of patient care equipment, tracking systems, quality assurance, safety, communication, sterile processing for ambulatory surgery and clinics.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0
HCS101	Medical Terminology for Surgical Services	Medical Terminology for patient care in surgery related areas. Use of word parts, term spelling, pronunciation and abbreviations related to all surgical specialties.	Prerequisites: None. Corequisites: HCS/SGT100. Xref: HCC100	LEC 1.0 1.0 1.0
HCS102	Basic Surgical Instrumentation for Surgical Services	History, construction and assembly of surgical instrumentation, categories, instrument set assembly, soft tissue foundation sets, general surgery instrumentation sets.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
HCS107	Equipment and Supplies for Surgical Services	Introduction to the surgical equipment and supplies used in surgical services areas.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.	L+L 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HCS152	Advanced Surgical Instruments for Surgical Services	Surgical specialty instrumentation care and assembly of instruments to include plastic, gynecologic, urologic, basic bone and joint, head and neck, neurosurgery, cardiovascular and thoracic, microscopic, endoscopes, stapling guns, and robotics procedures.	Prerequisites: A grade of C or better in HCS/SGT102. Xref: HCS102	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
HCS154	Hospital Central Service Practicum	Direct supervision of students applying knowledge of Hospital Central Service to include communication, policy and procedures, aseptic and sterile technique, instrument trays and packs, sterilization equipment and documentation performed in the clinical environment.	Prerequisites: A grade of C or better in HCS/SGT100 or permission of Instructor. Corequisites: HCS/SGT152. Xref: HCS100 HCS152	LAB 7.0 36.0 0.0
HES100	Healthful Living	Examines health-related behaviors and issues associated with a modern lifestyle. Explores current topics of interest related to mental, physical, social and environmental health such as stress management, nutrition, and fitness. Identifies and evaluates personal and community strategies to promote an optimal lifestyle.	Prerequisites: None.	LEC 3.0 3.0 3.0
HES105	Finding Health Information Online	Development of skills and competency in accessing, evaluating, and using online medical and health information resources.	Prerequisites: None.	LEC 1.0 1.0 1.0
HES110	Introduction to Global Health Issues and Disease	Introduction to global health challenges and diseases from throughout the world. Focus is on biological and social aspects of major health issues, infectious disease, nutrition and environmental health. Includes review of groups that are at increased risk of poor health and familiarity with policies and programs designed to reduce health inequalities.	Prerequisites: None.	LEC 3.0 3.0 3.0
HES120	Principles of Physical Fitness and Wellness	Stress basic, lifetime health and skill-related components of fitness to achieve total wellness. Topics include nutrition, weight control, exercise and aging, cardiovascular and cancer risk reduction, stress management, prevention of sexually transmitted diseases, substance abuse control, and overall management of personal health and lifestyle habits to achieve the highest potential for well-being.	Prerequisites: None.	LEC 3.0 3.0 3.0
HES124	Environmental Wellness	Overview of critical global environmental challenges and the impacts of these issues to human health. Topics to be covered include issues such as transportation options, alternative energy, food production, and air and water issues. Acquire skills, knowledge, and wisdom specific to sustainability which may be applied in many professions, occupations, social institutions, or organizations. At an individual level, learn specific ways to conserve energy, protect your health, and help create sustainable living practices.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HES144	Strategies in Diabetes Management	Introduction to strategies in diabetes mellitus management and prevention for individuals diagnosed with diabetes and their caretakers. Includes a physical activity component.	Prerequisites: None.	L+L 3.0 5.0 5.0
HES201	Substance Abuse and Behavior	Principles and factual bases of drug use and abuse. Physiological and socio-psychological effects of drug use and law enforcement of drug abuse. Consultants used extensively to enrich course.	Prerequisites: None.	LEC 3.0 3.0 3.0
HES210	Cultural Aspects of Health and Illness	Examines how culture influences health, illness, health maintenance practices, barriers to health care, interactions with healthcare professionals, and health disparities worldwide.	Prerequisites: None.	LEC 3.0 3.0 3.0
HES282AA	Service-Learning Experience in Health Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
HES282AB	Service-Learning Experience in Health Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
HES282AC	Service-Learning Experience in Health Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
HES296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HES296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
HES296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
HES296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HES298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
HES298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
HES298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
HFA101	Introduction to Insulation	Insulators' union history, significance and benefits. Successful and efficient labor relations. Insulation in relation to other construction trades. Safe and proper use of hand and power tools. Safe work habits, job site safety and first aid. Advanced first aid. Occupational Safety and Health Administration (OSHA) safety training and regulations.	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
HFA102	Insulation Tools and Equipment: Use and Care	Identify tools and equipment used for installation of mechanical insulation, finishes, and accessories. Proper methods for use and care of various tools and equipment.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 3.0 3.0 3.0
HFA110	Math for Heat and Frost Technology	Fundamentals of the metric system. Fundamental operations with whole numbers, common fractions, decimals, percentages and ratios and proportions. Algebraic expressions, operations, powers and roots. Compute measurements of geometric figures.	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HFA115	Fundamental Insulation Skills: Piping I	Principles of insulation. Materials and methods of insulation. Insulating straight piping. Application of specific types of insulation. Insulation irregular surfaces. Seal and finish insulated pipe.	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
HFA150	Shop Fabrication: Layout and Pattern-making for Insulators I	Shop fabrication for the heat, frost and asbestos trades related to insulation. Draw, bisect, trisect, divide and construct geometric linear and curvilinear geometric constructions. Layout and design templates and patterns for tees, valves, flanges, and endcaps.	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
HFA204	Scaffolding for Insulators	Occupational Safety and Health Association (OSHA) Scaffolding Standard Subpart L, scaffolding terms, safety, erection, and various types of scaffolding used. Aerial lift operation and safety.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
HFA215	Fundamental Insulation Skills: Piping II	Insulation for piping for cryogenic service. Insulation materials, coverings, finishes, and sealants for underground piping. Measure and cut rigid insulation using hand and table saws. Score block and board. Insulation of vertical and horizontal cylinders, finished heads and finished bodies using wired, bands, pins, stick clips, and washers. Insulate duct work in an air-handling system using fibrous board, duct wrap and flexible sheet	Prerequisites: A grade of C or better in HFA115.	LEC 5.0 5.0 5.0
HFA250	Shop Fabrication: Layout and Pattern-making for Insulators II	Shop fabrication for the heat, frost and asbestos trades related to insulation. Advanced layout patterns for long and short radius elbows, cones, bevels, and tank heads. Specifications for selecting fittings and structures. Numbers and sizes of miters and gores	Prerequisites: A grade of C or better in HFA150.	LEC 5.0 5.0 5.0
HFA260	Blueprints and Firestopping	Contents of a set of plans. Major divisions in a set of drawings and title blocks. Bidding requirements, contract forms and conditions of contract. Architect's scale. Architectural, isometric, structural, plumbing, electrical, mechanical, and ductwork drawings. Symbols and abbreviations. Heating, Ventilating, and Air Conditioning system operations. Calculate materials for insulation. Firestopping systems, materials, and installation.	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HFA270	Supervision for Foremen	Foreman's role on the job site. Management and leadership using functional, adaptive and technical skills. Effective supervision and communication skills. Maslow's Motivational Theory. Short term motivators. Foreman responsibilities in area of performance and production. Traits and habits of effective leaders Leadership styles and team building. Labor/contractor cooperation	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
HFA298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
HFA298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
HFA298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
HIM101	Introduction to Health Information Management	Provides detailed investigation of the history, development, and evolution of the health information management (HIM) profession. Topics include health care delivery systems, HIM career paths, HIM functions, and HIM in acute and alternative care settings.	Prerequisites: Acceptance into the (Medical Coding: Hospital-Based, or Medical Billing and Coding: Physician-Based, or Health Information Technology) program, and permission of Program Director.	LEC 3.0 4.0 3.7
HIM103	Long Term Care Delivery	Provides a survey of the Long-Term Care (LTC) continuum and the health information management function in long term care. Topics include long term care services provided in acute, ambulatory, and alternative care settings; LTC ethics and policy considerations; financial management; and special LTC populations.	Prerequisites: Acceptance into the Health Information Technology program and permission of Program Director.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HIM105	Computers in Healthcare and Health Record Systems	Introduction to computer applications in healthcare settings including electronic health records, health record content, structure, and origin of clinical information for various healthcare settings. A basic review of federal, state, and organizational documentation guidelines. Legal and ethical issues applicable to health information documentation and coding practices.	Prerequisites: (Acceptance into either the Medical Coding: Hospital-Based or the Medical Billing and Coding: Physician-Based program) and a grade of C or better in HCC130 or permission of Program Director.	LEC 2.0 2.0 2.0
HIM106	Legal and Ethical Aspects of Health Information Management	Overview of legal and ethical principles in health care and health information management. Topics include federal and state court systems; legal terminology; health care law; privacy, confidentiality, and security; release of information guidelines; ethics, bioethics, and ethical dilemmas.	Prerequisites: Acceptance into the Health Information Technology program and permission of Program Director.	LEC 3.0 3.0 3.0
HIM160	Health Data and Content	Introduction to data collection methods for health information systems. Overview of data structure, content, and standards, datasets and databases used in various health care settings, and registries and indexes.	Prerequisites: A grade of C or better in (BPC110 or CIS105) or permission of Program Director.	L+L 2.0 3.0 3.0
HIM180	Introduction to Medical Billing and Reimbursement	Overview of the medical billing profession, the revenue management process, and federal billing guidelines. Topics include Medicare, Medicaid, third party payers, management care models, and national insurance schemes.	Prerequisites: Permission of Program Director.	LEC 2.0 2.0 2.0
HIM181	Medical Claims Processing	Provides in-depth analysis of the medical claims process in ambulatory care settings. Topics include electronic data interchange, claims management, confidentiality, data retention, and the claims review and appeals process.	A grade of C or better required in all Prerequisites. Prerequisites: [(BPC110 or CIS105) and HIM180] or permission of Program Director. Prerequisites or Corequisites: HIM208 or permission of	L+L 3.0 5.0 5.0
HIM182	Human Diseases for Coding in Long Term Care Settings	Overview of diseases commonly treated in long term, home health, and hospice settings. Systems approach to causes, signs, symptoms, manifestations, diagnosis, and treatment of these diseases as required for accurate diagnostic coding.	Prerequisites: A grade of C or better in (BIO160 and HCC146) or permission of Program Director.	LEC 2.0 2.0 2.0
HIM183	Diagnostic Coding in Long Term Care Settings	Introduction to the International Classification of Diseases (ICD) in long term care, home health and hospice settings. Topics include principles for diagnostic coding, standards of ethical coding, and diagnostic coding for reimbursement and coding compliance.	A grade of C or better required in all Prerequisites. Prerequisites: (BIO201 and HCC145) or permission of Program Director. Prerequisites or Corequisites: HIM200 or permission of Program Director.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HIM200	Human Pathophysiology and Pharmacology for Health Information Management (HIM) Professionals	Surveys common disease states and conditions that impact each of the major body systems and the reproductive process. Explores how the study of diseases, conditions, and treatments are connected to the health information management function. Topics include disease etiology; signs and symptoms of diseases and conditions; prognosis of diseases and conditions; and pharmacological concepts related to drug nomenclatures, sources of drugs, drug actions and dosage, and routes of drug administration.	Prerequisites: A grade of C or better in (HCC145 and BIO201) or permission Program Director.	LEC 3.0 4.0 3.7
HIM203	Healthcare Statistics and Data Analytics	Emphasizes the role of Health Information Management professionals in calculating, mining, and reporting healthcare statistics for data analytics, research, quality assurance, financial, and other purposes. Topics include health statistics, morbidity, mortality, quality resource management, and research design.	Prerequisites: A grade of C or better in (CIS114DE, HIM160 and MAT112) or permission of Program Director.	L+L 3.0 4.0 4.0
HIM205	Managing Health Information in Long Term Care Settings	Provides an in depth analysis of the health information management function in Long Term Care (LTC) settings. Topics include long term care health record systems; LTC regulatory compliance standards and guidelines; common technologies used in LTC; and statistical and data analytics in LTC.	Prerequisites: A grade of C or better in HIM103. Corequisites: BPC110 or permission of Program Director.	L+L 2.0 4.0 4.0
HIM207	Health Information Organizational Resource Management	Provides an overview of principles and practices essential to the efficient use of human, financial, and physical resources within health information management services. Topics include team building, planning, leading, organizing, directing, and controlling.	Prerequisites: A grade of C or better in (HIM101 and HIM106) or permission of Program Director.	LEC 3.0 3.0 3.0
HIM208	ICD-CM Diagnostic Coding	Introduction to the International Classification of Diseases, Clinical Modification (ICD-CM) coding system. Topics include application of current ICD-CM guidelines and conventions for symptoms, signs, and abnormal clinical and laboratory findings, diseases, conditions, and external causes of morbidity in inpatient and outpatient settings.	A grade of C or better required in all Prerequisites. Prerequisites: (BIO202, HCC145, and HIM200) or permission of Program Director. Prerequisites or Corequisites: HIM180 or permission of	L+L 2.0 4.0 4.0
HIM209	Procedural Coding Systems for Non-Coders	Surveys major procedural coding systems used in acute, ambulatory, and alternative care settings. Structure, content, and guidelines for the current International Classification of Diseases, Procedure Coding System (ICD-PCS), Current Procedural Terminology (CPT), and Healthcare Common Procedure Coding System (HCPCS) classification systems are explored. Topics include purpose and function of procedural coding; coding guidelines and conventions; and coding accuracy, totality, and sequencing.	A grade of C or better required in all Prerequisites. Prerequisites: HIM200 and BIO202. Prerequisites or Corequisites: HIM208 or permission of Program Director.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HIM210	ICD-PCS Coding and ICD Applications	Introduction to the International Classification of Diseases, Procedure Coding System (ICD-PCS). Topics include application of the current ICD-PCS guidelines and conventions for procedures in inpatient settings and coding technologies.	A grade of C or better required in all Prerequisites. Prerequisites: BIO202 and HIM200. Prerequisites or Corequisites: HIM208 or permission of Program Director.	L+L 2.0 4.0 4.0
HIM211	Advanced Applications of Coding and Reimbursement	Provides foundation for advanced coding application including the use of references, source documents, and technology. Topics include Uniform Hospital Discharge Data Set; diagnostic-related groups; federal regulations for hospital-based settings; coding conventions for home health, long term care, rehabilitation, and other health care settings; and the use of codes for administrative, reimbursement, marketing, and regulatory purposes.	Prerequisites: A grade of C or better in (HIM208 and HIM210) or permission of Program Director.	L+L 4.0 6.0 6.0
HIM213	CPT and HCPCS Coding	Provides students with the foundation for using the Current Procedural Terminology (CPT) and the Healthcare Common Procedure Coding System (HCPCS). Topics include coding guidelines, healthcare reimbursement, coding technologies, ethical coding, and compliance issues.	Prerequisites: A grade of C or better in BIO202, HCC145, and HIM200.	L+L 3.0 6.0 6.0
HIM215	Physician-Based Billing and Coding Seminar	Guidance in the development of physician-based billing and coding compliance programs.	A grade of C or better required in all Prerequisites. Prerequisites: HIM213 or permission of Program Director. Prerequisites or Corequisites: HIM211, current CPR at BLS Healthcare Provider Level through the American Heart Association, and permission of Program Director. Corequisites: HIM216 or permission of	LEC 1.0 1.0 1.0
HIM216	Professional Practice in Physician-Based Billing and Coding	Practical application of billing and coding guidelines, conventions, and regulations under the supervision of a preceptor in an ambulatory care setting.	A grade of C or better required in all Prerequisites. Prerequisites: HIM213 or permission of Program Director. Prerequisites or Corequisites: HIM211, current CPR at BLS Healthcare Provider Level through the American Heart Association, and permission of Program Director. Corequisites: HIM215 or permission of	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HIM219	Health Information Management Systems	Overview of the fundamental concepts, terminology, and structure of health information systems with an emphasis on applications used to manage electronic health information. Topics include health informatics; health information systems; electronic claims processing; electronic health records; electronic data interchange; and privacy, security, and confidentiality.	Prerequisites: A grade of C or better in HIM160, and (BPC110 or CIS105).	L+L 3.0 3.0 3.0
HIM221	Medical Coding Seminar	Guides students in the development of hospital-based coding compliance programs. Explores career development tools for medical billers and coders.	A grade of C or better required in all Prerequisites. Prerequisites: HIM213 or permission of Program Director. Prerequisites or Corequisites: HIM211 or permission of Program Director. Corequisites: HIM222 or permission of	LEC 1.0 1.0 1.0
HIM222	Professional Practice in Medical Coding	Practical application of coding guidelines, conventions, and regulations under the supervision of a preceptor in an acute care setting.	A grade of C or better required in all Prerequisites. Prerequisites: HIM213 or permission of Program Director. Prerequisites or Corequisites: HIM211, current CPR at BLS Healthcare Provider Level through the American Heart Association, and permission of Program Director. Corequisites: HIM221 or permission of	LAB 1.0 5.0 0.0
HIM225	Health Data Analytics	Provides students with integral tools and skills to analyze data commonly used in healthcare provision. Topics include data analysis, organization, and preparation tools; statistical techniques and variables; study design; benchmarking; and quality and performance improvement.	Prerequisites: A grade of C or better in (CIS114DE and HIM203).	L+L 3.0 4.0 4.0
HIM231	Health Data Management Seminar	Designed for students pursuing skills and knowledge in health data management. Topics include career development, team building, health data systems management and preparation for the professional certification exam.	Prerequisites: A grade of C or better in CIS114DE, HIM203, HIM208, and HIM209. Corequisites: HIM232.	LEC 1.0 3.0 2.4

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HIM232	Health Data Management Professional Practice	Practical application of health data management knowledge and skills under the supervision of a preceptor in an acute, ambulatory, and/or alternative care setting.	Prerequisites: A grade of C or better in CIS114DE, HIM203, HIM208, HIM209 and current CPR certification at Basic Life Support (BLS) Healthcare Provider level through the American Heart Association. Corequisites: HIM231.	LAB 1.0 5.0 0.0
HIM233	Revenue Cycle Management Seminar	Prepares students for the workforce in the field of revenue cycle management. Topics include strategies for team building, project collaboration, career development, and preparation and review for professional exam.	Prerequisites: A grade of C or better in (HIM208 and HIM210) or permission of Program Director. Corequisites: HIM234 and permission of Program	LEC 1.0 3.0 2.4
HIM234	Revenue Cycle Data Management Professional Practice	Practical application of revenue cycle management knowledge and skills under the supervision of a preceptor in an acute, ambulatory, and/or alternative care setting.	Prerequisites: A grade of C or better in (HIM208 and HIM210) or permission of Program Director, and CPR at BLS Healthcare Provider level through the American Heart Association. Corequisites: HIM233 and permission of	LAB 1.0 5.0 0.0
HIM298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
HIM298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HIM298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
HIS100	History of Western Civilization to Middle Ages	Survey of the origin and development of Western civilization and its institutions from prehistory through the Ancient World and the Middle Ages.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS101	History of Western Civilization Middle Ages to 1789	Survey of the history of the Western world from the emergence of Western civilization in the Middle Ages to the start of the French Revolution.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS102	History of Western Civilization 1789 to Present	Survey of the history of the Western world from the French Revolution to the present.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS103	United States History to 1865	The political, economic, and social development of the United States from the Pre-Columbian period through the end of the Civil War (1865).	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS104	United States History 1865 to Present	The political, economic, and social development of United States from 1865 to the present time.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS105	Arizona History	The history of Arizona covering the Native American experience, Spanish colonial times, the Mexican national period, the U.S. federal territorial years, and its political and economic developments as a state.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS106	Southwest History	Historical survey of the American Southwest including ecological/environment, political, economic, religious and social developments. Includes the unique role of the region in national and global events.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS107	Selected Issues in History	In-depth survey of selected issues in history. Includes examination of the relationships among events, ideas, and artifacts relevant to the selected topic. Incorporates various historical lenses pertinent to the topic.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS108	United States History 1945 to the Present	Survey of American history from 1945 to the present. Focuses on the political, social, economic and cultural history of the United States from the end of World War II to the present time. Includes domestic developments and foreign policy.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HIS109	Mexican American History and Culture	Examination of the origins and development of Mexican American peoples. Including culture, history and contributions within the United States. Emphasis on educational, social, and economic conditions of Mexican Americans of the southwest.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS110	World History to 1500	A global survey of the economic, social, cultural, environmental, and political elements of world history to 1500.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS111	World History 1500 to the Present	A survey of the economic, social, cultural, and political elements of world history from 1500 to the present.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS113	History of Eastern Civilizations to 1850	An examination of the development of civilizations, religions and philosophies in the Near East, India, Far East, and Southeast Asia from ancient times to the mid-nineteenth century.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS114	History of Eastern Civilizations 1850 to Present	Examination of characteristics and development of civilizations of Middle East, India, Far East, and Southeast Asia, from mid-nineteenth century to present.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS140	American Indian History	Survey of American Indian history with emphasis on the last 200 years. Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS145	History of Mexico	Survey of the major forces that shaped the history of Mexico and its culturally diverse communities from pre-Columbian times to the present. Also examines how these historical forces continue to shape contemporary Mexican society and its place within the world.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS170	American Indian History of the Southwest	Covers history of American Indian Peoples of the Southwestern United States from pre-European contact era to the present. Includes historical events, the development and implementation of non-Indigenous policies and their impact on American Indian Peoples in these areas, and contemporary issues of importance.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS173	United States (U.S.) Military History 1603 to Present	Examines the history of the United States (U.S.) in war and peace from the colonial era to the present and the role of the military in the nation's development.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS175	Global History of World War II	Global survey of World War II (WWII), focusing on its origins, major military confrontations and events, conclusion, and historical significance.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS190	Environmental History	Historical overview of the interactions between humans and the natural environment in various time periods and regions around the world.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HIS200	Introduction to Africana Studies	Survey of the social, economic, political, environmental, and cultural developments of various African communities from the beginning of human civilization to the present, including the development of the African diaspora as well as the historical and cultural impacts of African interactions with other global communities.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS201	History of Women in America	Introduction to women's history from the colonial period to the present. Explores changes and developments which have influenced the lives of women.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS203	African-American History to 1865	History and cultural heritage of African-Americans from ancestral origins in Ancient Africa through the experience of chattel slavery in the Americas to eventual emancipation and participation in the American Civil War.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS204	African-American History 1865 to Present	The multifaceted history and cultural heritage of African-American communities since the Civil War, presented within the broader context of U.S. history. This course explores the social, economic, political, and cultural history of African-American communities, including the historical and cultural impacts of slavery and discrimination, and the collective struggle for freedom, equality, and self-determination throughout U.S. history.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS209	The Chicana/o in 20th and 21st Century America	Analysis of the 20th and 21st century Chicano experience. Interdisciplinary approach to contemporary Mexican American history and culture in the borderlands.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS212	History of Religion	Survey of the historical contexts in which the major religions have emerged and evolved. Focuses on social and political events throughout history and their impact on religious beliefs and practices.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS251	History of England to 1700	Analysis of the major political, social, economic, and cultural/intellectual factors in English historical development from Celtic times to the end of the 17th century.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS252	History of England 1700 to Present	Analysis of the major political, cultural, social, and intellectual factors in English historical development from c. 1688 to present.	Prerequisites: None.	LEC 3.0 3.0 3.0
HIS277	The Modern Middle East	Survey of the political, religious and economic development of the Middle East since 1500. Emphasis on the decline of the Moslem empire(s), the resurgence of contemporary Pan- Arabism, the Palestinian-Israeli question, jihadism, fundamentalist terrorism, the Taliban and Al Qaeda, and the impact of oil production on the region and the rest of the world.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HIS279	Creating and Telling Fact-Based Historical Stories	Creating and telling fact-based stories and stories from history.	Prerequisites: A grade of C or better in EDU/HUM/STO292. Xref: EDU292 HUM292	LEC 3.0 3.0 3.0
HIS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
HIS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
HIS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
HLC130	Fundamentals in Health Care Delivery	Overview of current and recent development of health care professions, including career and labor market information, health care delivery systems, third party payers, and facility ownership. Health organization structure, patient rights and quality care. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Basic communication skills which facilitate inter-professional teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies.	Prerequisites: Admission to program, and successful completion of RDG100 or higher or appropriate reading placement into CRE101.	30

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HLC130	Fundamentals in Health Care Delivery	Overview of current and recent development of health care professions, including career and labor market information, health care delivery systems, third party payers, and facility ownership. Health organization structure, patient rights and quality care. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Basic communication skills which facilitate inter-professional teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies.	Prerequisites: Admission to program, and successful completion of RDG100 or higher or appropriate reading placement into CRE101.	20
HLC145	Medical Terminology for Health Care Professionals	Medical terminology used in health care, with special care populations and in special services. Body systems approach to terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing terms using word parts. Medical abbreviations, symbols, and term spelling.	Prerequisites: A grade of C or better is required in HLC130.	105
HMC100	Medical Billing and Coding Examination Review	This course reviews separate subjects that will be taught in preparation for the National Certified Professional Coder (CPC) Examination administered through the American Academy of Professional Coders (AAPC).	Prerequisites: A grade of C or better is required in HMC213 or permission of Instructor.	48
HMC100	Medical Billing and Coding Examination Review	This course reviews separate subjects that will be taught in preparation for the National Certified Professional Coder (CPC) Examination administered through the American Academy of Professional Coders (AAPC).	Prerequisites: A grade of C or better is required in HMC213 or HMC213DC permission of Instructor.	30
HMC100DC	Medical Billing and Coding Examination Review	This course reviews separate subjects that will be taught in preparation for the National Certified Professional Coder (CPC) Examination administered through the American Academy of Professional Coders (AAPC).	Prerequisites: A grade of C or better is required in HMC213 or permission of Instructor.	40
HMC105	Computers in Healthcare and Health Record Systems	Introduction to computer applications in healthcare settings including electronic health records, health record content, structure, and origin of clinical information for various healthcare settings. A basic review of federal, state, and organizational documentation guidelines. Legal and ethical issues applicable to health information documentation and coding practices.	Prerequisites: A grade of C or better is required in HMC181 and HMC213.	36

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HMC105	Computers in Healthcare and Health Record Systems	Introduction to computer applications in healthcare settings including electronic health records, health record content, structure, and origin of clinical information for various healthcare settings. A basic review of federal, state, and organizational documentation guidelines. Legal and ethical issues applicable to health information documentation and coding practices.	Prerequisites: A grade of C or better is required in HMC181 or HMC181DC and HMC213 or HMC213DC.	30
HMC105DC	Computers in Healthcare and Health Record Systems	Introduction to computer applications in healthcare settings including electronic health records, health record content, structure, and origin of clinical information for various healthcare settings. A basic review of federal, state, and organizational documentation guidelines. Legal and ethical issues applicable to health information documentation and coding practices.	Prerequisites: A grade of C or better is required in HMC181DC and HMC213DC.	40
HMC180	Introduction to Medical Billing and Reimbursement	This course provides an overview of the medical billing profession and the revenue management process. Topics include Medicare, Medicaid, third-party payers, managed care models, and national insurance schemes.	Prerequisites: A grade of C or better is required in HMC200.	48
HMC180	Introduction to Medical Billing and Reimbursement	This course provides an overview of the medical billing profession and the revenue management process. Topics include Medicare, Medicaid, third-party payers, managed care models, and national insurance schemes.	Prerequisites: A grade of C or better is required in HMC200 or HCM20DC.	40
HMC180DC	Introduction to Medical Billing and Reimbursement	This course provides an overview of the medical billing profession and the revenue management process. Topics include Medicare, Medicaid, third-party payers, managed care models, and national insurance schemes.	Prerequisites: A grade of C or better is required in HMC200.	45
HMC181	Medical Claims Processing	This course provides an in-depth analysis of the medical claims process in ambulatory care settings. Topics include electronic data interchange, claims management, confidentiality, data retention, and the claims review and appeals process.	Prerequisites: A grade of C or better is required in HMC180.	54
HMC181DC	Medical Claims Processing	This course provides an in-depth analysis of the medical claims process in ambulatory care settings. Topics include electronic data interchange, claims management, confidentiality, data retention, and the claims review and appeals process.	Prerequisites: A grade of C or better is required in HMC180 or HMC180DC.	50
HMC200	Human Pathophysiology and Pharmacology for HMC	This course surveys common disease states and conditions that impact each of the major body systems and the reproductive process. Topics include disease etiology; signs and symptoms of diseases and conditions; prognosis of diseases and conditions; and pharmacological concepts related to drug nomenclatures, sources of drugs, drug actions and dosage, and routes of drug administration.	Prerequisites: A grade of C or better is required in HLC145.	180

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HMC200DC	Human Pathophysiology and Pharmacology for HMC	This course surveys common disease states and conditions that impact each of the major body systems and the reproductive process. Topics include disease etiology; signs and symptoms of diseases and conditions; prognosis of diseases and conditions; and pharmacological concepts related to drug nomenclatures, sources of drugs, drug actions and dosage, and routes of drug administration.	Prerequisites: A grade of C or better is required in HLC145.	150
HMC208	ICD-CM Diagnostic Coding	This course introduces students to the International Classification of Diseases, Clinical Modification (ICD-CM) coding system. Topics include application of current ICD-CM guidelines and conventions for symptoms, signs, and abnormal clinical and laboratory findings, diseases, conditions, and external causes of morbidity in inpatient and outpatient settings.	Prerequisites: A grade of C or better is required in ISP110PC.	90
HMC208DC	ICD-CM Diagnostic Coding	This course introduces students to the International Classification of Diseases, Clinical Modification (ICD-CM) coding system. Topics include application of current ICD-CM guidelines and conventions for symptoms, signs, and abnormal clinical and laboratory findings, diseases, conditions, and external causes of morbidity in inpatient and outpatient settings.	Prerequisites: A grade of C or better is required in HMC181DC.	100
HMC213	CPT and HCPCS Coding	This course provides students with the foundation for using the Current Procedural Terminology (CPT) and the Healthcare Common Procedure Coding System (HCPCS) coding systems. Topics include coding guidelines, healthcare reimbursement, coding technologies, ethical coding, and compliance issues.	Prerequisites: A grade of C or better is required in HMC208.	216
HMC213	CPT and HCPCS Coding	This course provides students with the foundation for using the Current Procedural Terminology (CPT) and the Healthcare Common Procedure Coding System (HCPCS) coding systems. Topics include coding guidelines, healthcare reimbursement, coding technologies, ethical coding, and compliance issues.	Prerequisites: A grade of C or better is required in HMC208 or HMC208DC.	175
HMC213DC	CPT and HCPCS Coding	This course provides students with the foundation for using the Current Procedural Terminology (CPT) and the Healthcare Common Procedure Coding System (HCPCS) coding systems. Topics include coding guidelines, healthcare reimbursement, coding technologies, ethical coding, and compliance issues.	Prerequisites: A grade of C or better is required in HMC208DC.	215

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HON190	The Honors Experience	Interdisciplinary studies of selected issues confronting the individual and society and overall human experience. Critical inquiry of specific themes from a wide variety of academic viewpoints. Comprehensive and interdisciplinary review of global, historical, and cultural trends, supplemented by readings and discussion. Varied content due to changing honors forum themes and issues.	Prerequisites: Admission to the college honors program or permission of Instructor.	LEC 3.0 3.0 3.0
HON201	Leadership Development: Historical and Contemporary Perspectives	Interdisciplinary study of leadership focusing on development of leadership skills.	Prerequisites: Admission to the college honors program or permission of Instructor.	LEC 3.0 3.0 3.0
HRC101	Overview of Healthcare Compliance	Introduction and overview of healthcare compliance; evolution of the field as a profession. Exploration of federally legislated mandates for a Compliance Program. Program elements. Organizational steps for implementation in specific settings.	Prerequisites: None.	LEC 1.0 1.0 1.0
HRC228	Healthcare Industry Regulation	Comprehensive review and study of laws that regulate the healthcare delivery industry including fraud and abuse, patient privacy, Protected Health Information (PHI) and electronic Protected Health Information (ePHI), and occupational safety for workforce members, patients, and visitors.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRC230	Healthcare Corporate Compliance Program Design	Creation, management, and evaluation of all aspects of a formal health care corporate compliance program. Compliance officers, compliance committee. Risk analysis, recommendations for corrective action. Implementation of corrective action.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRC232	Health Care Regulatory Compliance Program Design	Creation, management and evaluation of a health care regulatory compliance program including the work plan. Address the Health Insurance Portability and Accountability Act (HIPAA) Privacy and Breach Rules, HIPAA Security and Meaningful Use Attestation, Occupational Safety and Health Plan for workforce members, patients, and visitors. Occupational Safety and Health Administration (OSHA), Arizona Division of Occupational Safety and Health (ADOSH), Medicare/Medicaid Fraud and Abuse, Human Resources employment laws, Clinical Laboratory Improvement Act (CLIA) and Arizona Radiation Regulatory Agency (ARRA).	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HRC234	Health Care Regulatory Enforcement Case Studies	Comprehensive review of case studies involving litigation and enforcement of health care law including review of landmark and contemporary cases brought by the United States Office of the Inspector General (Fraud and Abuse); the Office of Civil Rights; the Health Insurance Portability and Accountability Act (HIPAA) Privacy and Security Laws. Application of knowledge and skills from earlier coursework to real-world situations.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM110	Introduction to Hospitality and Tourism Management	A fundamental overview of the hotel, restaurant, and tourism segments of the hospitality and tourism industry. Provides an overview of the operational sectors of the industry and reviews management components and skills. Contains components to develop a professional career plan.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM120	Hotel Facility Management	Fundamental duties and responsibilities of hotel facility management. Emphasis on detail tasks, including personnel, cleaning, purchasing, equipment, textiles, maintenance, and safety. Examines basic systems for hotel facility management record keeping	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM130	Guest Services Management	Examines organization and management of the hotel front office and guest service operations. Explores key front office functions and related systems and skills necessary to ensure guest satisfaction and efficient operations	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM140	Food Production Concepts	Concepts related to preparation of hot foods, pantry, and bakery items for commercial kitchens. Emphasis on essential components and techniques of food production, food cost control, setting standards, ordering, and inventory.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM142	Wine: From Vine to Table	An overview of the history, culture, viticulture techniques, production, distribution, control, and consumption in the wine industry. Provides an overview of wine and health issues, interpreting wine labels, alcohol service laws, and general operational concepts of the wine industry.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM145	Events Management	Introduction to organizing all event concepts through to completion, including goals and objectives, events design and vision, coordination, marketing, financing, budgeting, strategic planning and risk management, and assessing food and beverage needs. Provides an overview of the goals and objectives, and logistical functions involved in staging and managing events, including meetings, conferences, entertainment, expositions, conventions, and sporting events.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HRM146	International Meetings, Conventions and Exhibitions	Introduces the planning and executing of multinational and multicultural meetings, conventions and exhibitions. Emphasizes coordination, logistics, venue selection, budgeting and cultural competencies critical to a global business environment	Prerequisites: A grade of C or better in HRM110.	LEC 3.0 3.0 3.0
HRM150	Hospitality and Tourism Information Systems I	Overview of current computer technology, concepts and terminology as it applies to the hospitality and tourism industry. Use of software applications including word processing, spreadsheet, database and presentation graphics. Discussion of social and ethical issues related to computers. Exploration of relevant and emerging technologies in the industry.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM160	Tourism Principles and Practices	Explores the multifaceted nature of tourism from social-behavioral science perspectives with a global awareness angle. Includes the economic, historical, political, psychological, and sociological dimensions of tourism. Evaluates the diverse nature of world travel destinations, cultures, and ecology. Includes contemporary world cultures, their relationship with American culture, and emerging trends, such as food tourism and health care tourism.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM170	Hospitality in Healthcare and Life Care Management	Provides an overview of the role of hospitality in healthcare facilities and life care communities. Topics include history and future growth, customer service in these high-touch environments, facility design and housekeeping requirements, medical and health management, sensitivity to those healing and dealing with end-of-life issues, overall providing a strong management and customer service structure while caring for the most vulnerable.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM220	Hospitality Managerial Accounting	Study of financial statement analysis, asset management, ratio analysis, analytical techniques, and investment decision making. Emphasis on planning, budgeting, and management decisions.	Prerequisites: A grade of C or better in ACC111 or ACC211 or HRM265.	LEC 3.0 3.0 3.0
HRM230	Beverage Management	Identification, production, purchasing, and service of spirits, wine and beer products. Marketing, menu development, and cost controls of a beverage operation. Special emphasis on staffing training, and legal regulations for beverage sales.	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM235	Club Management	Examines organization and management of private clubs. Emphasis on member services and operations management. Explores key functions including food and beverage, golf operations, fitness and recreation programs	Prerequisites: A grade of C or better in HRM110.	LEC 3.0 3.0 3.0
HRM240	Commercial Food Production	Application of food preparation principles, procedures, and techniques to small and large quantity food production. Emphasis on techniques and procedures used in contemporary commercial kitchens	Prerequisites: A grade of C or better in HRM110 and HRM140.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HRM250	Hospitality and Tourism Information Systems II	Use of computer systems to generate information needed for management of lodging, tourism and food service businesses. Emphasis on computer-based hotel property and restaurant management systems. Includes basic ledger principles	Prerequisites: A grade of C or better in (HRM110 and HRM150) or permission of Instructor.	LEC 3.0 3.0 3.0
HRM260	Hospitality Human Resource Management	Examines concepts and applications of human resource management in the hospitality industry. Topics include recruitment, selection, training and evaluation. Emphasis on current management methods and productivity in the service environment	Prerequisites: A grade of C or better in HRM110 or permission of Instructor.	LEC 3.0 3.0 3.0
HRM265	Financial Management for Hospitality and Tourism	Examines financial management concepts, analytical techniques and decision making processes essential to hospitality and tourism management. Provides an applied management approach to managing profitability, financing growth, and using financial analysis to make decisions.	Prerequisites: A grade of C or better in HRM110. MAT140 or MAT141 or MAT142 recommended but not required.	LEC 3.0 3.0 3.0
HRM270	Hospitality Marketing	Essential skills of defining a service market, developing a market plan, and directing personnel to follow market plan. Emphasis on marketing in the hospitality industry and understanding segmentation, positioning and promotion in that market	Prerequisites: A grade of C or better in HRM110.	LEC 3.0 3.0 3.0
HRM275	Restaurant Management	Overview of restaurant industry with focus on the major segments. Emphasis on developing plans for: marketing, accounting system, staffing, training, menu development and cost controls for restaurant operation. Special emphasis on safety and sanitation, and legal regulations in the restaurant industry	Prerequisites: None.	LEC 3.0 3.0 3.0
HRM280	Hospitality and Tourism Law	Examines legal aspects of hotel, restaurant and tourism management. Uses case study approach to develop understanding of the laws and regulations governing guest relationships, contracts, employee relations, civil rights, alcoholic beverages, safety and product liability	Prerequisites: A grade of C or better in HRM110.	LEC 3.0 3.0 3.0
HRM290	Ecotourism	Overview of ecotourism planning and development with emphasis on contemporary issues associated with environmentally sound, culturally sensitive and economically viable tourism development. Examines the history and emergence of ecotourism and the establishment of policies and management practices associated with sustainable development that conserves natural resources while providing economic benefits	Prerequisites: A grade of C or better in HRM110.	LEC 3.0 3.0 3.0
HRM295AA	Hospitality Internship	Hospitality and/or tourism work experience in a business or industry. Eighty hours of designated work per credit.	Prerequisites: Permission of Department or Division.	LAB 1.0 1.0 0.0
HRM295AB	Hospitality Internship	Hospitality and/or tourism work experience in a business or industry. Eighty hours of designated work per credit for a total of 160 hours.	Prerequisites: Permission of Department or Division.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HRM295AC	Hospitality Internship	Hospitality and/or tourism work experience in a business or industry. Eighty hours of designated work per credit for a total of 240 hours.	Prerequisites: Permission of Department or Division.	LAB 3.0 3.0 0.0
HRM296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
HRM296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
HRM296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HRM296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
HRM298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
HRM298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
HRM298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
HSE101	Teaching Foundations in Healthcare Education	Examination of teaching foundations essential to understanding healthcare education as a discipline. Orientation to health professions concepts such as patient-centered care, interdisciplinary teams and evidence-based practice. Exploration of differences in healthcare education versus educational practices to develop skills necessary for a career as a health professions educator.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HSE102	Ethics and Diversity in Healthcare Educational Settings	Exploration of topics related to ethics and diversity within the educational setting as it relates to healthcare programs. Examination of the role of prejudice, stereotyping, and cultural incompatibilities in healthcare education. Reiterating topics of professionalism, legal knowledge, code of conduct, and other issues that are routinely addressed in the classroom and healthcare.	Prerequisites: None.	LEC 3.0 3.0 3.0
HSE103	Curriculum Design and Teaching in Healthcare Education	Introduction to curriculum design for healthcare education coursework derived from formal career and clinical knowledge. Examination and application of learning and teaching theories and curriculum models within the classroom, laboratory, or clinical learning environment in healthcare education.	Prerequisites: None.	LEC 2.0 2.0 2.0
HSE104	Assessment and Evaluation in Clinical Education	Application and determination of student performance using various methods. Methodologies will be explored on how to gauge the students' comprehension and understanding, and this feedback will help inform instruction.	Prerequisites: None.	LEC 3.0 3.0 3.0
HSE105	Technology Integration and Design for Healthcare Education	Explore and apply various forms of tools and technology in the teaching and learning processes, and how to engage these processes in the classroom. Introduction to Learning Management Systems (LMSs) and course design.	Prerequisites: None.	LEC 2.0 2.0 2.0
HSE106	Introduction to HIPAA Privacy Rule	Purpose and intent of the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule. Regulation interpretation and application in the health care environment. Guidelines for development of key documents. Penalties for non-compliance.	Prerequisites: Knowledge of basic operations of a medical practice or other health care environment.	LEC 2.0 2.0 2.0
HSE107	Research Methods for Healthcare Education	Introduction of qualitative, quantitative, and mixed methods research in the study of education within the health professions. Explores ethical issues, human subject protection, and institutional review boards associated with research in higher education. Enables students to become better consumers of educational research.	Prerequisites: None.	LEC 1.0 1.0 1.0
HSE108	Practicum in Healthcare Education	Capstone course including curriculum, design, and assessment. Facilitates role transition from student to healthcare educator. Focus on student presentations to a panel of students or peers.	Prerequisites: A grade of C or better in HSE101, HSE102, HSE103, HSE104, HSE105, and HSE107, or permission of Program Director.	LAB 3.0 3.0 3.0
HSE110	Successful Grant Writing	Grant seeking and grant writing processes for the beginning grant writer. Pre-application preparation, application development, and grant proposal evaluation and follow-up. Includes development of grant applications for government and private funding sources	Prerequisites: None.	LEC 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HSM122	Health Services Supervision	Skills and techniques for the leadership and supervision of health services employees. Emphasis placed on assertive supervision, effective human relations skills, and the enhancement of oral and written workplace communications	Prerequisites: None.	LEC 3.0 3.0 3.0
HSM125	Current Issues in Health Services Management	Overview of the inner workings of the health care industry and the forces that drive and control the delivery of health services. Explores financial, technological and human resources, regulatory systems, and national, state and local issues	Prerequisites: None.	LEC 3.0 3.0 3.0
HSM207	Health Service Management Internship	Application of leadership, supervisory and managerial skills and observation of administrative function in a specific health services setting.	Prerequisites: A grade of C or better in Any three (3) of the following four (4) courses: HSM122, or HSM125, or HSM222, or HSM226, or permission of Instructor.	LAB 3.0 15.0 0.0
HSM222	Health Services Management	The role and functions of management in understanding and building organizational effectiveness. Focuses on the manager as a leader and planner capable of developing motivated and committed employees and work teams	Prerequisites: None.	LEC 3.0 3.0 3.0
HSM226	Ethics and Legalities of Health Services Management	Identification, analysis, and problem solving related to legal and ethical issues in health services management. Includes an emphasis on employment law, confidentiality issues, accurate financial reporting and personal promotional preparation	Prerequisites: None.	LEC 3.0 3.0 3.0
HSM230	Healthcare Strategic Planning and Deployment	A comprehensive look at the development and implementation of strategic plans within healthcare business environments. This course explores essential techniques, tools, data, and communication strategies for developing strategic plans in order to make better recommendations for initiatives across the continuum of healthcare services.	Prerequisites: None.	LEC 3.0 3.0 3.0
HSM282AA	Volunteerism for Health Services Management: A Service Learning Experience	Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in Any three (3) of the following four (4) courses: HSM122, or HSM125, or HSM222, or HSM226, or permission of Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HST180	Overview of Histology (Anatomic) Laboratory	Overview of anatomic laboratory services, anatomic laboratory professionals, and the role of the histology technician. Emphasis on certification, accreditation, and regulatory agencies. Application of process improvement, quality control, laboratory mathematics, infection control, sharps/mechanical hazards, documentation, medico-legal implications, and chemical hygiene principles. Includes information management in anatomic laboratories. Importance of management and supervision leadership principles and professional growth and ethical conduct.	Prerequisites: Admission to Histologic Technology program or permission of Program Director.	LAB 2.0 2.0 2.0
HST181	Chemistry of Fixation	Principles of fixation and fixative solutions. Anatomic laboratory instrumentation and specimen handling, identification, and tracking protocols. Emphasis on gross examination processes, tissue processing protocols, and specialized processing techniques.	Prerequisites: Admission to Histologic Technology program or permission of Program Director, and a grade of C or better in HST180.	L+L 3.0 4.0 4.0
HST182	Microtomy	Emphasis on decalcification techniques, ergonomic safety practices for microtomy, and frozen section techniques. Application of embedding orientation by tissue type. Procedures for paraffin embedding station, cryostat and rotary microtome set-up and maintenance, and sharps safety practices for the microtome. Includes techniques for microtomy, specialized microtomy, frozen section, and cytology specimen preparation.	Prerequisites: A grade of C or better in HST181.	L+L 5.0 5.0 5.0
HST183	Practicum: Chemistry of Fixation	Practicum in histology techniques performed in an anatomic laboratory. Application of clinical skills for specimen handling, identification, and tracking protocols. Use of anatomic laboratory instrumentation. Study of gross examination protocols. Demonstration of fixation techniques, paraffin processing protocols, and specialized processing techniques. Performance of clerical and computer functions using medico-legal guidelines for documentation. Use of professional and ethical conduct in all interpersonal communications.	Prerequisites: A grade of C or better in HST181 or permission of Program Director.	LAB 1.0 4.5 0.0
HST184	Practicum: Microtomy	Practicum in histology techniques performed in an anatomic laboratory. Use of decalcification and frozen section techniques. Includes embedding orientation by tissue type and ergonomic safety practices for microtomy. Procedures for the paraffin embedding station, cryostat and rotary microtome set-up and maintenance, and sharps safety practices for the microtome. Emphasis on techniques for microtomy, specialized microtomy, frozen section, and cytology specimen preparation.	Prerequisites: A grade of C or better in HST182.	LAB 1.0 4.5 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HST185	Cellular Biological Staining	Recognition of basic cellular structure. Identification of carbohydrates classification, pigments, minerals, and lipids in tissues and connective tissue structures. Explanation of chemical staining theory. Stain principles and procedures for nuclear and cytoplasmic structures, carbohydrates and lipids, connective tissue, and tissue pigments and minerals stains.	Prerequisites: A grade of C or better in HST182. Corequisites: HST187.	L+L 5.0 5.0 5.0
HST186	Cellular Biological and Immunohistochemical Staining	Identification of pathologic organisms and neurological structures. Use of stains for microorganisms and neurological structures. Explanation of theories of histochemical and immunohistochemical staining. Procedures for histochemical and immunohistochemical stains. Overview of specimens for electron microscopy and autopsy procedures. Emphasis on assessing histology workflow processes, laboratory procedure manuals, and workload and productivity recording and monitors.	Prerequisites: A grade of C or better in HST185.	L+L 5.0 5.0 5.0
HST187	Practicum: Cellular Biological Staining	Practicum in histology techniques performed in an anatomic laboratory. Recognition of basic cellular structure, carbohydrate structures, connective tissue, lipid structures, and pigments and minerals in tissues. Application of chemical staining. Emphasis on stains for nuclear and cytoplasmic structures, carbohydrates and lipids, connective tissue, and tissue pigments and minerals stains.	Prerequisites: A grade of C or better in HST185.	LAB 1.0 4.5 0.0
HST188	Practicum: Cellular Biological and Immunohistochemical Staining	Practicum in histology techniques performed in an anatomic laboratory. Identification of pathologic organisms and neurological structures. Use of stains for microorganisms and neurological structures. Application of histochemical and immunohistochemical stains. Observation of electron microscopy and autopsy procedures. Emphasis on histology workflow processes, laboratory procedure manuals, and workload and productivity recording and monitors.	Prerequisites: A grade of C or better in HST186.	LAB 1.0 4.5 0.0
HTM150	Introduction to Healthcare IT and Systems	Introduction to current and emerging Healthcare IT systems with particular emphasis on healthcare information and data, governance, information systems and technologies, and industry challenges in a value-added healthcare environment.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	LEC 3.0 3.0 3.0
HTM200	Healthcare IT Software Infrastructure: Interoperability, Security and mHealth	Application of industry-specific IT skills to entry-level Healthcare IT software development projects, with particular skills emphasis on high-growth areas such as interoperability, security and Mobile Health (mHealth).	Prerequisites: A grade of C or better in [(CIS133AA and CIS133BA and CIS133CA) or CIS133DA] and CIS150AB and HTM150 and permission of Program Director.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HTM230	Healthcare Data Analytics, Artificial Intelligence (AI) and Machine Learning	Overview of theories and practical applications of Data Analytics, Artificial Intelligence (AI), and Machine Learning. A focus on trends, opportunities, and emerging uses, as well as best practices, limitations, and ethical implications. Hands-on practice with current tools to solve complex healthcare problems.	Prerequisites: A grade of C or better in (BPC110 or CIS105) and HTM150.	L+L 3.0 4.0 4.0
HTM250	Healthcare IT Systems Development Life Cycle (SDLC)	Introduction to the Systems Development Life Cycle (SDLC) methodologies and tools currently used on healthcare Information Technology (IT) projects, with particular emphasis on software development. Experience with application development and testing tools in a project-based lab setting.	Prerequisites: A grade of C or better in CIS224 and HTM200 or Corequisites: CIS224 and HTM200.	L+L 3.0 4.0 4.0
HTM270	Healthcare IT Systems Capstone	Culminating application of the skills, knowledge, communication and critical thinking skills from the Healthcare Technology Systems program to address industry-specific challenges. Includes investigation and application of current and emerging healthcare technologies.	Prerequisites: A grade of C or better in HTM250.	L+L 3.0 4.0 4.0
HTM280	Healthcare Technology Systems Career Strategies	Overview of the career exploration and planning process designed to assist students interested in healthcare technology systems and related fields to transition into the professional world. Focuses on current occupational trends and career decision-making strategies with a special emphasis on experiences within the field. Includes practice with self-presentation in the professional world such as effective resumes, personal portfolio, interviewing skills, online presence and professional appearance.	Prerequisites: A grade of C or better in HTM150.	L+L 3.0 2.0 2.0
HUM101	General Humanities	A general humanities course concentrating on three great ages of outstanding human achievement: The Golden Age of Greece, the Renaissance and the 20th Century	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM107	Humanities Through the Arts	Introduction to humanities including film, drama, music, literature, painting, sculpture, and architecture	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM108	Contemporary Humanities	An exploration of human expression in contemporary arts and sciences.	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM201	Humanities: Universal Themes	Study of worldviews in a variety of historical and contemporary world cultures, including analysis of origin and creation myths, artistic expression, spirituality, and the natural environment.	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM202	Humanities: Universal Themes	The hero/heroine; fool, the social world, and the future as themes in the humanities	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM205	Introduction to Cinema	Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements.	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM206	Introduction to Television Arts	History and development of electronic media and its impact on popular arts.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HUM209	Women and Films	Analysis of images of women in films from both historical and contemporary perspectives	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM210	Contemporary Cinema	A study of contemporary films, directors and critics with emphasis on evaluating film as an art form.	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM211AA	Foreign Films: Classics	Analysis of contributions of foreign directors to the art and history of motion pictures through a study of selected films	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM211AE	Foreign Films: Italian	Analysis of contributions of Italian directors to the art and history of motion pictures through a study of selected films.	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM212	Documentary Film	Survey of documentary or non-fiction film. Emphasis on the interplay between form, subject, cultural context and filmmaker perspective. Focuses on primary types of documentary film, such as poetic, observational, expository reflexive, participative, and performative. Analyzes what distinguishes documentary film from fiction film.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
HUM213	Hispanic Film	Analysis of Hispanic film as art form and as social commentary	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM214	African-Americans in Film	Study of films featuring African-American performers and directors from the Silent Era to the present. Emphasis on the historical and social elements of African Americans in film and basics of film analysis	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM215	Film Comedy	Explores the basics of humor in film by tracing its roots through a historical examination of a variety of arts, artists, and theorists. Focuses on films' unique contributions to the world of laughter. Investigates how comedy, and film comedy in particular, provides an essential and unifying force for culture and society.	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM216	The Films and Career of Alfred Hitchcock	Focuses on the career, films, and cinematic and cultural influence of acclaimed director Alfred Hitchcock. Includes the director's cinematic innovations, techniques, major films, and his influence on modern filmmakers.	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM220	History and Film	Presents historically based films and analyzes their accuracy, filmmaking techniques, and their value as cinematic historical records of U.S. and global events.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
HUM225	Introduction to Popular Culture	Introduction to major topics in the field of popular culture studies. Includes basic theories, methods, and concepts used to analyze popular culture texts and practices.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HUM235	Disability Studies	Considers representations of disability as artifacts of Western and non-Western cultures against changing backdrops in knowledge, ideas, beliefs, values, and practices. Works to build awareness, understanding, and empathy in regards to diverse forms of humanity and to de-stigmatize disease, illness, and impairment.	Prerequisites: A grade of C or better in ENG101 and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113 or eligibility for CRE101 as indicated by appropriate reading placement test score).	LEC 3.0 3.0 3.0
HUM245	Introduction to Holocaust Studies	Introduction to essential information about the Holocaust. Provides theological, social and political background to establish contexts of anti-Semitism, especially in 19th and 20th centuries, with particular attention to National Socialist ideologies. Ghetto and camp life, including resistance, are explored. Emphasis is on texts of the Holocaust, including historical documents, participant testimonies, fiction, creative non-fiction, and poetry, much of which involves theological and moral debate. Includes analysis of supplementary visual material and some performing arts.	Prerequisites: None. CRE101 or equivalent as indicated by appropriate reading placement recommended but not required.	LEC 3.0 3.0 3.0
HUM250	Ideas and Values in the Humanities: Early Civilizations to the Renaissance	An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the early civilizations to the Renaissance, including western and non-western cultures.	Prerequisites: A grade of C or better in ENG101.	LEC 3.0 3.0 3.0
HUM251	Ideas and Values in the Humanities: Renaissance to the Contemporary World	An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the Renaissance to modern period, including Western and Non-Western cultures.	Prerequisites: A grade of C or better in ENG101.	LEC 3.0 3.0 3.0
HUM260	Intercultural Perspectives	Cultural, literary, and artistic expressions of Native, Hispanic, and African Americans. Includes traditional and modern work and contribution to American civilization	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM261	Asian Ideas and Values	An examination of Asian cultural traditions for their humanistic ideas and values: the arts, music, literature, religions, and philosophies of Asia, with emphasis on India and its sphere of influence in southeast Asia, and on China and its sphere of influence, particularly Japan	Prerequisites: None.	LEC 3.0 3.0 3.0
HUM292	The Art Of Storytelling	Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HUM298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
HUM298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
HUM298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
HVA101	HVAC for Residential Systems I	Introduction to major components and functions of residential heating, ventilation, and air conditioning (HVAC) systems, to include heat flow and basic electrical concepts.	Prerequisites: None.	L+L 4.0 5.0 5.0
HVA102	HVAC for Residential Systems II	Applications of theory and basic principles of refrigeration in residential heating, ventilation, and air conditioning (HVAC) systems. Includes installations, diagnostics, preventative and predictive maintenance, and customer service.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: FAC/HVA101 or permission of Department or Division. Xref: FAC101	L+L 5.0 7.0 7.0
HVA104	EPA Section 608 Technician Preparation and Certification	Laws, standards and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608 - stationary equipment. Core certification requirements for Type I Technicians, Type II Technicians, Type III Technicians, and Universal Technicians. Type I Technician - primarily works on small appliances. Type II Technician - primarily works on appliances/equipment using high and very high pressure refrigerant. Type III Technician - primarily works on appliances/equipment using a low pressure refrigerant. Universal Technician - for servicing all appliances.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HVA120	HVAC Installation	Introduction to installation of residential heating, ventilation, and air conditioning (HVAC) systems. Includes startup and verification of proper equipment operation.	Prerequisites: A grade of C or better in HVA102 or permission of Department.	L+L 4.0 6.0 6.0
HVA130	HVAC Troubleshooting	Introduction to troubleshooting the components of residential heating, ventilation, and air conditioning (HVAC) systems, to assure proper equipment operation.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: HVA120 or permission of Department.	L+L 4.0 6.0 6.0
HVA131	Electrical Systems	Electricity related to residential and light commercial applications, to include common electrical components, AC and DC circuits, and electrical safety. Provides an introduction to reading, interpreting, and creating wiring diagrams and the application of electrical power. Operation and use of specific meters, tools, and an introduction to National Electrical Code (NEC).	Prerequisites: None.	L+L 3.5 4.0 4.0
HVA170	Construction Trades: H.V.A.C.r	Introduction to major components and functions of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, including heat flow and basic electrical concepts. Introduction to installation of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems. Includes startup and verification of proper equipment operation. Includes installations, diagnostics, preventative and predictive maintenance, and customer service. Introduction to troubleshooting the components of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems to ensure proper equipment operation. Examines federal laws, standards, and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 9.0 12.0 12.0
HVA170AA	Construction Trades: Introduction to H.V.A.C.r for Residential Systems	Introduction to major components and functions of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, to include heat flow and basic electrical concepts. Examines federal laws, standards and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 3.0 4.0 4.0
HVA170AB	Construction Trades: H.V.A.C.r Installation	Installation of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems. Includes startup and verification of proper equipment operation. Includes installations, diagnostics, preventative and predictive maintenance, and customer service.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 4.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HVA170AC	Construction Trades: H.V.A.C.r Troubleshooting	Introduction to troubleshooting the components of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, to assure proper equipment operation.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.	L+L 4.0 3.0 3.0
HVA210	Facilities Air Conditioning Systems	Fundamental principles of air conditioning including all-air, all-water (hydronic) and air-water combination systems. Overview of the physical principles, including air distribution systems and heating and cooling load calculation. System components and application theory for boilers, chillers, pumps, fans, and cooling towers. Theory and application of central air conditioning systems, air cleaning and humidification devices, pressure boosting, heat storage, expansion and pressurization equipment. Properties of water, pressure distribution in hydronic systems, flow in pipes, pressure drop/head loss, pump applications and pressurization of open and closed hydronic systems. Fundamentals of low and high temperature water systems.	Prerequisites: A grade of C or better in HVA130 or permission of Department.	L+L 4.0 6.0 6.0
HVA231	Codes	Local codes, Federal Housing Administration and Urban Development standards. Acceptable building practices based on the Uniform Building Code, National Electric Code, Uniform Mechanical Code, and the Uniform Plumbing Code. Impact of American with Disabilities Act (ADA) on new and existing facilities.	Prerequisites: None.	L+L 3.0 5.0 5.0
HVA296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HVA296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
HVA296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
HVA296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HVA298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
HVA298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
HVA298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
HVC101	HVAC for Residential Systems I	Introduction to major components and functions of residential heating, ventilation, and air conditioning (HVAC) systems, to include heat flow and basic electrical concepts.	Prerequisites: None.	130
HVC102	HVAC for Residential Systems II	Applications of theory and basic principles of refrigeration in residential heating, ventilation, and air conditioning (HVAC) systems. Includes installations, diagnostics, preventative and predictive maintenance, and customer service.	Prerequisites: None.	130
HVC120	HVAC Installation	Introduction to installation of residential heating, ventilation, and air conditioning (HVAC) systems. Includes startup and verification of proper equipment operation.	Prerequisites: A grade of C or better in HVC102 or permission of department.	130
HVC130	HVAC Troubleshooting	Introduction to troubleshooting the components of residential heating, ventilation, and air conditioning (HVAC) systems, to assure proper equipment operation.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: HVC120 or permission of department.	130

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
HWC101	Health and Wellness Coaching	Provides the foundational practical skills for the application of the appropriate structure and processes of health and wellness coaching. Fundamental techniques and concepts used in coaching to establish effective coach-client partnerships, build trust and rapport, assess client readiness, and ensure ethical and professional considerations in coaching. Satisfies components of the National Board for Health and Wellness Coaching requirements.	Prerequisites: None. It is recommended that HES100 be completed prior to or concurrent with this course.	L+L 3.0 4.0 4.0
HWC290	Health and Wellness Coaching Internship	Work-based experience in health and wellness coaching. Eighty hours of designated work per credit.	Prerequisites: A grade of C or better in HES100 and HWC101.	LAB 1.0 1.0 0.0
IBS101	Introduction to International Business	A basic overview of international business to introduce students to international trade concepts. Focus of the course is on international business environment issues that influence global business practices, decisions and applications	Prerequisites: None.	LEC 3.0 3.0 3.0
IBS104	International Finance	The development of foreign exchange and international banking is examined. Methods of export financing, including both short- and medium-term credit and an in-depth review of application to and administration of government loan programs are covered. Important factors in country risk analysis are discussed	Prerequisites: None.	LEC 1.0 1.0 1.0
IBS105	International Law	Introduction to the legal aspects and ramifications of international trade topics including multinational enterprises, sovereignty, technology transfer, arbitration, negotiation and diplomacy	Prerequisites: None.	LEC 2.0 2.0 2.0
IBS108	Basics of Import/Export Operations	An overview of the steps involved in importing and exporting a product or service from beginning to end. Course includes an introduction to the United States Customs Service, what customs brokers do, duty rate structure and determination, basic laws affecting imports, currency exchange and letters of credit. Practical advice about storage and transportation of shipments after they have cleared customs. Other topics will include marketing, organization, regulations, terms of sale, documentation, shipment and financing involved with international enterprises, sovereignty, technology transfer, arbitration, negotiation, and diplomacy	Prerequisites: None.	LEC 2.0 2.0 2.0
IBS109	Cultural Dimension for International Trade	The importance of cultural sensitivity in international business relations investigated by studying the impact of geography, history, religion, politics, customs and cross-cultural communications on society	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IBS116	Export/Import Management	Basics of importing and exporting processes with focus on documentation and procedures. Includes transportation and distribution options, freight forwarders, International Common Terms (INCO) shipping terms, packaging strategies, contract negotiation, and execution of international contracts	Prerequisites: A grade of C or better in IBS101 or permission of Instructor.	LEC 3.0 3.0 3.0
IBS118	International Marketing Management	Planning, implementing, and managing international marketing strategies through application of international marketing research and evaluation in diverse cultural, economic, and political environments. Emphasis on implementation of product, price, promotion, and distribution strategies	Prerequisites: A grade of C or better in IBS101 or permission of Instructor.	LEC 3.0 3.0 3.0
IBS123	U.S. Customs and Export Licensing Regulations	Requirements for importing into the United States, and for export clearance, licensing, and foreign entry. Includes role of customs brokers, duty rate structure and determination as well as Commerce Control List (CCL) and Export Control Commodity Numbering (ECCN), export licenses, and governmental requirements regarding exports	Prerequisites: A grade of C or better in IBS101 or permission of Instructor.	LEC 3.0 3.0 3.0
IBS140	International Financial Management	Development of foreign exchange and international banking, including methods of payment, export financing, and application for and administration of government loan programs, country risk analysis, and negotiation and processing of letter of credit and other payment methods	Prerequisites: A grade of C or better in IBS101 or permission of Instructor.	LEC 3.0 3.0 3.0
IBS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ICE220	Sectional Anatomy	Sectional human anatomy in the transverse, sagittal and coronal planes. Emphasis on the brain, neck, chest, abdomen and pelvic cavity.	Prerequisites: A grade of C or better in (BIO160 or BIO201) and (HCC145 or HCC146), or a graduate of a related medical program of study or currently registered as a technologist in radiography, nuclear medicine, radiation therapy or sonography OR Admission to the Medical Radiography Program or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ICE223	Introduction to Computed Tomography	Overview of the principles and operation of computed tomography (CT) scanner. Content includes history, physics processes, instrumentation components, imaging acquisition, reconstruction and display for computed tomography imaging.	Prerequisites: Admission to the Medical Radiography Program or permission of Instructor.	LEC 1.0 1.0 1.0
ICE229	Magnetic Resonance (MR) Multi-Planar Sectional Anatomy	Three dimensional anatomy presented in transverse, sagittal and coronal planes of specified regions of the human body as viewed from magnetic resonance imagery. Includes structure identification of the bones, muscles, vascular system, organs, soft tissue components and weighted imaging.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (certified by American Registry of Diagnostic Medical Sonography (ARDMS) or ARRT in Diagnostic Medical Sonography), or (Radiography, Radiation Therapist, Nuclear Medicine, or Sonography student currently enrolled at GateWay), or registry eligible graduate] and a grade of C or better in DMS/ICE220 and ICE233. Xref: DMS220	LEC 2.0 2.0 2.0
ICE231	Professional and Patient Interactions	Principles of verbal and non-verbal communication skills through the development of understanding self, patients, colleagues and others. Includes verbal communication, written instructions, communications devices, telephone protocol, resume writing and job interviewing techniques	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ICE233	Fundamentals of Magnetic Resonance Imaging (MRI)	Overview of magnetic resonance imaging, program policies and student responsibilities. Includes fundamental principles of magnetic resonance imaging (MRI), primary and secondary equipment, and MRI terminology. Imaging parameters, clinical applications overview for MRI and preparation for physics, instrumentation, and safety coursework. Basic overview of safety issues and MRI contrast agents.	Prerequisites: (Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy) or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine) or (certified by American Registry of Diagnostic Medical Sonography (ARDMS) or ARRT in Diagnostic Medical Sonography) or (Radiography, Radiation Therapist, Nuclear Medicine or Sonography student currently enrolled at GateWay) or registry eligible graduate. Corequisites: DMS/ICE220 or permission of Department or Division. Xref:	LEC 1.0 1.0 1.0
ICE240	Fundamentals of Positron Emission Tomography	Overview of Positron Emission Tomography (PET). Comparison to other diagnostic imaging modalities. History of PET, applications and importance. Introduction to PET radiation safety.	Prerequisites: Completion of Associate in Applied Science in Medical Radiography or completion of Associate in Applied Science in Nuclear Medicine Technology or completion of Certificate of Completion in Radiation Therapy program or Corequisites: DMS/ICE220 or permission of Department or Division. Xref: DMS220	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ICE248	Computed Tomography (CT) Multi-Planar Sectional Anatomy	Sectional human anatomy in the transverse, sagittal and coronal planes. Multi-planar emphasis on the musculoskeletal system to include multi-planar imaging of the facial bones, cervical, thoracic and lumbar spine, and extremities; and the heart and vascular structures.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy) or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine) or (Radiography or Nuclear Medicine student currently enrolled at GateWay) or registry eligible graduates] and DMS/ICE220 and (DMI/ICE223 or NUC250) with a grade of C or higher or permission of Instructor. Xref: DMS220	LEC 2.0 2.0 2.0
ICE250	Mammography	Screening and diagnostic mammography. Includes anatomy, positioning, equipment, patient history, clinical breast examination, and image evaluation related to mammography. Breast pathology along with advanced testing and treatments, including other imaging modalities.	Prerequisites: American Registry of Radiologic Technologists (A.R.R.T.) certification or permission of Program Director.	LEC 3.0 3.0 3.0
ICE254	Advanced Imaging Practicum	Advanced imaging procedures for the Graduate Radiologic Technologist from American Registry of Radiologic Technologists (ARRT) or registry eligible graduate performed under strict supervision. Use of correct technical and positioning techniques. Apply safety measures and procedures established by the institution and college. Observe ethical and legal guidelines and use of effective communication skills.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (Radiography or Nuclear Medicine student currently enrolled at GateWay), or registry eligible graduates] or permission of Instructor.	LAB 1.0 6.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ICE263	Computed Tomography Physics and Instrumentation	Overview and evolution of Computed Tomography (CT) in medical imaging to include: X ray production, CT principles, system components and operation; image acquisition, processing, reconstruction, and display; artifacts, quality assurance, radiation dosimetry and patient safety; contrast administration, imaging protocols; and competencies as outlined by American Registry of Radiologic Technologists (ARRT) for the CT Certification Examination.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy) or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine) or (Radiography or Nuclear Medicine student currently enrolled at GateWay) or registry eligible graduates] and DMS/ICE220 and (DMI/ICE223 or NUC250) with a grade of C or higher or permission of Instructor. Xref: DMS220	LEC 3.0 3.0 3.0
ICE264	MRI Physics, Instrumentation and Safety	An overview into the physics, equipment, physical design, and image characteristics of Magnetic Resonance Imaging (MRI) systems.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy) or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine) or (certified by American Registry of Diagnostic Medical Sonography (ARDMS) or ARRT in Diagnostic Medical Sonography) or (Radiography, Radiation Therapist, Nuclear Medicine, or Sonography student currently enrolled at GateWay) or registry eligible graduate] and a grade of C or better in DMS/ICE220 and ICE233. Xref: DMS220	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ICE265	Computed Tomography Procedure Protocols	Standard procedures and protocols for Computed Tomography (CT) imaging in alignment with the American Society of Radiologic Technologists (ASRT) examination curriculum outline. Includes patient preparation and safety, choosing appropriate protocols, interventional procedures, contrast indicators, post-exam processing quality issues, and adapting to atypical scanning situations.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy) or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine) or (Radiography or Nuclear Medicine student currently enrolled at GateWay) or registry eligible graduate] and (DMI/ICE223 or NUC250) and ICE248 and ICE263 with a grade of C or higher or permission of Instructor. Xref:	LEC 3.0 3.0 3.0
ICE267	Computed Tomography Advanced Imaging Practicum	Computed Tomography advanced imaging clinical practicum for those certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy, or certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine, or current Radiography or Nuclear Medicine student, or registry eligible graduates to perform under strict supervision. Use of correct computed tomography instrumentation, protocol implementation and positioning techniques. Apply patient safety measures and follow As Low As Reasonably Achievable (ALARA) practices to reduce radiation dose as established by the institution. Practice within established ethical and legal guidelines. Use effective communication skills.	Prerequisites: Currently enrolled in the Computed Tomography Program.	LAB 2.0 12.0 0.0
ICE268	MRI Advanced Imaging Practicum	Advanced Magnetic Resonance imaging (MRI) clinical practicum is for those certified by the American Registry of Radiologic Technologists (ARRT) in Radiography, Radiation Therapy, or Sonography, or certified by ARRT of the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine. Use of correct magnetic resonance imaging instrumentation, protocol implementation and positioning techniques. Apply MRI safety, quality control procedures and effective patient care and communication skills.	Prerequisites: Currently enrolled in the Magnetic Resonance Imaging Program.	LAB 2.0 12.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ICE269	Magnetic Resonance Procedure Protocols	Imaging techniques related to the central nervous system (CNS), neck, thorax, musculoskeletal system and abdominopelvic regions. Specific clinical application, available coils and use. Considerations in scan sequences, specific choices in protocols including slice thickness, phase direction, flow compensation, and positioning criteria. Anatomical structures and plane that best demonstrates anatomy. Signal characteristics of normal and abnormal structures.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or Certified by the American Registry of Diagnostic Medical Sonography (ARDMS) or (Radiography or Nuclear Medicine student) or registry eligible graduate] and ICE233 and ICE264 with a grade of C or higher or permission of	LEC 3.0 3.0 3.0
ICE270	Contrast Media	Functions and applications of contrast media used in diagnostic radiographic imaging procedures. Chemical characteristics and properties of contrast media. Indications and contraindications including potential hazards of contrast media administration. Adverse reactions, patient care associated with reactions and medicolegal issues associated with administration of contrast media.	Prerequisites: Graduate radiologic technologist or permission of Instructor.	LEC 0.5 0.5 0.5
ICE271	Physiologic Monitoring	Physiologic monitoring to include electrophysiology of the heart, electrocardiography, rhythms and dysrhythmias. Hemodynamic monitoring including equipment, parameters, and cardiovascular pressures. Vital signs to include normal and abnormal values.	Prerequisites: Graduate radiologic technologist or permission of Instructor.	LEC 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ICE272	Magnetic Resonance Pathology	Common pathologies found in magnetic resonance imaging, their appearance with various imaging protocols including all commonly imaged body systems and areas. Case studies and images of the pathologies to reinforce the lectures.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or Certified by the American Registry of Diagnostic Medical Sonography (ARDMS) or (Radiography or Nuclear Medicine student), or registry eligible graduate] and ICE233 and ICE229 with a grade of C or higher or permission of	LEC 3.0 3.0 3.0
ICE273	Computed Tomography Pathology	Common diseases diagnosed using Computed Tomography (CT) imaging. Appearance of pathology on CT to include: physiology, etiology, indications for exam, findings, and diagnosis. Case studies, images, and descriptions of pathologic conditions in various body systems will be presented in alignment with CT certification guidelines published by the American Registry of Radiologic Technologists (ARRT).	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (Radiography or Nuclear Medicine student currently enrolled at GateWay), or registry eligible graduate] and DMS/ICE220 and ICE248 with a grade of C or higher, or permission of Instructor. Xref:	LEC 3.0 3.0 3.0
ICE290	Registry and Board Examinations Preparation	Preparation for the American Registry of Radiologic Technologist (ARRT) and the Medical Radiologic Technology Board of Examiners (MRTBE)examinations. Review of the ARRT and MRTBE content specifications, techniques for preparation and review of current literature.	Prerequisites: Qualified individuals preparing for the ARRT and MRTBE or permission of Department or Division.	LEC 1.0 1.0 1.0
ICE291	Computed Tomography Registry and Board Exam Preparation	Discussion of concepts outlined in the American Registry of Radiologic Technologists (ARRT) published content specifications for their post-primary certification exam in computed tomography (CT).	Prerequisites: Permission of the Program Director or Instructor.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ICE292	MRI Board Exam Review Preparation	Preparation for the American Registry of Radiologic Technologists (ARRT) Medical Resonance Imaging (MRI) examination. Review of elements required to pass the AART examination, including patient care and safety, imaging procedures, data acquisition, and physical principles of image formation.	Prerequisites: A grade of C or better in DMS/ICE220, ICE229, ICE233, ICE264, ICE269 and ICE272. Corequisites: ICE254. Xref: DMS220	LEC 1.0 1.0 1.0
ICE293	Registry Examination Preparation in Vascular-Interventional Radiography	Preparation for the American Registry of Radiologic Technologist (ARRT) in Vascular Interventional Radiography examination. Review of the ARRT content specifications, techniques for preparation, and review of current literature.	Prerequisites: Registered Radiographers preparing for the American Registry of Radiologic Technologist (ARRT) Vascular Interventional Radiography examination or permission of Instructor.	LEC 1.0 1.0 1.0
ICE298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: None.	LAB 1.0 1.0 0.0
ICE298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: None.	LAB 2.0 2.0 0.0
ICE298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: None.	LAB 3.0 3.0 0.0
IEC101	Basic Electricity	Electrical and first aid safety. Introduction to electricity, trade math, wiring techniques. Introduction to the National Electrical Code	Prerequisites: None.	LEC 5.0 5.0 5.0
IEC102	Electrical Residential	Series-parallel circuits, governing bodies, residential wiring practices, Kirchhoff's Law, kitchen outlets, heating systems, low voltage systems, service entrance requirements and swimming pools	Prerequisites: A grade of C or better in IEC101 or permission of Instructor.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IEC104	Wiring Motors and Transformers	Sizes of wire, conduit and boxes; National Electric Code, sizing service and feeders, sizing transformers and protection of transformers	Prerequisites: Permission of Instructor.	LEC 5.0 5.0 5.0
IEC105	Electric Blueprint Reading	Three-phase systems, transformers, and blueprint reading, construction process, plumbing, masonry and welding blueprints as well as mechanical systems; electrical blueprints and grounding.	Prerequisites: A grade of C or better in IEC104 or permission of Instructor.	L+L 5.0 5.0 5.0
IEC106	Electric Motor Controls	Motor Control system, alternating current (AC) and direct current (DC) contactors and magnetic motor starters; time delay circuits, reversing circuits, power distribution systems and hazardous locations, signs and fiber optics.	Prerequisites: A grade of C or better in IEC105 or permission of Instructor.	L+L 5.0 5.0 5.0
IEC108	Alarm Systems and Codes	Fire and signaling systems. Installation and start-up of fire alarm systems, fire alarm maintenance and troubleshooting. Wiring methods and materials, circuits and equipment protection, motors and air conditioning circuits, transformers and generating. Dwelling occupancies, industrial and commercial locations, hazardous locations- swimming pool and leadership	Prerequisites: Permission of Instructor.	LEC 5.0 5.0 5.0
IEC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
IEC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
IEC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
IFS110	Critical Research for College Success	Understand the research process and how to access, evaluate, and incorporate sources appropriately into academic projects.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IFS112	College Research Foundations	Development of research skills and competencies essential for college success including accessing, evaluating, and incorporating information sources into academic projects. Examination of information ecosystems, online presence, and the implications of one's information seeking behaviors.	Prerequisites: None.	LEC 3.0 3.0 3.0
IFS150	Social Media, Society, and Ourselves	Introduction to the role of social media in historical, social, cultural, and political contexts. Examine social media experience through the lens of creator and consumer. Analysis of the impact of social media on information and communication, including its influence on mental health, relationships, and identity formation.	Prerequisites: None.	LEC 3.0 3.0 3.0
IFS201	Information in a Post-Truth World	Develop a critical approach to using information as both a consumer and creator. Explore the impact of culture and worldview on how information is created, shared, understood, and used. Utilize analysis, evaluation, interpretation, and synthesis through substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
IFS210	Digital Information and Access in a Global Society	An investigation into digital information access in a global environment. Explores the evolving cultures and socioeconomic factors related to the digital flow of information. Examines emerging technologies to produce and distribute information ethically within a global society.	Prerequisites: None.	LEC 3.0 3.0 3.0
IFS213	Hacking and Open Source Culture	Focus on the multi-dimensions of hacking and open source culture, including rule-breaking, innovation, and creative use of programming/technology. Social, economic, cultural, and political implications of hacking and technology, in historical and contemporary contexts will be addressed.	Prerequisites: None.	LEC 3.0 3.0 3.0
IGS290	Integrated Studies	Integrated nature of human experience. Critical inquiry of a particular theme from a wide variety of academic viewpoints. Synthesis of knowledge and skills. Evaluation of experience and decisions from ethical, aesthetic, and intellectual perspectives. Preparation of three formal papers.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
IGS290AA	Integrated Studies	Integrated nature of human experience. Critical inquiry of a particular theme from a wide variety of academic viewpoints. Synthesis of knowledge and skills. Evaluation of experience and decisions from ethical, aesthetic, and intellectual perspectives. Preparation of two formal papers	Prerequisites: None.	LEC 2.0 2.0 2.0
IGS290AB	Integrated Studies	Preparation of a formal paper related to IGS290AA that demonstrates competency in gathering, interpreting and evaluating evidence.	Prerequisites: A grade of C or better in IGS290AA or Corequisites: IGS290AA.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IGS291	Studies in Global Awareness	Interdisciplinary examination of selected topics in global awareness. Study of the human organization and modern global interdependence. Selected topics vary	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
IGS291AA	Studies in Global Awareness	Interdisciplinary examination of selected topics in global awareness. Study of the human organization and modern global interdependence. Selected topics vary.	Prerequisites: None.	LEC 1.0 1.0 1.0
IGS292	Studies in Cultural Diversity	Interdisciplinary examination of selected topics in cultural diversity. Study of the interrelationships among diverse cultures within the contemporary United States. Selected topics vary	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
IGS292AA	Studies in Cultural Diversity	Interdisciplinary examination of selected topics in cultural diversity. Study of the interrelationships among diverse cultures within the contemporary United States. Selected topics vary	Prerequisites: None.	LEC 1.0 1.0 1.0
IGS293	Studies in Historical Awareness	Interdisciplinary examination of selected topics in historical awareness. Study of the historical method and of human events that have created modern life. Selected topics vary.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
IGS293AA	Studies in Historical Awareness	Interdisciplinary examination of selected topics in historical awareness. Study of the historical method and of human events that have created modern life. Selected topics vary	Prerequisites: None.	LEC 1.0 1.0 1.0
IGS294	Integrative Study of the Future	Integrative and interdisciplinary study of the future. Critical inquiry of the future from historical, philosophical, literary, scientific, social, psychological, and religious perspectives. Comprehensive review of contemporary scientific- technological, environmental, and global and cultural trends and possible directions in the future. Synthesis of theoretical knowledge and practical and personal applications	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
IMC112	Introduction to Mechanical Trades Construction	Theories and concepts for mechanical trades construction: Basic safety, materials handling and construction math. Application and maintenance of hand and power tools, and basic rigging. Types and interpretation of construction drawings. Introduction to basic communication and employability skills.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC114	Overview of Mechanical Trades: Sheet Metal, Pipefitting, and Plumbing	Overview of the work performed in the mechanical trades. Theories and concepts of care, use, and safety procedures related to hand and power tools motorized equipment. Introductory concepts in construction drawings, safety hazards and installation of ductwork.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC120	Plumbing, Drain, and Waste Piping	Interpretation and grade requirements for drain piping. Planning, testing, and installation of specific types of drains.	Prerequisites: None.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IMC122	Multiple Trades Cross Training: Tubes, Fittings and Piping Systems	Principles of architectural sheet metal, copper tube and fittings, carbon steel pipe and fittings, mechanical piping systems, and plastic pipe and fittings. Introductory concepts of drain, waste and vent (DWV) systems, soldering for sheet metal and pipefitting power tools.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC124	Multiple Trades Cross Training: Standards	Fundamentals and theories of trade standards for sheet metal, plumbing systems, and mechanical piping systems installation.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC231	Mechanical Trades Construction: Plumbing Intermediate Principles and Concepts	Intermediate principles and concepts for the plumbing trade related to commercial drawings and calculations. Installation of fixtures, valves, faucets, roof, floor and area drain. Types of drains and fuel gas systems.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC233	Mechanical Trades Construction: Sheet Metal Intermediate Principles and Concepts	Intermediate principles and concepts for the sheet metal trade related to duct fabrication standards, air properties, bend allowances, field measuring, and triangulation.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC235	Mechanical Trades Construction: Pipefitting Intermediate Principles and Concepts	Intermediate principles and concepts for the pipefitting trade related to trade calculations, motorized equipment, above ground pipe installation. Emphasis on field routing, vessel trim, pipe hangers and support, testing systems and equipment.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC236	Mechanical Trades Construction: Plumbing Advanced Principles and Concepts	Advanced principles and concepts for the plumbing trade related to water supply piping installation, testing, and sizing. Application of advanced trade calculations and fundamentals of backflow prevention and types of venting.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC237	Mechanical Trades Construction: Sheet Metal Advanced Principles and Concepts	Advanced principles and concepts for the sheet metal trade related to piping practices, radial line development, layout and fabrication. Emphasis on air systems, shop production and organization.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC238	Mechanical Trades Construction: Pipefitting Advanced Principles and Concepts	Advanced principles and concepts for the pipefitting trade relative to blueprint reading, drawing, and detail sheets. Advanced application of weld pipe fabrication, rigging, standards, and specifications.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC241	Mechanical Trades Construction: Plumbing Advanced Skill Building	Application and review of advanced principles for drain, waste and vent (DWV) systems, pumps, compressed air systems, and potable water treatment. Fundamentals of business practices for plumbers.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IMC243	Mechanical Trades Construction: Sheet Metal Advanced Skill Building	Application and review of advanced sheet metal layout, fabrication, and installation. Review principles of airflow, air distribution systems, standards, comprehensive planning and specification reading.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC245	Mechanical Trades Construction: Pipefitting Advanced Skill Building	Application and review of advanced principles and concepts for valve maintenance, hot taps, special piping, and pipe fabrication.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC246	Mechanical Trades Construction: Plumbing Advanced Applications and Techniques	Application and review of advanced plumbing techniques for water pressure boosters, recirculation systems, review and function of codes for indirect and special wastes and the plumbing industry. Introduction to hydronic and solar heating systems, servicing piping systems, fixtures and appliances. Team leadership skills.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC247	Mechanical Trades Construction: Sheet Metal Advanced Applications and Techniques	Application and review of advanced sheet metal techniques for air testing and balancing. Review of codes and specifications pertaining to fume and exhaust system design including review and practice of lay out patterns, fabrication and selection of sheet metal fittings.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IMC248	Mechanical Trades Construction: Pipefitting Advanced Applications and Techniques	Application and review of advanced pipefitting techniques for advanced blueprint reading, steam systems, stress relieving and aligning. Purpose and function of in-line specialties and an introduction to supervisory roles.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
IND110	Introduction to the Printing Industry	Brief history/introduction of graphic arts technologies including printing, photography, graphics and text. Safety and health practices, job estimating and trade customs as well as legal restrictions and requirements covered	Prerequisites: None.	LEC 1.0 1.0 1.0
IND111	Paper, Binding and Finishing Techniques	Finishing techniques and binding styles of paper. Covers paper properties, requirements, and grades. Various finishing and binding styles emphasized	Prerequisites: None.	L+L 3.0 4.0 4.0
IND112	Lithographic Inks and Offset Press Operations	Basic overview of lithographic inks and offset press operations. Sheet-fed and web-fed offset presses emphasized	Prerequisites: None.	L+L 2.0 3.0 3.0
IND133AB	Speaking in Business - Delivering Communication Messages	Practical, effective speech techniques for everyday business interactions. Examination of effective message preparation skills and communication styles and techniques	Prerequisites: None.	LEC 1.0 1.0 1.0
IND135	Interpersonal Skills and Leadership in Construction	Values and expectations of the workforce, building relationships, satisfying stakeholders. Effective communication, management grid, creating a leadership environment. Behavioral interviewing and professional development of personnel.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IND136	Communications in Construction	Communication in the construction industry. Positive direct communication, written communication, active listening, understanding, negotiation, and dealing with difficult people. Communication skills at all organizational levels, with groups, combining oral and written communication for maximum effectiveness.	Prerequisites: None.	LEC 1.0 1.0 1.0
IND138	Introduction to Project Management and Resource Control	Technical and management skills such as preconstruction planning, cost and risk control and policy development. Criteria for project layout purchasing, subcontractor management, project layout. Preparation process for project start up, close out and alternate project delivery methods. Major factors which affect production control and production control standards. Project manager's role.	Prerequisites: None.	LEC 1.0 1.0 1.0
IND140	Construction Scheduling and Time Management	Fundamental training in scheduling, including listing and sequencing, bar charts, network diagrams and methods of managing resources. Importance of formal schedules, job planning, and establishing priorities and alternative scheduling methods.	Prerequisites: None.	LEC 1.0 1.0 1.0
IND142	Construction Safety/Loss Prevention	Construction safety and loss prevention from the perspective of the construction superintendent. Includes communication and motivation for safety and loss prevention, project security and traffic control, and scheduling planning to prevent losses. Also includes loss prevention documents and inventories, assigning responsibility for safety and equipment maintenance, handling inclement weather and emergencies, and government regulations and inspections.	Prerequisites: None.	LEC 1.0 1.0 1.0
IND144	Improving Construction Productivity	Techniques for improving the productivity of construction projects including external factors influencing productivity, planning and communications as functions of a productive project, and the relationship of motivation and job satisfaction to productivity. Also presents techniques for evaluating methods improvement, including the use of time lapse photography and development of a methods improvement program, time management and delegating responsibility	Prerequisites: None.	LEC 1.0 1.0 1.0
IND150	Construction Foreman	Examine the basic supervisory and leadership concepts and skills needed to manage a construction project. Includes basic theories of motivation, role of communications in construction project management,decision making process, planning and organizing, strategies, developing production schedules to control production, discussing accident prevention and loss control	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IND170AA	Training for Business, Industry, and Government - AA	Customized one credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 1.0 1.0 1.0
IND170AB	Training for Business, Industry, and Government - AB	Customized two credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 2.0 2.0 2.0
IND170AC	Training for Business, Industry, and Government - AC	Customized three credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 3.0 3.0 3.0
IND170AD	Training for Business, Industry, and Government - AD	Customized two credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	L+L 2.0 4.0 4.0
IND170AE	Training for Business, Industry, and Government - AE	Customized three credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	L+L 3.0 5.0 5.0
IND170AF	Training for Business, Industry, and Government - AF	Customized four credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	L+L 4.0 6.0 6.0
IND170AG	Training for Business, Industry, and Government - AG	Customized one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 0.5 0.5 0.5
IND170AH	Training for Business, Industry, and Government - AH	Customized four credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 4.0 4.0 4.0
IND170AI	Training for Business, Industry, and Government - AI	Customized five credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 5.0 5.0 5.0
IND170AJ	Training for Business, Industry, and Government - AJ	Customized one and one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 1.5 1.5 1.5
IND170AK	Training for Business, Industry, and Government - AK	Customized two and one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 2.5 2.5 2.5
IND170AL	Training for Business, Industry, and Government - AL	Customized three and one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 3.5 3.5 3.5
IND170AM	Training for Business, Industry, and Government - AM	Customized four and one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 4.5 4.5 4.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IND170AN	Training for Business, Industry, and Government - AN	Customized one quarter credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	LEC 0.25 0.25 0.25
IND170AO	Training for Business, Industry, and Government - AO	Customized one credit lecture/lab course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: None.	L+L 1.0 2.0 2.0
IND170AP	Training for Business, Industry, and Government - AP	Customized two credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa Country.	Prerequisites: None.	L+L 2.0 3.0 3.0
IND170AQ	Training for Business, Industry, and Government - AQ	Customized three credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa Country.	Prerequisites: None.	L+L 3.0 4.0 4.0
IND170AR	Training for Business, Industry, and Government - AR	Customized one credit lab course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: None.	LAB 1.0 2.0 2.0
IND170AS	Training for Business. Industry, and Government - AS	Customized 1.75 credit L+L course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: None.	L+L 1.75 1.75 1.75
IND170AT	Training for Business, Industry, and Government - AT	Customized 1.25 credit L+L course to meet immediate training needs of business, industry and government.	Prerequisites: None.	L+L 1.25 1.25 1.25
IND170AU	Training for Business, Industry, and Government-AU	Customized two credit lab course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: None.	LAB 2.0 6.0 6.0
IND170AV	Training for Business, Industry and Government-AV	Customized three credit lab course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: None.	LAB 3.0 9.0 9.0
IND170AW	Training for Business, Industry, and Government-AW	Customized one credit lab course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	LAB 1.0 3.0 3.0
IND170AX	Training for Business, Industry, and Government-AX	Customized twelve credit lecture course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	LEC 12.0 12.0 12.0
IND170BA	Training for Business, Industry, and Government-BA	Customized two credit lecture with zero credit laboratory course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	LEC 2.0 1.5 1.5 LAB 0.0 1.5 1.5
IND170BB	Training for Business, Industry, and Government-BB	Customized two credit lecture with zero credit laboratory course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IND170BC	Training for Business, Industry, and Government-BC	Customized four credit lecture with zero laboratory course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	LEC 4.0 2.5 2.5 LAB 0.0 1.5 1.5
IND170BD	Training for Business, Industry, and Government-BD	Customized L+L 4.0 credits, 4.5 periods, 5.0 load course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	L+L 4.0 4.5 5.0
INS100	Insurance Industry Profession	Introduction to the insurance industry profession and environment. Includes identification of personal career goals, effective workplace behaviors and professionalism in the workplace in addition to strategies for problem solving and conflict management. Also covers the importance of integrity and ethical behavior in the insurance industry.	Prerequisites: None.	LEC 3.0 3.0 3.0
INS140	Review for the Property and Casualty Insurance Agent Licensing Exam	Preparation for the Property and Casualty Insurance Producer licensing exam required by the State of Arizona Department of Insurance for licensure as a Property/Casualty Insurance Agent. Covers the basic principles and legal parameters of property and casualty insurance including homeowners, auto, and business policies. Designed for students with no prior experience in the insurance field as well as those seeking to expand their licensing authority with the State of Arizona.	Prerequisites: None.	LEC 1.0 1.0 1.0
INS150	Introduction to Personal Lines Policies	Introduction to personal lines policies for the customer service representative. Includes principles of insurance, contracts, and the role of regulation in the insurance industry. Covers various types of personal insurance including property, liability, dwelling, homeowner, and auto insurance in addition to procedures for rating a policy.	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
INS151	Introduction to Commercial Property Policies	Introduction to commercial property policies for the customer service representative. Includes principles of commercial property, business owner, and commercial insurance for businesses. Covers terminology, forms, and procedures for policy coverages, declarations, exclusions, and endorsements.	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
INS155	Fire Product Procedures	Customer service emphasis on fire product procedures. Covers types of coverage, endorsements, discounts, and eligibility in addition to fair access concerns. Also includes procedures for quoting watercraft and homeowner fire coverage and use of state-specific guidelines and procedures.	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0
INS200	Principles of Property and Liability Insurance	Basic principles of insurance. Introduction to insurance contracts. Overview of company functions and operations including ratemaking, underwriting, claims, adjusting, and marketing.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INS205	Personal Insurance	Analysis of personal loss exposures and personal insurance coverages including homeowner's, other dwelling coverages, personal liability, auto, life, health, and government programs.	Prerequisites: A grade of C or better in INS200 or permission of Instructor.	LEC 3.0 3.0 3.0
INS210	Commercial Insurance	Analysis of commercial coverages including property, business income, inland marine, ocean marine, crime, boiler, general liability, auto, and worker's compensation. Analysis of loss exposures and explanation of coverage parts.	Prerequisites: A grade of C or better in INS200 or permission of Instructor.	LEC 3.0 3.0 3.0
INS241	Risk in an Evolving World	Introduction to the risk management process and its role in identifying and managing exposure to loss. Process for establishing a framework for hazard identification and the use of analytical and technology tools to determine financial impact to business.	Prerequisites: A grade of C of better in INS210.	LEC 3.0 3.0 3.0
INS242	Holistically Assessing Risk	Examination of various risk identification and assessment techniques implemented by business to control potential loss exposures. Emphasis on understanding the impact of operational decisions and employee actions on losses and steps used to mitigate financial consequences. Detailed analysis of property, liability, management liability, cyber, and loss exposures as well as use of data analytics to manage risk assessment and control.	Prerequisites: A grade of C of better in INS241.	LEC 3.0 3.0 3.0
INS243	Successfully Treating Risk	Evaluation of risk financing techniques available to organizations to provide funds to pay for losses incurred. Overview of financial elements of insurance, self-insurance, captives, and non-insurance transfers. Examination of non-traditional methods of financing including reinsurance, derivatives, catastrophe bonds, and insurance linked securities and their implementation to reduce hazard risk and market and credit risks faced by companies.	Prerequisites: A grade of C of better in INS241.	LEC 3.0 3.0 3.0
INS280	Insurance Studies Internship Preparation	Overview of essential skills necessary for an insurance studies student preparing to enter in the internship environment. Covers essential skills, self-evaluation, and resources available to an insurance student.	Prerequisites: A grade of C or better in INS200 and permission of Department or Division.	L+L 1.0 1.0 1.0
INS290AA	Internship for Insurance Studies	Insurance work experience in industry. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 1.0 1.0 1.0
INS290AB	Internship for Insurance Studies	Insurance work experience in industry. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INT100	Interior Design Drafting	Basic manual drafting techniques used in the interior design industry. Focus on industry standards of equipment use, lettering, line work, dimensioning, scaling, and annotation. Introduction and practice of industry-specific drawing types, including floor plans, elevations, sections, details, multi- view projection, and paraline. Brief exploration of hand sketching and Computer-Aided Design (CAD) techniques as they relate to manual drafting	Prerequisites: None.	L+L 3.0 6.0 6.0
INT101	Introduction to Interior Design	Overview of interior design and related professions, the design process, elements and principles of design, color theory, and basic concepts of space planning and furniture layout. Development of design vocabulary relative to architectural details, furnishings, and finishes.	Prerequisites: None.	LEC 3.0 3.0 3.0
INT110	Revit - Introduction	Basic skills required to complete architectural drawings with Revit software; simplified overview of the software program and operations gained through completing typical plan, elevation, sectional, and 3D views, using generic walls and related components.	Prerequisites: None.	L+L 3.0 6.0 6.0
INT111	Architectural Computer Aided Design I: Introduction	Introduction to Computer-aided drafting (CAD) for the creation of construction documents including: annotated plans, elevations, schedules and schematic section views. Dimensions, notes, and symbols to be included in the set of construction documents.	Prerequisites: None.	L+L 3.0 6.0 6.0
INT112	Architectural Computer Aided Design II: Plans and Elevations	Computer-aided drafting (CAD). Creation of a fully annotated plan, elevation, and schematic section views including dimensions, notes, symbols, and schedule, using a computer aided drafting software such as AutoCAD. Includes an introduction to three-dimensional (3D) CAD using SketchUp and Building Information (BIM) software such as Revit.	Prerequisites: A grade of C or better in ARC/INT111. Completion of prerequisites within the last three years is required unless current work experience to override this time constraint is approved with permission of Instructor.	L+L 3.0 6.0 6.0
INT115	Historical Architecture and Furniture	Historical survey of the development of architecture, interiors, furniture, and decorative arts from antiquity to the Industrial Revolution.	Prerequisites: None.	LEC 3.0 3.0 3.0
INT120	Modern Architecture and Furniture	Survey of the development of architecture, interiors, furniture, and decorative arts from the Industrial Revolution to the present. Emphasis is on modern architects and designers.	Prerequisites: None.	LEC 3.0 3.0 3.0
INT122	Digital Visualization for Design	Introduction to the utilization of leading interior design industry software such as Adobe Photoshop, Illustrator, and InDesign for digital rendering and the development of interior design drawings and presentations.	Prerequisites: None.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INT126	Sewing for the Home	Provides students systemic skills and knowledge to plan and construct draperies, shades, pillows, bedding and other home furnishings through instructional projects. Emphasizes techniques used in producing textile goods for the home.	Prerequisites: None.	LEC 3.0 3.0 3.0
INT145	Drawing and Rendering Studio	Development of basic freehand sketching and perspective rendering skills. Explores drawing styles and techniques through quick sketching and the use of digital tools to create presentation drawings as used in the professional interior design industry.	A grade of C or better required in all Prerequisites. Prerequisites: INT101. Prerequisites or Corequisites:	L+L 3.0 6.0 6.0
INT145AA	Sketching and Visualization	Development of basic freehand sketching and perspective drawing skills. Explores styles and techniques with emphasis on quick sketch and presentation type drawings as used by design professionals.	Prerequisites: None. Corequisites: INT145AB.	L+L 1.5 3.0 3.0
INT145AB	Rendering	Development of basic digital sketching and perspective drawing skills. Explores styles and techniques with emphasis on quick sketch and presentation type drawings as used by design professionals.	Prerequisites: None. Corequisites: INT145AA.	L+L 1.5 3.0 3.0
INT156	Furniture Upholstery I	Techniques of general furniture upholstery, operations of webbing, springing, stuffing, trimming, sewing and cushion making on approved student-selected projects.	Prerequisites: None.	L+L 3.0 5.0 5.0
INT157	Furniture Upholstery II	Application and use of modern materials and tools, button tufting, channel construction, and special trim effects.	Prerequisites: A grade of C or better in INT156 or permission of Department or Division.	L+L 3.0 5.0 5.0
INT158	Furniture Upholstery III	Advanced techniques in upholstering of furniture and other needle-trade items; time and money saving shortcuts in layout; fabric cutting and sewing.	Prerequisites: A grade of C or better in INT157 or permission of Department or Division.	L+L 3.0 5.0 5.0
INT159	Furniture Upholstery IV	Advanced techniques of furniture upholstery for students interested in entering the upholstery trade; modern production techniques for sewing; stuffing; and finishing; job estimating; equipment selection and maintenance.	Prerequisites: A grade of C or better in INT158.	L+L 3.0 5.0 5.0
INT160	Fabrics for Interiors	Study of the properties, design, and performance characteristics of interior fabrics. Psychological and cultural impact of textiles on the built environment. Role of the interior designer in working with textiles. Introduction to regulations and codes within the textile industry.	Prerequisites: None.	LEC 3.0 3.0 3.0
INT165	Space Planning Studio	Study of creative, critical, analytical, and strategic thinking as it relates to human behavior and the built environment. Emphasis on design process, and functional application. Considerations for space utilization including anthropometrics and ergonomics. Development of presentation skills.	A grade of C or better required in all Prerequisites. Prerequisites: INT101, INT122, and ARC/INT111. Prerequisites or Corequisites: INT145 and ARC/INT112.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INT201	Color and Design Communication Studio	The application of color theory to professional interior design projects. Emphasis on utilizing leading industry software for the development and delivery of presentations as used in the professional interior design industry.	Prerequisites: A grade of C or better in INT101, INT122, INT145, and INT165.	L+L 3.0 6.0 6.0
INT205	Custom Design Studio	The development of custom interior design furnishings, millwork, and architectural features. Exposure to the process of manufacturing custom design elements. Emphasis on the visualization of concepts through sketching and the use of digital tools to create shop drawings, renderings, and specifications. Refinement of presentation skills.	Prerequisites: A grade of C or better in ARC/INT111, INT101, INT122, and INT145.	L+L 3.0 6.0 6.0
INT210	Interior Materials Studio	Exploration of interior finishes, including their properties, performance, maintenance, sustainability, and general characteristics. Emphasis on appropriate material selection and specification. The utilization of digital tools to create specification documents as used in the professional interior design industry. Refinement of presentation skills.	A grade of C or better in all Prerequisites. Prerequisites: ARC/INT111 and INT122. Prerequisites or Corequisites: ARC/INT112.	L+L 3.0 6.0 6.0
INT211AA	Interior Materials	Properties, performance, maintenance, sustainability and general characteristics of interior finishes.	A grade of C or better required in all Prerequisites. Prerequisites: ARC/INT111 or permission of Instructor. Prerequisites or Corequisites: INT211AB and [INT222 or [INT212 or (INT240AA and	L+L 1.5 3.0 3.0
INT211AB	Material Specifications	Emphasis on selection, basic estimating, and writing specifications.	A grade of C or better required in all Prerequisites. Prerequisites: ARC/INT111 or permission of Instructor. Prerequisites or Corequisites: INT211AA and [INT222 or [INT212 or (INT240AA and	L+L 1.5 3.0 3.0
INT212	Kitchen and Bath Studio	Exploration into the specific requirements associated with kitchen and bath design and their practical application. Emphasis on the design process and functional application utilizing professional interior design digital tools. Refinement of presentation skills.	A grade of C or better required in all Prerequisites. Prerequisites: INT101, INT122, INT145, INT165, and ARC/INT112. Prerequisites or Corequisites: INT210.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INT222	Residential Design Studio	The use of the design process to create design solutions for a residential remodel. Functional and aesthetic analysis of interior components. Includes kitchen and bath design; residential furnishings, fixtures, and equipment (FF&E); and environmental considerations. Advanced application of professional interior design digital tools. Refinement of presentation skills.	A grade of C or better required in all Prerequisites. Prerequisites: INT122, INT145, and INT165. Prerequisites or Corequisites: INT210 and ARC/INT112.	L+L 3.0 6.0 6.0
INT225	History of Decorative Arts	Survey of historical art, furniture and interiors with an emphasis on decorative arts from various cultures.	Prerequisites: A grade of C or better in INT115 and INT120.	LEC 3.0 3.0 3.0
INT230	Presentation Techniques	Advanced freehand sketching and perspective drawing skills. Explores a variety of styles and techniques with emphasis on presentation type drawings and portfolio development techniques used by design professionals.	A grade of C or better required in all Prerequisites. Prerequisites: [INT145 or (INT145AA and INT145AB)] and ARC/INT111. Prerequisites or Corequisites: INT122 or	L+L 3.0 6.0 6.0
INT235	Universal Design	The study of innovative, strategic, problem-solving and crucial design principles as it pertains to the constructed surroundings and those using space. Prominence will be placed on Universal Design principles and how they relate to the design process and tasks to be performed within the environment. Emphasis on the creative execution through the application of universal design elements and principles.	Prerequisites: A grade of C or better in INT190 or permission of Instructor.	LEC 3.0 3.0 3.0
INT240AA	Bath Design	Exploration into the specific requirements associated with bath design. Emphasis on the design process and computer-based tools for interior design.	A grade of C or better required in all Prerequisites. Prerequisites: INT165 and ARC/INT111. Prerequisites or Corequisites: [INT210 or (INT211AA and INT211AB)] and	L+L 1.5 3.0 3.0
INT240AB	Kitchen Design	Exploration into the specific requirements associated with kitchen design. Emphasis on the design process and computer-based tools for interior design.	A grade of C or better required in all Prerequisites. Prerequisites: INT165 and ARC/INT111. Prerequisites or Corequisites: [INT210 or (INT211AA and INT211AB)] and	L+L 1.5 3.0 3.0
INT241	Advanced Kitchen and Bath Design	Advanced approaches to kitchen and bath design using National Kitchen and Bath Association (NKBA) planning guidelines. Mastery in the development of a design concept, producing construction documents and 3-D model drawings, verbally and visually presenting the solution, and processing necessary documentation needed to follow a kitchen and bath project from inception to completion.	Prerequisites: A grade of C or better in INT240, or (INT240AA and INT240AB), or permission of Program Director.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INT242	Interior Design Professional Practices	Examination of marketing, business processes, and ethical issues in the interior design industry. Create materials for use in the profession including a portfolio, resume, and online presence. Exposure to industry professionals and procedures.	Prerequisites: A grade of C or better in INT212.	L+L 3.0 6.0 6.0
INT245	Color Rendering	Development of color rendering techniques. Emphasis on producing two-dimensional and three-dimensional renderings utilizing various media.	Prerequisites: AAS Degree in Interior Design or permission of Department or Division.	L+L 3.0 6.0 6.0
INT251	SketchUp - Introduction	Provides students with introductory level instruction utilizing Sketchup rendering software for school and workplace applications. Addresses basic drawing/rendering commands, accessing external drawing files, and plotting through the creation of both three-dimensional schematic and rendered interior and exterior building views.	Prerequisites: None. Previous CAD experience recommended but not required.	L+L 3.0 6.0 6.0
INT255	Advanced Custom Design	Covers advanced custom design for interior designers. Uses creative problem solving, design theories, and the design process to visualize custom design elements such as interior materials, furnishings, and details, through three-dimensional digital technology and construction processes.	Prerequisites: A grade of C or better in ARC140, ARC/INT250, ARC265/INT251, (INT145 or (INT145AA and INT145AB)), INT150, INT175 and INT190. Xref: ARC250	L+L 3.0 6.0 6.0
INT260	Interior Codes and Regulations	Study of interior building codes, regulations, and standards and their impact on the health, safety, and welfare of the public. Emphasis on occupancy classifications, means of egress, fire protection, finish/furniture standards and testing, and Americans with Disabilities Act Accessibility Guidelines (ADAAG). This course is an exploration of codes and regulations as it pertains to the application of interior design projects.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: INT140 or ARC141 or permission of Program Director.	LEC 3.0 3.0 3.0
INT265	Building Systems	Overview of technical building systems including structural, mechanical, electrical, plumbing, and other building components, and how they relate to an interior design project. Emphasis on sustainability and the communication between interior designers and other building professionals, including architects, builders, and engineers.	Prerequisites: A grade of C or better in ARC141 or INT131.	LEC 3.0 3.0 3.0
INT266	Current Topics in Interior Design	Presentation of current topics related to the interior design industry. Emphasis on practical applications of historical, technical, business, social, or creative aspects of the field. Includes demonstration or in-depth description and may involve hands-on experience.	Prerequisites: Permission of Program Director.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INT267	Sketchup II: Advanced Rendering Techniques	Provides students with advanced instruction utilizing Sketchup, Google Earth, Sandbox and Podium rendering software for school and workplace applications. Creation of photo-realistic rendered three-dimensional interior and exterior building/site views.	Prerequisites: A grade of C or better in ARC265/INT251 or permission of Instructor.	L+L 3.0 6.0 6.0
INT268	Lighting Design	Study of the technical and creative approaches to lighting for residential and commercial interior design projects. Advanced application of professional interior design digital tools. Emphasis on environmental considerations, product sourcing, and the development of lighting plans.	Prerequisites: A grade of C or better in INT165.	L+L 3.0 6.0 6.0
INT270	Commercial Design	The use of the design process to create design solutions for commercial interiors. Functional and aesthetic analysis of interior components. Includes furnishings, fixtures, and equipment (FF&E), building codes, and environmental considerations. Focuses on issues affecting the health, safety, and welfare of the public.	A grade of C or better required in all Prerequisites. Prerequisites: INT122. Prerequisites or Corequisites: INT268.	L+L 3.0 6.0 6.0
INT271AA	Interior Design Internship	Interior design work experience in the interiors industry. Required to work 80 hours. Supervised and evaluated by a faculty coordinator.	Prerequisites: Permission of Department or Division.	LAB 1.0 5.0 0.0
INT271AB	Interior Design Internship	Interior design work experience in the interiors industry. Required to work 160 hours. Supervised and evaluated by a faculty coordinator.	Prerequisites: Permission of Department or Division.	LAB 2.0 10.0 0.0
INT271AC	Interior Design Internship	Interior design work experience in the interiors industry. Required to work 240 hours. Supervised and evaluated by a faculty coordinator	Prerequisites: Permission of Department or Division.	LAB 3.0 15.0 0.0
INT274AA	Interior Design Study Tour	A tour of the interior design industry outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about this multi-faceted career	Prerequisites: Permission of Department or Division.	LAB 1.0 5.0 0.0
INT274AB	Interior Design Study Tour	A tour of the interior design industry outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about this multi-faceted career	Prerequisites: Permission of Department or Division.	LAB 2.0 10.0 2.0
INT274AC	Interior Design Study Tour	A tour of the interior design industry outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about this multi-faceted career	Prerequisites: Permission of Department or Division.	LAB 3.0 15.0 3.0
INT282AA	Service-Learning Experience in Interior Design	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
INT282AB	Service-Learning Experience in Interior Design	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INT282AC	Service-Learning Experience in Interior Design	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
INT285	Interior Design Portfolio	Design, produce, and present a professional portfolio appropriate to the field of Interior Design. Includes content selection, organization, and presentation formatting utilizing professional interior design digital tools.	Prerequisites: A grade of C or better in INT212, or permission of Program Director.	LAB 1.0 1.5 1.35
INT290	Advanced Commercial Design	Use of design process to create solutions for medium to large multi-story commercial interiors. Focuses on issues affecting the health, safety, and welfare of the public	Prerequisites: A grade of C or better in INT270.	L+L 3.0 6.0 6.0
INT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
INT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
INT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
INT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
INT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
INT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
IPH101	Introduction to Public Health	Introduction to Public Health introduces students to the broad discipline of public health and how it influences community and individual health status. Includes sciences of public health, historical context of public health, role of various public health agencies, core functions, methods of measurement and evaluation, major public health issues in the United States, public policy, and factors that contribute to individual and community health.	Prerequisites: None.	LEC 3.0 3.0 3.0
IPH105	Introduction to Community Health Work	Basic concepts of patient navigation including disease prevention and community health, health insurance navigation, as well as accessing and analyzing health information. Training in assisting individuals with limited health literacy to access the maximum array of benefits from community services, clinical care, and health insurance.	Prerequisites: None.	LEC 3.0 3.0 3.0
IPH106	Cultural Aspects of Health for Community Health Work	Understanding and addressing cultural aspects of health is crucial for Community Health Workers (CHWs) as they work closely with diverse communities. This course provides a broad overview of health beliefs and practices across cultures, and defines what "being healthy" means from a cultural standpoint. Cultural adaptations and competence, effective communication across cultures, cultural considerations, cultural stigma, and cultural adaptations of health interventions are explored.	Prerequisites: None.	LEC 3.0 3.0 3.0
IPH110	Principles of Health and Behavior Change	Introduction to the social and behavioral science theories used in public health. Provides an overview of health promotion principles and various theories and models developed to change health behavior and promote the health of individuals and societies.	Prerequisites: None.	LEC 3.0 3.0 3.0
IPH111	Public Health Across the Lifespan	Introduction to evidence-based research of trends and developments in health throughout the lifespan, dealing with the prenatal period through advanced age. Training in the individual, social, and environmental factors to determine and address health status and health inequities across the lifespan and in public health interventions such as education, policy, and environmental changes.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IPH112	Community-Based Health Education in Health and Illness	Provides the student with a basic understanding of the application of public health principles to community-based health education interventions. Includes an overview of public health, factors impacting health, health education theories and ethical considerations, the community needs assessment process, the program planning process, health communication, interventions at both the individual and population level.	Prerequisites: A grade of C or better in IPH101, IPH105, and IPH106 or permission of Program Director.	LEC 3.0 3.0 3.0
IPH115	Introduction to Health Administration and the U.S. Health System	Introduction to the U.S. health care delivery system including knowledge and skills needed to navigate health care within a health care organization.	Prerequisites: None.	LEC 3.0 3.0 3.0
IPH136	Medical Terminology for Community Health Work	Common medical terms used in community health work. Requires a practical, clear, and accessible approach that focuses on essential medical terms relevant to their role in serving communities. Key concepts, topics, abbreviations, terms, skills, and body systems. Includes basic medical terminology, common medical terms and conditions, medical abbreviations and acronyms, body systems and related terminology, medical terminology for the social determinants of health, cultural sensitivity and clear communication, and practical application and documentation.	Prerequisites: A grade of C or better in IPH101, IPH105, and IPH106 or permission of Program Director.	LEC 2.0 2.0 2.0
IPH201	Introduction to Epidemiology	Introduction to epidemiology and its role in public health. Training in the application of epidemiologic concepts and methods such as disease causation, terminology, and control principles relating to the spread, prevention, and control of communicable diseases and principles and practices of field investigation.	Prerequisites: A grade of C or better in (MAT206, PSY230 or PSY230WL).	LEC 3.0 3.0 3.0
IPH205	Chronic Disease Management	Focuses on the prevention and management of chronic disease as a critical priority for health systems around the world. Provides participants with an overview of the prevention and management of chronic disease in community settings. Identifies effective programs and policies to reduce the risk of chronic disease, or to control their consequences. Develops practical skills in analyzing and evaluating approaches to chronic disease in a variety of settings. Helps to identify capacities and opportunities for change. The focus on prevention is expanded further through a deeper discussion of health equity and the social determinants of health.	Prerequisites: A grade of C or better in IPH101, IPH105, and IPH106 or permission of Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IPH220	Introduction to Mobile Integrated Health Care	Students learn components of patient-centered health care defined specifically for needs of the community. Training in determinants of health, health status indicators, cultural competence, health disparities, and bridging the gap of patient health care needs with social service resources and referrals. Additional topics include legal and ethical issues of mobile care, health care information technology, and insurance and reimbursement programs.	Prerequisites: None.	LEC 3.0 3.0 3.0
IPH275	Community Health Work Practicum	Provides students with hands-on experience in the role of the community health worker in the public health field, including guiding patients through various types of health care situations. Provides 45 hours of workplace engagement per credit.	Prerequisites: A grade of C or better in IPH101, IPH105, IPH106, IPH112, IPH136, and IPH205 or permission of Program Director.	LAB 1.0 5.0 0.0
IPH280	Health Education Practicum	Provides students with hands-on experience in the role of the health educator professional in the public health field, including assessing health education needs and developing and delivering health education programs.	Prerequisites: A grade of C or better in [COM270, FON241, (HCR230 or HES210), HTM150, IPH101, IPH110, IPH111, IPH112, and IPH201] or permission of Instructor.	LAB 3.0 15.0 0.0
IPH285	Health Administration Practicum	Provides students with hands-on experience in the role of the health administrator professional in the public health field, including applying managerial functions within a health care agency.	Prerequisites: A grade of C or better in [(HCR230 or HES210), HSM222, HTM150, IPH101, IPH115, and IPH201] or permission of Instructor.	LAB 3.0 15.0 0.0
IPH290	Mobile Integrated Health Practicum	Provides students with hands-on experience in the role of the mobile integrated health professional in the public health field, including using evidence-based health care interventions and guiding patients through health care payment systems.	Prerequisites: A grade of C or better in [COM270, FON241, (HCR230 or HES210), HTM150, IPH101, IPH201, and IPH220] or permission of Instructor.	LAB 3.0 15.0 0.0
IPP198	Careers in Deaf Studies: Observation	Provides experience through observation to the world of work of a professional interpreter. Observation of professional interpreters in a variety of work settings, including but not limited to professional principles, standards and ethics applied to everyday interpreting settings.	Prerequisites: A grade of C or better in IPP205 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IPP205	Introduction to Interpreting	Theories of role, function, responsibilities, and communication strategies of the American Sign Language (ASL)/English interpreter. Covers application and implementation of the National Registry of Interpreters for the Deaf (R.I.D.) and National Association of the Deaf (N.A.D.) Code of Professional Conduct. Additional topics addressed include interpreters functioning as advocates, moral systems vs. ethical systems, standard business practices, and perceptions of consumers.	Prerequisites: A grade of C or better in ASL201 or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 3.0 3.0 3.0
IPP207	Ethics and Decision Making for ASL/English Interpreters	Guided exploration of factors that impact decisions within interpreted contexts, including strategies, theory, and models for decision making. Application and implementation of the National Association of the Deaf (N.A.D.)-Registry of Interpreters for the Deaf (R.I.D.) Code of Professional Conduct.	A grade of C or better required in all Prerequisites. Prerequisites: ASL201 or permission of Department or Division. Prerequisites or Corequisites: IPP205 or permission of Program Director. Completion of prerequisites within the last three years is	LEC 2.0 2.0 2.0
IPP208	Advanced American Sign Language Discourse	Advanced study of terminology and discourse in various fields such as medical, judicial, technological, as well as financial and business transactions. Use of specialized terminology/concepts in dialogues, discussions, and narratives. Advanced use of classifiers, structuring of space, and grammatical features of American Sign Language (ASL)	Prerequisites: A grade of B or better in ASL203. Completion of prerequisites within the last three years is required.	LEC 4.0 4.0 4.0
IPP209	Introduction to Educational Interpreting	Principles, vocabulary, and techniques used specifically in educational (K-12) interpreting and transliterating. Introduces students to the scope of work and issues in primary, secondary, and vocational educational settings. Covers sign systems, technical signs, and appropriate methods of incorporating new signs.	Prerequisites: A grade of B or better in IPP205 or permission of Department or Division. ASL200 recommended.	LEC 2.0 2.0 2.0
IPP210	Research in Interpreting	Overview of theory and methodological practice in Interpretation with particular attention to research methods. Emphasis on development of critical thinking skills through active participation in the research process.	Prerequisites: A grade of C or better in COM225, CRE101, ENG102, and IPP207.	LEC 3.0 3.0 3.0
IPP211	Preparation for Interpreting	Development of pre-interpreting skills, cognitive processing and analysis of interpreting process theories. Pre-interpreting skills include memory, cloze, identifying meaning, paraphrasing and summarization. Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of monologues.	Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Department or Division.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IPP215	ASL to English Consecutive Interpreting	Sequential development of consecutive interpreting skills from American Sign Language (ASL) to English. Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues, guidance for discovering personal filters, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: (Acceptance into the Interpreter Preparation Program or permission of Department or Division) and a grade of B or better in IPP211.	L+L 2.0 3.0 3.0
IPP216	ASL to English Simultaneous Interpreting	Sequential development of simultaneous interpreting skills from American Sign Language (ASL) to English. Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues from different genres with increasing length and difficulty, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: A grade of B or better in IPP215 and permission of Program Director.	L+L 3.0 4.0 4.0
IPP218	English to ASL Consecutive Interpreting	Sequential development of consecutive interpreting skills from English to American Sign Language (ASL). Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues, guidance for discovering personal filters, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: (Acceptance into the Interpreter Preparation Program or permission of Department or Division) and a grade of B or better in IPP211. IPP215 suggested but not required.	L+L 2.0 3.0 3.0
IPP219	English to ASL Simultaneous Interpreting	Sequential development of simultaneous interpreting skills from English to American Sign Language (ASL). Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues from differing genres with increasing length and difficulty, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: A grade of B or better in IPP218, and permission of Program Director. Completion of prerequisites within the last three years is required.	L+L 3.0 4.0 4.0
IPP220	Interactive Interpreting I	Sequential development of interactive interpreting skills from English to American Sign Language (ASL) and from ASL to English. Perform source language analysis, apply cognitive processing techniques, and produce target language equivalents. Analysis of texts and contexts of naturally occurring dialogues, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: A grade of B or better in IPP211 or permission of Department or Division. Completion of prerequisites within the last three years is required.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IPP221	Interactive Interpreting II	Continued development of interactive interpreting skills from English to American Sign Language (ASL) and from ASL to English. Perform source language analysis, apply cognitive processing techniques, and produce target language equivalents. Analysis of texts and contexts of naturally occurring dialogues, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: A grade of B or better in IPP220, and permission of Program Director. Completion of prerequisites within the last three years is required.	L+L 3.0 4.0 4.0
IPP229	Interpreter Preparation Internship Seminar	Classroom portion of the Interpreter Preparation Program internship. Emphasizes the blend of job-related activities including career exploration, employment application procedures, interpersonal skills, and on-the-job problems.	Prerequisites: Acceptance into the Interpreter Preparation Program and/or program director approval. Corequisites: IPP230AA or IPP230AB.	LEC 1.0 1.0 1.0
IPP230AA	Interpreter Preparation Program Internship	Laboratory portion of the Interpreter Preparation Program seminar. Eighty (80) clock hours of work required. Practical experience in settings such as educational, rehabilitation, community service centers, and agencies serving children, adolescents, and/or adults who are deaf or hard of hearing. Designed to provide students with the opportunity to synthesize practical and academic experiences gained during the in-classroom portion of the program. Site, supervision, and plan of activity mutually agreed upon by the student and instructor. Capstone experience for Associate in Applied Science (AAS) degree students.	Prerequisites: Acceptance into the Interpreter Preparation Program and Program Director approval. Corequisites: IPP229.	LAB 1.0 5.0 0.0
IPP242	Educational Interpreting Skills	Skill development and application of techniques used specifically in educational (K-12) interpreting and transliterating. Covers sign systems, technical signs, and methods of non-standard sign incorporation.	Prerequisites: A grade of B or better in (IPP209 and IPP211) and permission of Program Director.	L+L 1.0 2.0 2.0
IPP250AA	Special Topics: Interpreter Preparation	Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing career in (American Sign Language) ASL/English Interpreting and Transliterating.	Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Program Director.	L+L 1.0 1.0 1.0
IPP250AB	Special Topics: Interpreter Preparation	Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing career in (American Sign Language) ASL/English Interpreting and Transliterating.	Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Program Director.	L+L 2.0 2.0 2.0
IPP250AC	Special Topics: Interpreter Preparation	Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing career in (American Sign Language) ASL/English Interpreting and Transliterating.	Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Program Director.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IRW101	Ironworking: Orientation	Overview of the Ironworker labor history, green construction, work place issues and sexual harassment. Basic safety, measuring, tools and rigging. Types of ironwork and welding.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 3.0 3.0 3.0
IRW102	Safety and Health for Ironworking	Safety, health, and accident prevention in the construction work environment related to ironworking. Proper erection, use, and dismantling of scaffolds. Selection, inspection, and use of fall protection including safe operation of forklifts and First Aid/Automated External Defibrillator/Cardiopulmonary Resuscitation (First Aid/AED/CPR).	Prerequisites: Registered Apprentice status with the Ironworkers Apprenticeship and Training Program or permission of Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
IRW103	Science, Rigging and Hoisting	Science and mechanics related to the plumbing trade. Properties of water and matter, hydraulic and pneumatic mechanics, metals and alloys. Corrosion. Rigging procedures including the use of fiber and wire rope for knots, hitches and slings. Use of hoisting equipment, and cranes. Hoisting with helicopters. Safe and proper loading and unloading of hoisting equipment. Intermediate fitting projects and mathematical applications.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 6.0 6.0 6.0
IRW104	Ironworking: Blueprint Reading	Basic elements of construction drawings including characteristics of various types of blueprints for ironworkers. Drawing interpretation, general abbreviations, acronyms, and basic symbols recognition and drawing classifications.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 1.5 1.5 1.5
IRW105	Ironworking III: History	Historical factors, events and activities leading to the founding of the International Ironworkers Labor Union. Circumstances and events between 1906-1912 related to labor unionization. Conspiracy trials involving unionization of Ironworkers, Carpenters, Machinists and the Building Trades. World War II and postwar struggles related to the labor movement. Factors of labor movement growth. The Occupational Health and Safety Administration (OSHA), nuclear power, foreign production of steel, and political influences relating to unionization in the 21st Century	Prerequisites: None.	LEC 3.0 3.0 3.0
IRW112	Lead Hazard Training	Background of lead and its uses including health effects caused by lead exposure. Occupational Safety and Health Administration (OSHA) regulations that apply to lead exposure, hazard communication and workers legal rights. Personal protective equipment (PPE) and work methods on steel structures. General site safety, work practices and confined space entry.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
IRW120	Structural Steel Erection I	History and manufacture of iron and steel. Tools, equipment, materials, and trade procedures. Safety precautions. ;Raising gang members, erecting columns, beams, girders, trusses, nets, and railings. Fastening components.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IRW121	Structural Steel Erection II	Tools, equipment and trade procedures. Advanced structural steel welding and burning. Mobile and tower cranes. Bolted, riveted and pinned connections. Bar joists, and bridging. Detailing stairways, ladders, channel bucks and grating.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 4.0 4.0
IRW122	Cranes	Cause of fatalities. Load charts, wire rope, capacity, hook loads. Ground pressure, minimum and maximum clearances, list and trim. Floating cranes.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 3.0 3.0 3.0
IRW130	Reinforcing: Rebar	Reinforced concrete; manufacture of reinforcing steel; tools, ties, and safety; types of reinforcing used in building construction; bridge construction; purpose and location of reinforcing steel in concrete; fabricating, unloading, handling, and storing, reinforcing steel, reading engineering and placing drawings.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 4.0 4.0
IRW131	Reinforcing: Post Tensioning Monostrand	Principles, theory, and terminology of post-tensioning. Stressing equipment, hand tools, document control. Installation of monostrand post-tensioned floor systems, tendons. Troubleshooting, encapsulated systems, barrier cables, slabs-on-ground, and field placement drawings.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 4.0 4.0
IRW142	Conveyors and Industrial Maintenance	History of conveyors, safety and tools. Overview and installation of overhead and floor conveyor systems. Bulk handling, conveyor drawings and maintenance procedures.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 3.0 3.0 3.0
IRW150	Rigging I	Rigging history, principles and blocks. Rigging safety. Fabric and wire rope, steal chain, sockets, slings, rigging hardware. Slicing techniques. Reeving systems and personnel requirements.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 4.0 4.0
IRW151	Rigging II	Safety rules and information for operation of rigging equipment; operation and assembly of cranes; examples of rigging jobs; use of helicopters in construction; miscellaneous rigging equipment; skids and rollers; access structures.	Prerequisites: A grade of C or better in IRW150 and apprentice status, or permission of the Apprenticeship Coordinator.	LEC 3.0 3.0 3.0
IRW160	Architectural Ironworking I	Curtain, window wall systems, skylights, storefronts, entranceways, cable walls, sealants, glazing, rails, doors, anchors and fasteners, stairs and ladders, catwalks, grating, fence and guardrails, detention systems, testing, installation and erection.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 4.0 4.0
IRW161	Architectural Ironworking II	Introduction to layout, basic tools, mathematics, automatic levels, lasers, theodolites and transits including total station.	Prerequisites: A grade of C or better in IRW160 and registered apprentice status or permission of the Apprenticeship	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IRW175	Precast Concrete, Metal Buildings, and Scaffolding	Preconstruction planning including loading, method of transportation, timing, tolerances, safety, and quality control. Handling, erection and storage including hazards awareness. Use of cranes, hoists, and other specialized equipment. Pre-engineered metal building systems, site evaluation and preparation. Framing systems, insulation, walls, metal roofing, repairs and renovations. Basic components of scaffolding, loading, erecting and dismantling of scaffold systems.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
IRW296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
IRW296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IRW296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
IRW296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
IRW298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
IRW298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
IRW298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
ITA101	Elementary Italian I	Introduction to basic grammar, pronunciation, and vocabulary of Italian. Development of speaking, listening, reading, and writing skills. Study of the Italian culture.	Prerequisites: None.	LEC 4.0 4.0 4.0
ITA102	Elementary Italian II	Continued development of speaking, listening, reading, and writing skills in Italian. Study of Italian culture.	Prerequisites: A grade of C or better in ITA101 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
ITA201	Intermediate Italian I	Review of essential grammar of the Italian language and study of the Italian Culture. Continued practice and development of reading, writing, and speaking skills.	Prerequisites: A grade of C or better in ITA102 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
ITA202	Intermediate Italian II	Continued development of Italian language skills and continued study of the Italian culture.	Prerequisites: A grade of C or better in ITA201 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
ITD200	The Physical Child: Birth to Age Three	Examines the physical aspects of child growth and development in the first three years of life in the context of contemporary communities. Includes nutrition and feeding, health and safety, motor skills and exercise, neurological development, and identification of developmental delay.	Prerequisites: None.	LEC 3.0 3.0 3.0
ITD210	Early Attachments, Relationships, and Families: Birth to Age Three	Explores the attachment process and relationships within families. Considers contemporary social contexts where children develop a concept of self, self-regulation, and interaction skills with children and adults. Examines social-emotional development, societal stresses, and supportive professional roles and responsibilities.	Prerequisites: None.	LEC 3.0 3.0 3.0
ITD220	Cognition and Communication: Birth to Age Three	Examines the cognitive development and language acquisition of infants and toddlers. Considers the role of people and daily environments on development. Also covers disabilities and developmental delays as well as major theories and research in the field.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ITS101	Introduction to the Digital Divide	Introduction to concepts of the digital divide and access to technology across communities. Exploration of disparities in technology access and adoption, focusing on the barriers faced by urban and rural communities. Includes but not limited to digital literacy, economic and education factors, and the role of public and private initiatives in closing the gap and proposed strategies for digital access and equity.	Prerequisites: None.	LEC 1.0 1.0 1.0
ITS102	Advancing Digital Access and Literacy	Digital literacy skills focusing on development of prompting equity, recognition to digital literacy barriers, and access. Emphasis on understanding societal and institutional factors of digital equity and practical approaches to improving digital literacy and improving access.	Prerequisites: None.	LEC 1.0 2.0 1.7
ITS103	Wireless Surveys and Community Network Planning	Exploration of methodologies of conducing wireless site surveys to gather and interpret information on wireless coverage, signal strength, and interference to create optimized network plans. Demonstrate an understanding of the importance of data collection, analysis, and how to translate survey results.	Prerequisites: None.	LEC 1.0 1.0 1.0
ITS104	Network Planning and Geographical Mapping	Introduction to essential skills in network planning and geographical mapping using mapping tools such as Geographic Information Systems (GIS), Global Positioning Systems (GPS), and heat maps to interpret data signal strength, bandwidths availability, and infrastructure limitations. Emphasizes practical application of tools, performance, and propose strategies for addressing challenges in network planning.	Prerequisites: None.	LEC 1.0 1.0 1.0
ITS105	Introduction to Digital Infrastructure	Introduction to core components of digital infrastructure to explore key topics such as bandwidth, network speeds, data transmission, and the various types of network topologies used to design and maintain efficient networks. Emphasizes how these components work together to support connectivity, ensuring the reliable flow of data across different environments, from small businesses to large-scale operations.	Prerequisites: None.	L+L 1.0 2.0 2.0
ITS106	Wireless Security Fundamentals	Fundamentals of wireless security for security protocols to safeguard data, prevent unauthorized access, and maintain the integrity of wireless communication systems. Effectiveness of different security measures in mitigating these risks, identify potential security threats including but not limited to hacking, interference, and data breaches.	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ITS110	Information Security Fundamentals	Fundamental concepts of information technology security. Topics include authentication methods, access control, cryptography, Public Key Infrastructure (PKI), network attack and defense methods, hardening of operating systems and network devices, securing remote access and wireless technologies and securing infrastructures and topologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and Microsoft (MS) Windows and Linux Administration.	Prerequisites: A grade of C or better in CIS126DL, or CIS126RH, or permission of Program Director. Corequisites: BPC270 or MST150++.	L+L 3.0 4.0 4.0
ITS111	Wireless Technologies: Wi-Fi 6, 5G, and LTE	Exploration of wireless networking technologies to develop understanding of wireless protocols, network architectures, technical advancements to meet growing demands for faster, reliable, and efficient connectivity with focus on WiFi6, 5G, and Long-Term Evolution (LTE).	Prerequisites: A grade of C or better in ITS105 or permission of Instructor.	LEC 1.0 1.0 1.0 LAB 0.0 2.0 2.0
ITS112	Smart Cities and Technology Integration	Exploration of smart cities, focusing on how emerging technologies are integrated into urban infrastructures to enhance city services, improve operational efficiency, and foster sustainable urban development. Students will explore the key components of smart city ecosystems, including Internet of Things (IoT), Artificial Intelligence (AI)-driven analytics, smart grids, intelligent transportation systems, and environmental monitoring technologies. In addition, the implications of these advancements on social, economic, and environmentally sustainable smart cities.	Prerequisites: None.	L+L 1.0 2.0 2.0
ITS113	Introduction to Citizens Broadband Radio Service (CBRS)	Introduction to Citizens Broadband Radio Service (CBRS) and its applications. Including but not limited to regulations, licensing structures and technical aspects and use in real-world for industries like healthcare, manufacturing, and education are explored.	Prerequisites: A grade of C or better in ITS111 or permission of Instructor.	LEC 1.0 1.0 1.0 LAB 0.0 2.0 2.0
ITS114	CBRS Installation and Management	Technical aspects of Citizens Broadband Radio Service (CBRS) networks installation and management in compliance with Certified Professional Installer (CPI), spectrum access system (SAS) integration, and environmental sensing capacity (ESC). Considerations to meet real-world settings, address common challenges of installation, configuration and maintenance of networks.	Prerequisites: A grade of C or better in ITS113 or permission of Instructor.	LEC 1.0 1.0 1.0 LAB 0.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ITS115	Introduction to Digital Transformation	Introduction to digital transformation on organizations and integration of technologies such as cloud computing, artificial intelligence, machine learning, and data analytics in industries such as but not limited to healthcare, finance, and government. In addition, the importance of organizational change management in facilitating digital adoption and long-term sustainability.	Prerequisites: None.	L+L 1.0 2.0 2.0
ITS116	Wireless Network Optimization	Exploration of wireless network optimization through advanced strategic techniques. Focus on improving network performance applying radio frequency (RF) management strategies, mitigate interferences, enhance signal strength, and balance network load.	Prerequisites: None.	LEC 1.0 1.0 1.0
ITS120	Legal, Ethical and Regulatory Issues	Exploration of legal and ethical issues unique to information security. Analysis of professional ethical codes and their application to information security practitioners. Federal and state laws as they relate to information security.	Prerequisites: None.	LEC 3.0 3.0 3.0
ITS130	Operating System Security	In-depth examination of operating system security including Transmission Control Protocol/ Data Encryption Standard (DES), Triple Data Encryption Standard (3DES), Advanced Encryption Standard (AES), Pretty Good Privacy (PGP), and other encryption technologies (TCP/IP), Internet Protocol Security (IPSec) and Cisco Internetwork Operating System (IOS), Microsoft Windows, Linux and Mac OSX Security. Procedures to defend networks against attacks and recovery from network disasters. Web server security. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration	Prerequisites: A grade of C or better in ITS110 or permission of Instructor.	L+L 3.0 4.0 4.0
ITS240	Ethical Hacking and Network Defense	Preparation for the EC-Council Certified Ethical Hacking examination. In-depth exploration of how to effectively protect computer networks from risks ranging from malicious infiltration to cyber-warfare. Includes examination of ethical hacking, relevant tools and methodologies, and its importance to network security. Resources to identify new computer network vulnerabilities and counter security strategies will be discussed as well as an overview of relevant computer crime laws and penalties.	Prerequisites: A grade of C or better in ITS110, or CNT205, or CIS270, or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
ITS250	Certified Security Operations Center Analyst: CSA Exam Prep	The Certified Security Operations Center Analyst (CSA) course explores an understanding of Security Operations Center (SOC) fundamentals including incident response, threat detection, vulnerabilities, security monitoring techniques, and use of industry-leading tools and techniques used to safeguard critical systems and infrastructures, networks, and protection against cyber attacks. Helps prepare students for the EC-Council, Certified SOC Analyst Exam.	Prerequisites: A grade of C or better in ITS110, ITS120 and ITS240 or permission of Instructor.	L+L 3.0 4.0 4.0
ITS291	Computer Forensics Foundations	Development of foundational computer forensic skills. Introduction to preserving, identifying, extracting, interpreting, and documenting computer data as part of a forensically sound analysis. Examination of the physical and logical structure of hard drives. Study of the logical structure of Windows-based file systems and common applications. Introduction to the logical structure of Unix/Linux-based file systems and common applications of commercial forensic tools	Prerequisites: A grade of C or better in BPC170 and ITS110 or permission of Instructor.	L+L 4.0 5.0 5.0
ITS292	Advanced Computer Forensics	Advanced computer forensics analysis techniques with commercial tools. Introduction to open-source forensic tools. Emphasis on data recovery from complex applications and media types. Study of the logical structure of Unix/Linux-based file systems. Advanced search techniques. Analysis of unallocated space, compound files, and NTFS artifacts	Prerequisites: A grade of C or better in ITS291 or permission of Instructor.	L+L 4.0 5.0 5.0
ITS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
JPH245	Traditional and Modern Japanese Culture	Survey of traditional and modern Japanese culture in context. Intellectual, spiritual, and artistic traditions of Japan will be examined with an eye on their popular-culture manifestations. The course, conducted in English, will consist of lectures, discussions, as well as oral and written reports.	Prerequisites: None.	LEC 3.0 3.0 3.0
JPN101	Elementary Japanese I	Basic grammar, pronunciation, and vocabulary of Japanese. Study of Japanese culture. Development of speaking, listening, reading and writing skills	Prerequisites: None.	L+L 5.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
JPN102	Elementary Japanese II	Continued study of basic grammar, pronunciation and vocabulary of Japanese. Study of the Japanese culture. Intensive practice in oral communication and development of reading and writing skills.	Prerequisites: A grade of C or better in JPN101 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 5.0 6.0 6.0
JPN115	Beginning Japanese Conversation I	Conversational Japanese. Basic sentence structure, pronunciation, and vocabulary necessary to develop speaking ability in Japanese. Designed for students seeking speaking and listening abilities, with little emphasis on grammar, reading, or writing	Prerequisites: None.	LEC 3.0 3.0 3.0
JPN116	Beginning Japanese Conversation II	Continuation of conversational Japanese for survival in everyday business and social situations. Expansion of vocabulary and sentence structure through aural/oral practice. Practice in reading and writing Kana.	Prerequisites: A grade of C or better in JPN115. Completion of prerequisites within the last three years is required.	LEC 3.0 3.0 3.0
JPN201	Intermediate Japanese I	Expansion of sentence structures through oral/aural practice. Increased emphasis on reading and writing in Japanese and study of Japanese culture.	Prerequisites: A grade of C or better in JPN102 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 5.0 6.0 6.0
JPN202	Intermediate Japanese II	Extensive review of Japanese grammar; development of vocabulary and idiomatic expressions through reading and writing. Continued practice of oral communication skills and study of Japanese culture.	Prerequisites: A grade of C or better in JPN201 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 5.0 6.0 6.0
JPN296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
JRN101	Grammar and Style for Journalists	Focus on the fundamentals and application of grammar, punctuation, spelling, style and structure necessary in professional writing fields, including media writing.	Prerequisites: A grade of C or better in WAC101, or a grade of B or better in ALT100, or eligibility for ENG101 as indicated by appropriate English	L+L 1.0 2.0 2.0
JRN105	Introduction to Journalism	Survey of the field of journalism including what journalists do, their role in society, ethical practices, history, current trends, and the future of the profession. Overview of mass communication media, including newspapers, magazines, radio, television, and the Internet.	Prerequisites: None.	LEC 3.0 3.0 3.0
JRN125	Photo Editing	Basic techniques of photo composition and editing for media reproduction. Teach how to crop and size photographs. Use of photo editing and design software in paginating a newspaper page on the computer. The effect and impact of color vs. black and white photographs. Basic techniques of photo essay, photo page and photo story and/or multimedia news products and the impact of photos on typography.	Prerequisites: None.	L+L 3.0 3.0 3.0
JRN133	Development of Small Publications	Design, plan and write newsletters, brochures, and advertisements. Desktop computer production and paste-up techniques.	Prerequisites: None. Computer experience suggested but not required.	LEC 3.0 3.0 3.0
JRN201	News Writing	Writing and producing news for the media. Associated Press (AP) editing style, writing skills, and organizational structure for news.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
JRN205	Copyediting	Focus on copy editing skills and techniques needed in professional communication industries. Specifically, the basics of grammar of style, interaction of word and image, the process of aggregation and curation, and an introduction to ethics and industry standards are covered. Writing for clarity, completeness, and conciseness is emphasized.	Prerequisites: A grade of C or better in ENG101 or permission of Instructor. JRN201 recommended for Journalism students.	L+L 3.0 3.0 3.0
JRN208	Media Law and Ethics	Basic legal concepts for print, broadcast, online, and photojournalism including constitutional legal protections and the Freedom of Information Act (FOIA). Focus on access to courts, public records, public meetings, subpoenas, shield laws, prior restraint, libel, defamation, privacy, source confidentiality, intellectual property, obscenity, and Federal Communications Commission (FCC) regulations, and ethical practices.	Prerequisites: None.	LEC 3.0 3.0 3.0
JRN210	News and Media Production	Hands-on experience working in a college newsroom developing content as reporters, photographers, editors, and other roles on the student news team. Roles and responsibilities vary depending on student goals.	Prerequisites: A grade of C or better in JRN201 or [(ENG101 or ENG107) and permission of Program Director or Instructor].	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
JRN212	Writing for Broadcasts	Broadcast writing techniques emphasizing grammar, style and structure for various communication platforms. Focus on media reporting including writing scripts, interviewing skills, live broadcasting techniques, production overview and journalistic ethics.	Prerequisites: A grade of C or better in ENG101 and (JRN201 or permission of Instructor).	L+L 3.0 5.0 5.0
JRN213	Writing for Online	Focus on writing content applying fundamentals of style, grammar, and structure for media online.	Prerequisites: None. JRN201 recommended for Journalism students.	LEC 3.0 3.0 3.0
JRN216	Current Topics in Media Practice	Theory, training and experience in a specific area of journalism, with a focus on specialized types of journalism and cutting-edge and innovative practices.	Prerequisites: A grade of C or better in JRN201. JRN215 recommended but not required.	LAB 1.0 1.0 0.0
JRN225	Photojournalism	Reporting the news as a photojournalist, with emphasis on the development and creation of news photographs. Experience in shooting, editing and transmitting digital photos using professional photo editing and design software.	Prerequisites: None.	L+L 3.0 3.0 3.0
JRN226	Introduction to Multimedia Journalism	Overview to multimedia journalism including video and audio for news websites and TV news, as well as other multimedia platforms. Focus on conceptualizing story ideas, identifying and interviewing sources, and producing stories using multimedia. Introduction to current technologies for recording audio and video. Laws and ethics as applicable to multimedia journalism will also be explored.	Prerequisites: A grade of C or better in JRN201.	L+L 3.0 3.0 3.0
JRN231	Sports Writing	Writing sports stories for the print media. Composing at the computer keyboard. Associated press editing style, writing skills, and organizational structure for sports news.	Prerequisites: A grade of C or better in JRN201 or permission of Instructor.	L+L 3.0 3.0 3.0
JRN232	Community Reporting	Focus on the knowledge and skills needed to conduct reporting that is industry ready. Cover a community beat and write and use multimedia skills to publish the stories.	Prerequisites: A grade of C or better in JRN201.	LAB 3.0 3.0 0.0
JRN234	Feature Writing	Emphasis on crafting stylized human interest stories for publications. Includes research, interviewing, writing techniques, editing and professional concerns. Includes best practices for writing features for traditional and digital media.	Prerequisites: A grade of C or better in ENG101 or ENG107, or permission of Instructor.	L+L 3.0 3.0 3.0
JRN236AA	Public Relations Internship	Public relations work experience.	Prerequisites: Permission of Program Director.	LAB 1.0 1.0 0.0
JRN236AB	Public Relations Internship	Public relations work experience.	Prerequisites: Permission of Program Director.	LAB 2.0 2.0 0.0
JRN236AC	Public Relations Internship	Public relations work experience.	Prerequisites: Permission of Program Director.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
JRN238	Business Journalism	Focus on reporting for and about business. Explores the nature and functions of business and the roles of business journalists. Examines the various media and situations within which business journalism operates.	Prerequisites: A grade of C or better in JRN201 and GBS151.	L+L 3.0 3.0 3.0
JRN240AA	Journalism Internship	Journalism work experience with a newspaper or other news organization. 80 hours of designated work per credit. Maximum of 6 credits allowed	Prerequisites: A grade of C or better in JRN210.	L+L 1.0 1.0 0.0
JRN240AB	Journalism Internship	Journalism work experience with a newspaper or other news organization. 80 hours of designated work per credit. Maximum of 6 credits allowed.	Prerequisites: A grade of C or better in JRN210.	L+L 2.0 2.0 0.0
JRN240AC	Journalism Internship	Journalism work experience with a newspaper or other news organization. 80 hours of designated work per credit. Maximum of 6 credits allowed	Prerequisites: A grade of C or better in JRN210.	L+L 3.0 3.0 0.0
JRN290	Publications Portfolio	This course is organized around the development of a portfolio of published stories for submission to a jury of professional journalists, active and retired, that supports the district's occupational journalism certificate. Passing requires approval from two-thirds of the jury.	Prerequisites: None.	LAB 1.0 1.0 1.0
JRN296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
JRN296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
JRN296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
JRN296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
JRN298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
JRN298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
JRN298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
LAS101	Introduction to Law	Legal terminology and basic legal principles in the areas of tort, contract, and criminal law. Interrelationships among lawyers, the court system, and law enforcement and administrative agencies. Development of a case for trial, adjudication, and post-verdict procedures in the civil and criminal systems. Suggested but not required: ENG101 and CRE101, or exemption by score on the reading placement test (ASSET)	Prerequisites: None.	LEC 3.0 3.0 3.0
LAS107	The Paralegal Profession	Focus on the role, responsibilities, and ethical standards of a paralegal. Provides an overview of the legal system and the role of the paralegal in the legal system. Emphasis on professional development and job-search strategies.	Prerequisites: None.	LEC 3.0 3.0 3.0
LAS109	Civil Procedures I	Pretrial procedural issues in both Arizona and the federal system. Emphasis on Arizona Rules of Civil Procedure 1-37, 41, 55, 56, and 72-76. Coverage of applicable time limits, filing requirements, and proficiency in locating appropriate provisions in the Arizona Rules of Civil Procedure. Drafting of pleadings and motions and the application of procedural rules pertinent to the early stages of civil litigation.	Prerequisites: Acceptance into the Paralegal Studies program. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LAS101 and LAS107 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LAS110	Civil Procedures II	Application of the procedural aspects of discovery, trial preparation, and post-trial work as part of a litigation team. Emphasis on practical concerns, such as interviewing of witnesses; preparation of discovery documents, exhibits, and transmittal memoranda; summarizing and indexing depositions; organization of files; preparation of trial notebooks; and participation in a mock trial.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS115	Criminal Trial Procedure	Procedural aspects of the criminal trial process in Arizona state courts from preliminary proceedings through trial. Emphasis on application of the rules of criminal procedure and preparation of common trial documents by paralegals. Documents include the charging instrument, pre-trial motions, and jury instructions.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS131	Legal Writing	The use of proper grammar, punctuation, and spelling in the construction of sentences and the development of paragraphs. Use of case briefs to study effective writing and analytical techniques. Analysis and application of the writing process to produce well-written documents commonly used in the practice of law.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS203	Ethics and Professional Practice	Rules of professional responsibility and ethical requirements with an emphasis on their application to legal assistants. Sources of power to regulate the practice of law. Issues related to unauthorized practice of law. Examination of professionalism in the legal profession	Prerequisites: A grade of C or better in LAS131 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS204	Contract Law	Examination of contracts and their regulation by the Uniform Commercial Code. Review and drafting of basic agreements.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS208	Probate	Emphasis on various ways in which property can be held and passed on. Requirements for valid wills and trusts. Steps involved in estate administration and appropriate forms to be used. Includes drafting basic wills and simple trusts.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS211	Legal Research	Use of print and electronic media to locate public documents, statutes, administrative regulations, and cases from county, state, and federal jurisdictions. Reading and interpreting research results. Shepardizing. Use of proper citation forms.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LAS212	Tort Law	Basic elements of negligence, strict liability, intentional torts; defenses; damages; insurance coverage. Evaluation of records and personal injury claims; review of insurance policies; settlement brochure; preparation of case intake memorandum	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS214	Business Organizations	Analysis and evaluation of business organizations with practical application of the law to analyze the utility, form, and function of Sole Proprietorships, General Partnerships, Limited Partnerships, Limited Liability Companies, and Corporations. Preparation of documents to create the most effective and feasible business organization under a given set of circumstances.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS217	Family Law	Legal analysis of marriage, dissolution of marriage, parental rights and duties; pleading and practice.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS218	Administrative Law	Introduction to fundamental administrative law concepts including the delegation of powers, due process, citizen access and participation, rulemaking, adjudication, and judicial review. Emphasis on Arizona administrative procedures and the role of the paralegal in informal and prehearing advocacy and proceedings before a hearing officer.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or permission of Department Chair or Program Director).	LEC 3.0 3.0 3.0
LAS220	Paralegal Internship Seminar	Coordinates on-the-job experiences with interpersonal relations, communications, time-management, and case-management skills. Provides opportunity to discuss problems encountered during internship.	Prerequisites: A grade of C or better in LAS203, LAS211, (LAS204 or LAS212), and (BPC110 or CIS105 or permission of Program Director). Corequisites: LAS221AB.	LEC 1.0 1.0 1.0
LAS221AB	Paralegal Internship	Field work through placement at a law firm or other law-related organization where student will gain experience working in a legal setting. Supervision and evaluation by on-the-job supervisor as well as college program director.	Prerequisites: Permission of Program Director. Corequisites: LAS220.	LAB 2.0 10.0 0.0
LAS225	Legal Research, Analysis, and Writing	Integration and further development of legal research and writing skills with an emphasis on critical thinking, issue analysis, and motion practice. Focus on integrating research, writing, and legal argument development.	Prerequisites: A grade of C or better in LAS131 and LAS211 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS229	Litigation Technologies	Use of presentation software; use of timekeeping, calendaring, and docketing software; use of litigation support software to organize case files; use of electronic trial presentation software in an electronic courtroom; ethical issues.	Prerequisites: A grade of C or better in LAS110 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LAS261	Bankruptcy	Examination of bankruptcy laws and procedures and the role of paralegals in bankruptcy practice, including the commencement of a case, preparation of common forms, review of bankruptcy litigation including contested matters and adversary proceedings, and debtors' and creditors' rights and obligations.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS265	Regulatory Compliance	Examination of, and requirements for, organizations maintaining compliance with regulatory schemes. Emphasis on federal regulations and the role of non-lawyer personnel, such as paralegals, in obtaining, organizing, analyzing, and presenting recommendations for acting on factual information and legal research related to regulatory requirements.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).	LEC 3.0 3.0 3.0
LAS280	Paralegal Studies Portfolio Capstone	Demonstration of acquired skills and knowledge through review, revision, and supplementation of electronic portfolio containing evidence of program competencies; preparation, revision, and review of work product samples to facilitate the transition from student to entry-level paralegal.	A grade of C or better required in all Prerequisites. Prerequisites: LAS110, LAS203, LAS204, LAS214 and (BPC110 or CIS105 or permission of Program Director). Prerequisites or Corequisites: (LAS225 and LAS229) or permission of Program Director.	LEC 1.0 1.0 1.0
LAS294AA	Special Topics in Civil Law	Explores special topics related to the practice of civil law. Focuses on substantive and procedural aspects.	Prerequisites: Completion of Legal Assisting degree or certificate, or permission of Department or Division.	LEC 1.0 1.0 1.0
LAS294BA	Special Topics in Criminal Law	Explores special topics related to the practice of criminal law. Focuses on substantive and procedural aspects.	Prerequisites: Completion of Legal Assisting degree or certificate, or permission of Department or Division.	LEC 1.0 1.0 1.0
LAS294CA	Special Topics in Administrative Law	Explores special topics related to the practice of administrative law. Focuses on substantive and procedural aspects.	Prerequisites: Completion of Legal Assisting degree or certificate, or permission of Department or Division.	LEC 1.0 1.0 1.0
LAS294DA	Special Topics in Current Legal Issues	Explores special topics related to the practice of law. Focuses on substantive and procedural aspects.	Prerequisites: Completion of Legal Assisting degree or certificate or permission of Department or Division	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LAS296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
LAS296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
LAS296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LAS296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
LAS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
LAS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
LAS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
LAT101	Elementary Latin I	Introduction to the basic grammar and vocabulary of the Latin language. Practice reading and translating Latin into English	Prerequisites: None.	LEC 4.0 4.0 4.0
LAT102	Elementary Latin II	Comparative study of English and Latin grammar. Emphasis on analytical thinking, memorization, and familiarization with new terminology. Translation from English and from original works in Latin.	Prerequisites: A grade of C or better in LAT101 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LAT201	Intermediate Latin I	Introduction to translation technics using selections from various authors; emphasis on use of primary texts.	Prerequisites: A grade of C or better in LAT102. Completion of prerequisites within the last three years is required.	LEC 4.0 4.0 4.0
LAT202	Intermediate Latin II	Refinement of translation technics using selections from Virgil's Aeneid; emphasis on use of language and meter.	Prerequisites: A grade of C or better in LAT201. Completion of prerequisites within the last three years is required.	LEC 4.0 4.0 4.0
LBA155	Laboratory Assisting: Principles and Procedures	Overview of laboratory services, laboratory professionals, and the role of a laboratory assistant. Principles and procedures for pre-analytical processing of laboratory specimens. Performance of specimen processing, pre-analytical processes, and point-of-care testing. Application of quality assurance, quality control, quality management principles, infection control, and laboratory safety. Use of laboratory supplies, instrumentation, and information systems. Performing clerical and computer functions using medico-legal guidelines for documentation.	Prerequisites: (Acceptance into the Laboratory Assisting program), (a grade of C or better in PLB109 and PLB111), and permission of Program Director.	L+L 5.0 5.0 5.0
LBA158	Laboratory Assisting Practicum	Practicum in laboratory assisting based in healthcare facilities or reference laboratories. Performance of clinical skills for pre-analytical processing of laboratory specimens, initial testing phases, and point-of-care testing using laboratory instrumentation, information systems, and supplies. Application of quality assurance, quality control, infection control, and laboratory safety. Performance of clerical and computer functions using medico-legal guidelines for documentation. Use of professional and ethical conduct in all interpersonal communications.	Prerequisites: A grade of C or better in LBA155 and permission of Program Director.	LAB 2.0 9.0 0.0
LDR100	The Leader in You	Introductory exploration and application of leadership theories, concepts and practices for college students that want to make a difference in a changing world. Provides the concept of the relational leadership model and how it differs from traditional leadership theories. Focus on self-development of leadership potential through completion of personal and leadership assessments, values exploration and leadership skill applications.	Prerequisites: None.	LEC 3.0 3.0 3.0
LDR101	Emerging Leaders I	Concepts and application of leadership skills and service learning to promote social change and value clarification. Development of organizational leadership skills through experiential learning	Prerequisites: None.	LEC 2.0 2.0 2.0
LDR102	Emerging Leaders II	Focus on implementing collaborative practices and organizational leadership skills to promote positive social change. Apply value-based leadership behavior in diverse settings	Prerequisites: A grade of C or better in LDR101 or permission of Instructor.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LDR201	Leadership Facilitation I	Designed to provide skills and practice for group facilitation of leadership activities in diverse settings Focus on development of organizational skills to promote effective group functioning	Prerequisites: A grade of C or better in LDR102 or permission of Instructor.	LEC 2.0 2.0 2.0
LET112	Introduction to Juvenile Corrections	Introduction to the Arizona Department of Juvenile Corrections. Includes the philosophy, mission, vision, and goals of the department in addition to juvenile corrections statistics and jurisdiction issues. Also covers programs available to youth in the department as well as agency information policy and access. Standards of conduct also covered.	Prerequisites: None.	LEC 2.0 2.0 2.0
LET113	Juvenile Corrections Procedures	Practical application of juvenile corrections procedures. Includes workplace safety, first aid, and cardiopulmonary resuscitation (CPR) procedures in addition to principles of staff safety in the facility. Also covers physical intervention techniques, preparation and transportation of youth, and radio and telephone communications. Report writing also covered.	Prerequisites: None.	LAB 2.0 6.0 6.0
LET114	Juvenile Corrections Officer Skills	Officer skills for the juvenile corrections system. Includes cultural awareness, data security policy and procedures, and defensive driving skills. Also covers tools for and goals of behavior management and effective communication styles and skills. Contraband legalities and procedures also covered.	Prerequisites: None.	L+L 3.0 4.0 4.0
LET115	Crisis Intervention in Juvenile Corrections	Overview of juvenile corrections officer skills for crisis intervention. Includes phases of the stress model and situation assessment in addition to verbal and non-verbal crisis communication. Also covers behavioral support and conflict resolution goals and limitations. Life Space Interview (LSI) steps included.	Prerequisites: None.	LEC 2.0 2.0 2.0
LET116	Adolescent Treatment Issues	Adolescent treatment issues in the juvenile corrections system. Includes stages of adolescent development and development theories. Covers mental health issues and illness, disorders, and interventions in addition to types of treatments, medications, and behavioral issues.	Prerequisites: None.	LEC 3.0 3.0 3.0
LET117	Juvenile Corrections Supervision	Supervisory skills for the juvenile corrections system. Includes classification principles and systems, stages of change, and case management responsibilities. Also covers indicators of and reporting requirements for child abuse, Incident Command System (ICS) responsibilities, and education team roles and responsibilities. Positive Behavioral Interventions and Support (PBIS) also covered.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LET118	Legal Issues in Juvenile Corrections	Overview of legal issues in the Arizona Department of Juvenile Corrections (ADJC) system. Includes justice system treatment philosophies and theories as wells as adjudication, conviction, and victim's rights. Also covers civil and criminal liability, causes of civil litigation, and civil rights concerns. Search and seizure, due process, and physical intervention principles also covered.	Prerequisites: None.	LEC 3.0 3.0 3.0
LET120	Juvenile Corrections Housing Unit Operations	Housing unit operations for juvenile corrections officers. Includes policies for housing unit operations, supervisory procedures, and documentation in addition to behavior management goals and techniques. Also covers levels of support, group management skills, and activation procedures for the Incident Command System (ICS).	Prerequisites: None.	L+L 2.0 3.0 3.0
LET130	Detention Officer Training	Introduction to the detention field. Includes officer responsibilities with regards to discipline, conduct and dealing with inmates in the legal system. Examination of detention services, management principles, philosophy and goals also covered. Constitutional Amendments, law enforcement ethics and corruption included.	Prerequisites: Permission of Department or Division.	LEC 2.0 2.0 2.0
LET132	Introduction to Correctional Law	Introduction to the legal and constitutional rights of inmates. Pre-trial, sentencing, and probation processes covered. Court cases with regards to enforcement personnel and custodial agencies discussed. Also covers inmate discipline and types of force.	Prerequisites: A grade of C or better in LET130.	LEC 3.0 3.0 3.0
LET134	Special Needs Issues and Communication	Management skills for dealing with inmates with special needs. Issues related to female inmates, drug addictions, and mental disorders covered. Techniques for dealing with suicidal inmates and gang members included.	Prerequisites: A grade of C or better in LET132.	LEC 2.0 2.0 2.0
LET135	Problem Solving and Crisis Management	Further examination of management techniques and tools within the detention facilities. Crisis intervention and de-escalation techniques covered. Also includes medical screening, inmate grievances, inmate disciplinary reports, and the reclassification system.	Prerequisites: A grade of C or better in LET134.	LEC 2.0 2.0 2.0
LET136	Detention Security Procedures	Security procedures within the detention facilities. Officer responsibilities with regards to contraband, facility security, and key/tool control. Procedures for conducting searches, security walks, headcounts, and the proper use of restraints. Dealing with hostage and emergency situations covered.	Prerequisites: A grade of C or better in LET135 or permission of Department or Division.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LET138	Detention Officer Emergency Procedures	Techniques for managing emergency situations in the detention facility including fires and medical emergencies. Skills for administrating first aid and cardiopulmonary resuscitation (CPR). Procedures for using control devices. Includes Occupational Safety and Health Administration (OSHA) safety equipment and methods as well as Sudden In-Custody Death (SICD) procedures.	Prerequisites: A grade of C or better in LET136.	LAB 1.0 3.0 3.0
LET139	Detention Facility Training	Daily procedures for managing the detention facility. Includes procedures for processing inmate needs and requests, completing departmental reports and crime scene management. Operational procedures and liability issues also covered.	Prerequisites: A grade of C or better in LET138.	L+L 2.0 4.0 4.0
LET141	Detention Defensive Tactics	Defensive tactics training for Detention Officers. Covers defensive body mechanics, various defensive techniques, handcuffing, and search techniques as well as pressure points and the carotid control technique. Ground defense and survival skills, survival psychology, and physical fitness also included.	Prerequisites: Permission of Department or Division.	L+L 4.0 5.0 5.0
LET144	Detention Officer Field Training	Field training procedures for the detention facility officer. Includes officer communication, safety, and security as well as procedures for handling emergency situations in the detention facility. Also covers Order of Protection, Injunction Against Harassment, and visitation responsibilities.	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0
LET146	Officer Survival	Overview of skills and techniques for officer survival. Tactical thinking, critical incident stress, entry techniques and emergency plans as well as basic high risk traffic stops and search warrants covered. Limitations of the mind and body in a crisis also covered	Prerequisites: None.	LEC 1.0 1.0 1.0
LET148	Detention Officer Field Training Lab	Application of field training procedures for the detention facility officer. Includes communication and documentation requirements as well as officer safety in the tower and on the floor. Also covers procedures for handling emergency situations and management of special populations within the detention facility.	Prerequisites: Permission of Department or Division.	LAB 3.0 9.0 9.0
LET150	Firearms I	Overview of firearms usage. Covers firearms safety and nomenclature, basic firearms usage techniques, and firearms care and cleaning.	Prerequisites: Permission of Department or Division.	L+L 3.0 3.0 3.0
LET151	Firearms II	Practical application of firearms usage. Covers loading and unloading ammunition, firearm safety, daytime and nighttime firing techniques and shooting positions. Emphasis on qualification courses.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LET150.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LET152	Tactical Weapons	Practical application of tactical weapons procedures. Emphasis on handgun and rifle techniques in addition to impact weapon targets, use of force, and taser operation. Includes techniques for engaging suspects, advanced simunitions, and high threat vehicle engagement.	Prerequisites: Permission of Department or Division.	L+L 4.0 6.0 6.0
LET154	Leadership in Law Enforcement	Skills for effective leaders in the law enforcement industry. Covers behavioral and personality types, leadership styles, organizational accountability, and skills for providing effective mentoring. Emphasis on professionalism and its impact on society and law enforcement.	Prerequisites: None.	LEC 2.0 2.0 2.0
LET155	General Instructor Certification	Designed to aid persons responsible for training in the workplace. Emphasis on motivating the adult learner, systematic training, planning, and evaluating performance.	Prerequisites: None.	LEC 3.0 3.0 3.0
LET160	Correctional System Ethics and Professionalism	Overview of policies and guidelines with respect to professionalism and ethics in the correctional system. Includes workforce diversity, staff-inmate relations, and harassment issues. Also covers the definition of ethics and the basis for ethical decision-making.	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
LET162	Introduction to Inmate Management	Effective inmate management techniques. Includes components of effective management and use of officer discretion. Criminal justice system also covered. Procedures for dealing with inmate discipline and classification, grievances, and use of force determinations.	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
LET164	Correctional Information Systems	Overview of policies and guidelines for professional and effective distribution of information within the correctional system, including regulations governing two-way radio operation and use of a field notebook	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
LET166	Correction Officers Safety and Weapons Training	Basic shooting principles of the weapons used by correctional officers. Includes nomenclature, handling, loading and firing of the service handgun, shotgun, and 37mm gas gun. Lawful use of chemical agents including identification, coding, delivery and decontamination procedures.	Prerequisites: Permission of Department or Division.	L+L 2.0 4.0 4.0
LET167	Correctional Sergeant Leadership	Examination of leadership skills, duties and responsibilities, and procedures for sergeants in correctional facilities. Includes leading and creating an environment that motivates employees, effective communication, professionalism, and staffing/roster management procedures. Also covers procedures for the Incident Command System (ICS), Designated Area Response Team (DART), and performance evaluations for correctional employees.	Prerequisites: Permission of Department or Division.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LET168	Inmate Security Procedures I	Procedures for dealing with inmate security. Includes progressive behavior control and protective custody. Inmate count, personal property inventory, mail handling procedures, and cell extraction procedures also covered.	Prerequisites: Permission of Department or Division.	LEC 2.0 2.0 2.0
LET169	Inmate Security Procedures II	Security procedures for handling inmates. Covers searches, contraband, monitoring of inmates and perimeter checks. Transportation of inmates, use of restraints and driving skills including preventable collisions included.	Prerequisites: A grade of C or better in LET168 or Corequisites: LET168.	L+L 3.0 4.0 4.0
LET170	Security, Custody and Control Procedures	Procedures for maintaining security and control within a correctional institution. Includes custody levels, roles of staff, and essential components with regards to span-of-control. Also covers procedures for dealing with crime scene management, fires, and emergency situations.	Prerequisites: Permission of Department or Division.	LEC 2.0 2.0 2.0
LET171	Essentials of Team Dynamics and Leadership in Public Safety	Overview of leadership essentials including characteristics and skills for achieving positive team dynamics, organizational goals, and greatness in the public safety sector. Covers techniques for influencing the mindsets and skill sets of teams and tools required to unlock the talent and strengths of their teams. Also covers levels of trust and engagement, facilitating team discussions, and collaboration towards a shared mission and vision.	Prerequisites: None.	LEC 2.0 2.0 2.0
LET172	Conflict and Crisis Management	Conflict and crisis management techniques for correctional institutions. Effecting positive, non-forceful resolutions to potentially violent situations. Emphasis on officer and inmate safety	Prerequisites: Permission of Department or Division.	LEC 2.0 2.0 2.0
LET173	Introduction to Leadership in Public Safety	Introduction to leadership in the field of public safety. Covers stages of adult human development, generational differences, and characteristics of effective leaders. Also includes characteristics of leaders, including values, ethics, attitudes, behavior, and response techniques in addition to identification of personal strengths and determination of a personal leadership style.	Prerequisites: None.	LEC 2.0 2.0 2.0
LET174	Organizational Culture and Leadership	Examination of organizational structure and its application to the field of public safety. Covers characteristics and principles of effective organizations, systems and process management, and phases of process building in addition to characteristics of a process enterprise. Also includes levels of leadership and characteristics, ethical considerations, restrictions, and best behaviors of each.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LET173.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LET175	Public Safety Leadership Capstone	Completion and professional presentation of a capstone project such as a formal staff study or leadership portfolio in the field of public safety, including steps for problem identification, research, and analyzing and reporting of information.	Prerequisites: A grade of C or better in LET174.	LAB 1.0 3.0 2.40
LET176	Medical and Mental Health	Responsibilities of the correctional system staff with regards to medical and mental health of inmates. Includes basic first aid, basic life support, and supervision and care for mentally ill and impaired inmates. Also includes drug and substance abuse and communicable disease control.	Prerequisites: Permission of Department or Division.	LEC 2.0 2.0 2.0
LET178	Physical Fitness and Self Defense Training	Physical and self defense training for correctional officers. Emphasis on aerobic power, muscular strength, endurance, and flexibility. Includes necessary and legal self defense along with techniques for protection of self and others in physical confrontations. Also includes training guidelines, safety issues and the benefits of good physical fitness.	Prerequisites: Permission of Department or Division.	L+L 3.0 5.0 5.0
LET179	Highway Patrol Procedures	Overview of operational and response procedures for highway patrol operations. Covers pursuits, roadblocks, emergency response, and high risk stops in addition to incident command systems. Also includes overview of racially biased policing, sex trafficking indicators, and marijuana field testing.	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
LET180	Introduction to Computer Aided Dispatch	Introduction to computer aided dispatch. Covers techniques and procedures for emergency broadcast, including dispatch protocol, types of requests, and use of the dispatch panel. Also includes an overview of banking and vehicle security systems, the Incident Command System (ICS), and procedures for officer involved emergencies.	Prerequisites: None.	LEC 2.0 2.0 2.0
LET181	Emergency Communications Personnel	Duties and responsibilities of personnel within the emergency communications industry. Includes information operator and tactical dispatcher responsibilities for handling various types of calls including priority one, hot calls and pursuits. Also covers split configuration communication.	Prerequisites: None.	LEC 2.0 2.0 2.0
LET182	Emergency Communications Procedures	Practical application of emergency communications procedures. Includes dispatch functions, protocol and techniques, Incident Command system (ICS) implementation, and information officer and dispatcher responsibilities. In addition to basic dispatch procedures, covers queries, pursuits, priority one calls, hot calls, all calls, and high-risk situations and procedures. Radio dispatch card procedures also covered.	Prerequisites: None.	L+L 3.0 9.0 9.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LET183	Transportation Law	Transportation law provisions. Covers Arizona Revised Statute (ARS) Title 28, drug transportation, and contraband as well as civil and criminal traffic laws. Traffic offenses, violation name, and classification included.	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
LET184	Introduction to 911 Call Basics	Overview of basics for processing 911 calls. Covers communications terminology, abbreviations and codes as well as various police systems. Also includes location systems including numbering, point of origin, freeway structure, various maps and city codes.	Prerequisites: None.	LEC 3.0 3.0 3.0
LET185	911 Policies and Procedures	Policies and procedures for completing 911 calls. Includes the National Incident Management System (NIMS), Incident Command System (ICS) and the use of an incident action plan. Also covers the purpose and use of radio codes, the online crime reporting website, and call signs. Alarm call types, prioritization, reporting, and cancellation procedures also covered.	Prerequisites: None.	L+L 3.0 5.0 5.0
LET186	Specialized 911 Call Procedures	Procedures for managing specific emergency situations. Includes goals and procedures for handling barricaded suspect calls, active shooter situations and officer involved emergencies. Also covers Critical Incident Stress Management (CISM) resources and the impact of emotional labor.	Prerequisites: None.	L+L 3.0 5.0 5.0
LET195	Proficiency Skills for Fire Investigators	Proficiency skills required of the fire investigator. Includes physical conditioning and wellness as well as defensive tactics and vehicle operations.	Prerequisites: Permission of Department or Division.	L+L 2.0 4.0 4.0
LET196	Patrol Procedures for Fire Investigators	Patrol and off-duty responsibilities procedures for fire investigators. Includes domestic violence authority as well as priorities for handling crimes in progress. Also covers communication procedures and restrictions.	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
LET197	Firearms for Fire Investigators	Firearms training for the fire investigator. Includes firearm safety and procedures, including daytime and nighttime firing techniques and shooting positions. Practical application in a field environment.	Prerequisites: Permission of Department or Division.	L+L 2.0 4.0 4.0
LET198	Criminal Investigations for Fire Investigators	Overview of procedures for conducting special criminal investigations. Responsibilities of the fire investigator with regard to death investigations, and assault and burglary cases. Also covers gangs and gang activity in addition to narcotics and dangerous drug investigations.	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
LET201	Physical Fitness Instructor Certification	Covers skills necessary to instruct and conduct physical fitness tests using the Cooper Institute for Aerobics Research standards and the Peace Officer Physical Aptitude Test (POPAT) standards. Also covers basics of human anatomy, strength training and aerobic conditioning as well as nutrition and prevention of injuries.	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LET225	Criminal Investigations Certification	Police Detective Training. Emphasis on investigations, search and seizure, legal aspects of interview and interrogation, report writing, case management, and field problem scenarios.	Prerequisites: Must be a certified police officer or have permission of Department or Division.	LEC 6.0 6.0 6.0
LET225AA	Criminal Investigations Certification I	Overview of information, strategies, techniques, and resources available to detectives investigating property crimes, sex crimes, forged documents, and death investigations.	Prerequisites: Must be a certified police officer or have permission of Department or Division.	LEC 1.0 1.0 1.0
LET225AB	Criminal Investigations Certification II	Review of laws regarding search and seizure. Updated information regarding new laws as they apply to search and seizure.	Prerequisites: Must be a certified police officer or have permission of Department or Division.	LEC 1.0 1.0 1.0
LET225AC	Criminal Investigations Certification III	The legal framework for admissible confessions and other information gathered through interviews and interrogations. Prepares law enforcement personnel for obtaining confessions and other incriminating information from suspects used in court.	Prerequisites: Must be a certified police officer or have permission of Department or Division.	LEC 1.0 1.0 1.0
LET225AD	Criminal Investigations Certification IV	Emphases on necessity for good reports in criminal investigations. Characteristics of pre-report preparation, preparing the body of the report, and assembling the case report. Process of handling submission of a case report, processing turndowns, and furthers.	Prerequisites: Must be a certified police officer or have permission of Department or Division.	LEC 1.0 1.0 1.0
LET225AE	Criminal Investigations Certification V	Overview of the criminal investigators role in preparing case documents for submittal to the attorney and to prepare for trial.	Prerequisites: Must be a certified police officer or have permission of Department or Division.	LEC 0.5 0.5 0.5
LET225AF	Criminal Investigations Certification VI	Various types of electronic evidence and the procedures required to be submitted to the court for prosecution.	Prerequisites: Must be a certified police officer or have permission of Department or Division.	LEC 0.5 0.5 0.5
LET225AG	Criminal Investigations Certification VII	This course is a summative culmination of the investigator courses. Students will assume the investigator's role in a crime scene scenario, securing a crime scene, processing evidence, preparing documentation, and submit a case for trial.	Prerequisites: A grade of C or better in LET225AA, LET225AB, LET225AC, LET225AD, LET225AE, and LET225AF.	LEC 1.0 1.0 1.0
LET226	Arrest and Defense Tactics Instructor Training	Techniques for instructing students in arrest and defense tactics. Includes approaching suspects, use of equipment, and officer responsibilities as well as handcuffing and transporting prisoners. Use of force and liability issues, pressure points and impact weapons also covered. Close Quarter Crisis Management and psychological factors emphasized	Prerequisites: Permission of Department or Division.	LEC 6.0 6.0 6.0
LET229	High Risk Situations/Instructor Training	Techniques for instructing students in high risk/known risk situations. Includes pre-stop procedures, primary and back-up officer responsibilities, suspect removal, and vehicle positioning	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LET243	Search Warrant Preparation	Overview of statutes, constitutional requirements, and case law covering searches, seizures, and detentions relative to the search warrant process. Includes procedures and tactical considerations for obtaining and serving search warrants. Also covers review and documentation of probable cause related to property, persons, and drug-related crimes within a search warrant affidavit as well as search warrant draft procedures.	Prerequisites: Must be Law Enforcement personnel or have permission of Instructor.	L+L 6.0 6.0 6.0
LET250	DUI Detection	Overview of alcohol-related DUI enforcement and general deterrence, DUI detection and description techniques, legal statutes, Standardized Field Sobriety Test (SFST's) procedures, DUI arrest process, report writing, courtroom testimony techniques and drug detention techniques.	Prerequisites: Permission of Department or Division.	LEC 2.0 2.0 2.0
LET254	Criminal Investigations Detective I	Advanced training designed to prepare law enforcement officers for transition into investigator positions. Includes Criminal Investigations Division (CID) goals and expectations, the scouting mission techniques and resources, operational plan components and development, and a review of professional writing skills for report writing, in addition to procedures for surveillance. Also covers procedures for preparing and serving search warrants, handling digital evidence, and working human trafficking and smuggling cases.	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
LET255	Criminal Investigations Detective II	Further advanced training designed to prepare law enforcement officers for transition into investigator positions. Includes Department of Public Safety (DPS) Criminal Investigations Division (CID) policies and procedures, the intelligence mission and cycle, crime scene management and processing, in addition to open source intelligence applications and resources. Also covers procedures for handling informants, interview and interrogation, and courtroom/trial preparation.	Prerequisites: A grade of C or better in LET254.	LEC 3.0 3.0 3.0
LET256	Law Enforcement Firearm Instructor	A train the trainer course for police firearm instructors. Covers instructional techniques for the pistol, revolver, and shotgun.	Prerequisites: AzPost (Peace Officer Standard and Training) Certified Police General Instructor or permission of Department or Division.	LEC 5.0 5.0 5.0
LET256AA	Law Enforcement Patrol Rifle Instructor	Techniques on proper manipulation and marksmanship skills needed by a patrol officer/deputy in the use of the patrol rifle, and techniques of teaching those skills to other officers/deputies.	Prerequisites: AzPOST (Peace Officer Standard and Training) certified law enforcement firearms instructor or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
LET260	Traffic Accident Investigation	Overview of accident investigation techniques and reports. Physical evidence on the roadway and from the vehicle, human factors and reaction times, measurement and calculations emphasized. Also includes felony collision investigation.	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
LET262	Active Shooter Procedures	Procedures for response and mitigation of active shooter/active homicide events. Includes policies for decision making, use of appropriate force, tactics for responding to active shooter events, basic structure clearing techniques, and Tactical Combat Casualty Care (TCCC) as well as opportunities for reality-based training.	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0
LET279AA	Field Training: Phase I	Introduction to the Field Training Program. Overview of standards for officers in training. Also includes vehicle inspection, traffic stops, writing citations, and field interview cards. Use of the radio and Mobil Data Terminal (MDT) covered. Integration of radio and MDT use while driving patrol emphasized.	Prerequisites: Permission of Department or Division.	L+L 4.0 4.0 4.0
LET279AB	Field Training: Phase II	Field training communication skills. Procedures for interview and interrogation skills, as well as strategies for conflict resolution. Covers standards for effective report writing in addition to requirements for callback, arrest and field reports. Also includes procedures for completing bookings. Standards for officers in training also evaluated.	Prerequisites: Permission of Department or Division.	L+L 4.0 6.0 6.0
LET279AC	Field Training: Phase III	Continuation of field training. Procedures in arrest of suspects driving under the influence (DUI) and for investigating accidents emphasized. Standards for officers in training also evaluated.	Prerequisites: Permission of Department or Division.	L+L 5.0 5.0 5.0
LET279AD	Field Training: Phase IV	Culmination of field training. Self initiated field activity, 'On-view' cases emphasized. Integration of recognizing activity that is suspicious in nature or illegal and appropriate action. Standards for officers in training also evaluated.	Prerequisites: Permission of Department or Division.	L+L 4.0 6.0 6.0
MAS101	Introduction to Medical Assisting	Introduction to professional skills required in the field of medical assisting. Development of professional behaviors and expectations; in addition to but not limited to communication and mathematical calculations used.	Prerequisites: None.	LEC 3.0 3.0 3.0
MAS102	Fundamentals of Administrative Medical Assisting	Explores fundamental administrative procedures in ambulatory healthcare settings, such as appointment scheduling, telephone etiquette, and patient rights. Emphasis on a basic understanding of medical law and ethics and Health Insurance Portability and Accountability Act (HIPAA) regulations. Provides a basic overview of insurance, coding, billing, and electronic health records (EHR) as they relate to medical assisting.	Prerequisites: A grade of C or better in MAS101.	LEC 6.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAS103	Basic Anatomy, Physiology, and Medical Terminology	Provides an overview of medical terminology and the word parts used in building and analyzing terms used in healthcare, including abbreviations and symbols. A body-systems approach is used for terms relating to anatomy, physiology, and pathophysiology.	Prerequisites: None.	LEC 3.0 3.0 3.0
MAS104	Medical Administrative Assisting Practicum	Students will apply the medical administrative concepts learned in previous program courses.	Prerequisites: A grade of C or better in HCC145 or MAS103.	LAB 4.0 4.0 4.0
MAS201	Fundamentals of Clinical Medical Assisting	Provides a foundation for clinical lab skills related to medical assisting. This hands-on course will explore surgical procedures, vital signs, sterilization, electrocardiogram (EKG), and emergency situations in the ambulatory setting. Includes a review of the steps involved in basic first aid and healthcare provider cardiopulmonary resuscitation (CPR).	Prerequisites: Acceptance into the Clinical Medical Assisting or Medical Assisting program.	L+L 6.0 7.5 7.5
MAS202	Laboratory Testing in Ambulatory Healthcare Settings	Introduction to basic Point of Care Testing (POCT), specimen collection, and handling. Theory and practice of basic phlebotomy and application of fundamental phlebotomy procedures and techniques in a clinical ambulatory healthcare setting.	Prerequisites: A grade of C or better in MAS201, or permission of Program Director.	L+L 6.0 7.5 7.5
MAS203	Medical Assisting Pharmacology	Explores principles of basic pharmacology and medication administration. Focus on responsibility and appropriate medication protocols as they relate to medical assisting.	Prerequisites: A grade of C or better in MAS201 and MAS202.	L+L 6.0 7.5 7.5
MAS204	Clinical Medical Assisting Practicum	Application of clinical medical assisting concepts while interacting with patients at a clinical practicum site.	Prerequisites: A grade of C or better in MAS203.	LAB 4.0 9.0 0.0
MAS205	Medical Assisting Program Review	Prepares students to apply for the clinical credentialing examination and for entry into the medical assisting industry.	Prerequisites: A grade of C or better in MAS203.	LEC 2.0 2.0 2.0
MAT051	Number Sense I	Primary emphasis on conceptual understanding of whole numbers, integers and mathematical operations. Use systems of measure and Pythagorean Theorem. Focus on mathematical language, connections, patterns and reasoning.	Prerequisites: None.	LEC 1.0 1.0 1.0
MAT052	Number Sense II	Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction addition and subtraction. Solving problems involving decimals and fractions. Focus on mathematical language, connections, patterns and reasoning.	Prerequisites: A grade of C or better in MAT051, OR an appropriate district placement.	LEC 1.0 1.0 1.0
MAT053	Multiplicative and Proportional Reasoning	Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction multiplication and division. Solving problems involving decimals, fractions, and percentages. Focus on additive and multiplicative reasoning including proportionality and similarity.	Prerequisites: A grade of C or better in each of the following courses: (MAT051 and MAT052), OR an appropriate district placement.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT055	Algebraic Structures	Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations.	Prerequisites: None.	LEC 1.0 1.0 1.0
MAT056	Functions I	Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations.	Prerequisites: A grade of C or better in MAT055, or an appropriate district placement.	LEC 1.0 1.0 1.0
MAT057	Functions II	Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change.	Prerequisites: A grade of C or better in MAT055 and MAT056, or an appropriate district placement.	LEC 1.0 1.0 1.0
MAT081	Basic Arithmetic	Primary emphasis on conceptual understanding of and solving problems involving whole numbers, integers, mathematical operations, decimals, decimal operations, fractions, percentages, angles and geometric figures. Use of systems of measure, similarity, proportionality and the Pythagorean theorem. Focus on mathematical language, connections, patterns and reasoning, and additive and multiplicative reasoning.	Prerequisites: None.	LEC 4.0 4.0 4.0
MAT082	Basic Arithmetic	Primary emphasis on conceptual understanding of and solving problems involving whole numbers, integers, mathematical operations, decimals, decimal operations, fractions, percentages, angles and geometric figures. Use of systems of measure, similarity, proportionality and the Pythagorean theorem. Focus on mathematical language, connections, patterns and reasoning, and additive and multiplicative reasoning.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT090	Introductory Algebra	Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change.	Prerequisites: None.	LEC 5.0 5.0 5.0
MAT091	Introductory Algebra	Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change.	Prerequisites: None.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT092	Introductory Algebra	Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change.	Prerequisites: None.	LEC 3.0 3.0 3.0
MAT103	College Mathematics Prep	Foundational knowledge of topics necessary for success in College Mathematics. Emphasis on understanding mathematical concepts and their applications. Topics include number sense, proportional reasoning, numerical and algebraic expressions, linear equations, and representations of data.	Prerequisites: None.	LEC 3.0 3.0 3.0
MAT108	Tutored Mathematics	Structured tutorial assistance and math study skills to help students achieve success in a mathematics course in which they are concurrently enrolled. Mathematics study skills emphasized.	Prerequisites: None. Corequisites: (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155 or MAT156), OR any lower numbered MAT class, OR permission of Department/Division Chair.	LEC 2.0 2.0 2.0
MAT108AA	Tutored Mathematics	Structured tutorial assistance and math study skills to help students achieve success in a mathematics course in which they are concurrently enrolled. Mathematics study skills emphasized.	Prerequisites: None. Corequisites: (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155 or MAT156), OR any lower numbered MAT class, OR permission of Department/Division Chair.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT112	Mathematical Concepts and Applications	A problem solving approach to mathematics as it applies to real-life situations. Development, use and communication of mathematical concepts and applications that relate to measurement, percentage, practical geometry, statistics, finance, and unit conversions.	Prerequisites: None.	LEC 3.0 3.0 3.0
MAT114	College Algebra Prep	Proper use of function notation, average rate of change of functions, and evaluating arithmetic and algebraic expressions. Analysis of linear and quadratic equations, and their applications; graphs of linear and quadratic functions; operations on polynomial expressions.	Prerequisites: None.	LEC 4.0 4.0 4.0
MAT115	College Algebra Prep	Proper use of function notation, average rate of change of functions, and evaluating arithmetic and algebraic expressions. Analysis of linear and quadratic equations, and their applications; graphs of linear and quadratic functions; operations on polynomial expressions.	Prerequisites: None.	LEC 5.0 5.0 5.0
MAT120	Intermediate Algebra	Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions.	Prerequisites: A grade of C or better in each of the following courses: (MAT055 and MAT056 and MAT057), OR a grade of C or better in (MAT090 or MAT091 or MAT092 or MAT095 or MAT096), OR an appropriate district placement.	LEC 5.0 5.0 5.0
MAT121	Intermediate Algebra	Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions.	Prerequisites: A grade of C or better in each of the following courses: (MAT055 and MAT056 and MAT057), OR a grade of C or better in (MAT090 or MAT091 or MAT092 or MAT095 or MAT096), OR an appropriate district placement.	LEC 4.0 4.0 4.0
MAT122	Intermediate Algebra	Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions.	Prerequisites: A grade of B or better in each of the following courses: (MAT055 and MAT056 and MAT057), OR a grade of B or better in (MAT090 or MAT091 or MAT092 or MAT095 or MAT096), OR an appropriate district placement.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT126	Intermediate Algebra with Review	Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions.	Prerequisites: None.	LEC 6.0 6.0 6.0
MAT140	College Mathematics	Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics.	Prerequisites: An appropriate District placement, or a grade of C or better in (MAT052, MAT053 and MAT055) or (MAT055, MAT056 and MAT057) or MAT09+ or MAT103 or MAT114 or MAT115 or MAT12+.	LEC 5.0 5.0 5.0
MAT141	College Mathematics	Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics.	Prerequisites: An appropriate District placement or a grade of C or better in (MAT052, MAT053 and MAT055) or (MAT055, MAT056 and MAT057) or MAT09+ or MAT103 or MAT114 or MAT115 or MAT12+.	LEC 4.0 4.0 4.0
MAT142	College Mathematics	Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics.	Prerequisites: An appropriate District placement or a grade of C or better in (MAT052, MAT053 and MAT055) or (MAT055, MAT056 and MAT057) or MAT09+ or MAT103 or MAT114 or MAT115 or MAT12+.	LEC 3.0 3.0 3.0
MAT145	College Mathematics with Review	Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics, along with review of arithmetic and introductory algebra, as needed.	Prerequisites: None.	LEC 5.0 5.0 5.0
MAT146	College Mathematics with Review	Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics, along with review of arithmetic and introductory algebra, as needed.	Prerequisites: None.	LEC 6.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT150	College Algebra/Functions	Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems.	Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair.	LEC 5.0 5.0 5.0
MAT150	College Algebra/Functions	Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems.	Prerequisites: A grade of C or better in MAT114 or MAT115 or MAT12+ OR an appropriate district placement for MAT15+, or permission of Department or Division Chair.	LEC 5.0 5.0 5.0
MAT151	College Algebra/Functions	Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems.	Prerequisites: A grade of C or better in MAT114 or MAT115 or MAT12+ or an appropriate district placement for MAT15+ or permission of Department or Division Chair.	LEC 4.0 4.0 4.0
MAT152	College Algebra/Functions	Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems.	Prerequisites: A grade of C or better in MAT114 or MAT115 or MAT12+ OR an appropriate district placement for MAT15+ OR permission of Department or Division Chair.	LEC 3.0 3.0 3.0
MAT155	College Algebra/Functions with Review	Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems.	Prerequisites: A grade of C or better in (MAT055, MAT056, and MAT057), or MAT09+, or MAT114, or MAT115, or an appropriate district placement for MAT120 or MAT121 or MAT122, or permission of Department/Division Chair.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT156	College Algebra/Functions with Review	Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems, along with review of intermediate algebra, as needed.	Prerequisites: A grade of C or better in each of the following: (MAT055, MAT056, and MAT057), OR MAT09+ or MAT114 or MAT115, OR an appropriate district placement for MAT120 or MAT121 or MAT122, OR permission of Department or Division Chair.	LEC 6.0 6.0 6.0
MAT172	Finite Mathematics	An introduction to the mathematics required for the study of social and behavioral sciences. Includes combinatorics, probability, descriptive statistics, matrix algebra, linear programming and the mathematics of finance. Includes applications of technology in problem-solving.	Prerequisites: A grade of C or better in (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155 or MAT156) or MAT187 or MAT188 or an appropriate District Placement.	LEC 3.0 3.0 3.0
MAT182	Plane Trigonometry	A study of measures of angles, properties of graphs of trigonometric functions, fundamental identities, addition and half-angle formulas, inverse trigonometric functions, solutions of trigonometric equations, complex numbers and properties of triangle solution. May receive credit for only one of the following: MAT182 or MAT187.	Prerequisites: A grade of C or better in (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155 or MAT156), OR an appropriate district placement. Corequisites: (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155 or	LEC 3.0 3.0 3.0
MAT187	Precalculus	Topics in algebra and trigonometry in preparation for calculus.	Prerequisites: A grade of C or better in MAT15+, or an appropriate district placement.	LEC 5.0 5.0 5.0
MAT188	Precalculus	Topics in algebra and trigonometry in preparation for calculus.	Prerequisites: A grade of C or better in MAT 15+, OR an appropriate district placement.	LEC 4.0 4.0 4.0
MAT206	Elements of Statistics	Basic concepts and applications of statistics, including data description, estimation and hypothesis tests.	Prerequisites: A grade of C or better in MAT14+ or MAT15+ or MAT187 or MAT188 or equivalent or an appropriate District placement or permission of Department/Division Chair.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT212	Brief Calculus	Introduction to the theory, techniques and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences.	Prerequisites: A grade of C or better in MAT15+ or MAT187 or MAT188 or an appropriate District placement.	LEC 3.0 3.0 3.0
MAT213	Brief Calculus	Introduction to the theory, techniques, and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences.	Prerequisites: A grade of C or better in MAT15+ or MAT187 or MAT188 or an appropriate District placement.	LEC 4.0 4.0 4.0
MAT217	Mathematical Analysis for Business	An introduction to the mathematics required for the study of business. Includes multivariable optimization, Lagrange multipliers, linear programming, linear algebra, probability, random variables, discrete and continuous distributions.	Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221.	LEC 3.0 3.0 3.0
MAT218	Mathematical Analysis for Business	An introduction to the mathematics required for the study of business. Includes multivariable optimization, Lagrange multipliers, linear programming, linear algebra, probability, random variables, discrete and continuous distributions.	Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221.	LEC 4.0 4.0 4.0
MAT220	Calculus with Analytic Geometry I	Limits, continuity, differential and integral calculus of functions of one variable.	Prerequisites: A grade of C or better in MAT187 or MAT188 or an appropriate District	LEC 5.0 5.0 5.0
MAT221	Calculus with Analytic Geometry I	Limits, continuity, differential and integral calculus of functions of one variable.	Prerequisites: A grade of C or better in MAT187 or MAT188 or an appropriate District	LEC 4.0 4.0 4.0
MAT225	Elementary Linear Algebra	Introduction to matrices, systems of linear equations, determinants, vector spaces, linear transformations and eigenvalues. Emphasizes the development of computational skills.	Prerequisites: A grade of C or better in MAT212 or MAT213 or MAT220 or MAT221, or equivalent.	LEC 3.0 3.0 3.0
MAT227	Discrete Mathematical Structures	Course emphasizes discrete mathematics connections to computer science by exposing students to foundational concepts of set theory, logic, counting, induction, proof techniques, graph theory, and algorithms.	Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221, or permission of Department/Division Chair.	LEC 3.0 3.0 3.0
MAT230	Calculus with Analytic Geometry II	Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series.	Prerequisites: A grade of C or better in MAT220 or MAT221 or equivalent.	LEC 5.0 5.0 5.0
MAT231	Calculus with Analytic Geometry II	Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series.	Prerequisites: A grade of C or better in MAT220 or MAT221 or equivalent.	LEC 4.0 4.0 4.0
MAT240	Calculus with Analytic Geometry III	Multivariate calculus including vectors, vector- valued functions, partial differentiation, multiple integration, and an introduction to vector fields.	Prerequisites: A grade of C or better in Grade of C or better in MAT230 or MAT231.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT241	Calculus with Analytic Geometry III	Multivariate calculus including vectors, vector- valued functions, partial differentiation, multiple integration and an introduction to vector fields.	Prerequisites: A grade of C or better in MAT230 or MAT231.	LEC 4.0 4.0 4.0
MAT256	Investigating Quantity: Number, Operations and Numeration Systems	Explore number, numeration systems and operations on numbers. Techniques of problem solving with an emphasis on exploring a variety of strategies. Use a variety of visualization techniques to develop a conceptual understanding of these topics.	Prerequisites: A grade of C or better in (MAT15+ or higher), or (MAT12+ and MAT14+), or [MAT14+ and (MAT114 or MAT115)], or (MAT14+ and an appropriate District placement into MAT150, MAT151, or MAT152), or permission of Department/Division Chair.	LEC 4.0 4.0 4.0
MAT257	Investigating Geometry, Probability and Statistics	Explores geometry, measurement, probability and statistics. Uses visualization, technologies, problem solving, reasoning and proof to develop a conceptual understanding of these topics.	Prerequisites: A grade of C or better in MAT256 or permission of Department/Division Chair.	LEC 4.0 4.0 4.0
MAT276	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques with applications. Problem solving using MATLAB.	Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department/Division Chair.	LEC 4.0 4.0 4.0
MAT277	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques with applications. Problem solving using MATLAB.	Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department/Division Chair.	LEC 3.0 3.0 3.0
MAT280	Foundational Statistics for Engineers	Fundamentals of probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, regression analysis, analysis of variance, and design of experiments.	Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent.	L+L 3.0 5.0 5.0
MAT282AA	Service-Learning Experience in Mathematics	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
MAT282AB	Service-Learning Experience in Mathematics	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
MAT282AC	Service-Learning Experience in Mathematics	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
MAT295	Special Topics in Mathematics	Conceptual and computational aspects of a special topic in modern mathematics.	Prerequisites: Permission of Department/Division Chair.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MAT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Department/Division Chair.	LAB 1.0 1.0 0.0
MAT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Department/Division Chair.	LAB 2.0 2.0 0.0
MAT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Department/Division Chair.	LAB 3.0 3.0 0.0
MAT305	Mathematics for Machine Learning	Advanced mathematical concepts essential for understanding and applying techniques in machine learning using Python programming language. Focus on vector-based calculus, probability distributions, continuous optimization, and information theory.	Prerequisites: A grade of C or better in (AIM250 and MAT227) or permission of Program Director.	L+L 3.0 4.0 4.0
MCO120	Media and Society	Study of historical and contemporary roles of media and its pervasiveness in society as it relates to culture, politics and education.	Prerequisites: Eligibility for ENG101 or ENG107 or permission of Instructor.	LEC 3.0 3.0 3.0
MCO220	Cultural Diversity and the Media	Images of the diverse cultures and gender issues within the U.S. media. Exploration of racial and gender roles which shape the media as well as media roles which influence U.S. race relations and racial change. Roles, contributions, and challenges of the minority press in the United States.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MCO296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
MCO296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
MCO296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MCO296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
MCO298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
MCO298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
MCO298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MDC103	Introduction to Medical Assisting	This course develops the foundation of healthcare through an understanding of anatomy and physiology, medical terminology, application of basic pathophysiology as it relates to entry-level medical assisting, emergency preparedness, and demonstration of CPR completion. Medical terminology as it relates to structures, functions, diseases, procedures, and diagnostic testing. Building and analyzing terms using word parts. Medical abbreviations, symbols and correct spelling and pronunciation, Professionalism in healthcare to ensure students are ready to enter the professional workplace including etiquette, image, manners, communication, professional relationships, responsibility and accountability, respectfulness, patient privacy. Empathy, compassion and emotional maturity specific to the healthcare setting. Focus on development of personal and professional communication skills and an understanding of how effective communication skills promote teamwork. Additional focus on intercultural communication strategies.	Prerequisites: Program admission, and successful completion of RDG100 or higher or appropriate reading placement into CRE101. Health and Safety Documentation uploaded to American DataBank and verified prior to being enrolled in the class.	156
MDC104	Fundamentals of Administrative Medical Assisting	This course explores fundamental administrative procedures in various healthcare settings. Overview of the daily operations, principles and procedures for administrative skills including: medical record management, introduction to the electronic health record (EHR), and application of insurance, coding and billing. Basic administrative office policies, procedures, appointment scheduling, telephone etiquette, patient reception, financial practices, third party payers, health insurance, and basic understanding of medical billing and coding. Health organization structure, patient rights and quality care. Definition and importance of values, basic understanding of medical law and ethics.	Prerequisites: MDC103.	159

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MDC105	Fundamentals of Clinical Medical Assisting I	Overview of the daily operations, principles and procedures for clinical medical assisting, including: compliance with Occupational Safety and Health Administration (OSHA), the Centers for Disease Control and Prevention (CDC), and Clinical Laboratory Improvement Amendments (CLIA). Infection control practices including, proper disposal of biohazardous materials and sharps, aseptic handwashing, appropriate application of personal protective equipment (PPE), blood borne pathogens, fomites, chain of infection, setting up and maintaining a sterile field, surgical instrument identification and sterilization, sterile techniques, and application of sterile gloves. Definition, application and importance of performing vital signs accurately (blood pressure, pulse, respirations, temperature, pulse oximetry, height and weight). Basic understanding of the fundamental concepts of nutrition and diet as they relate to human health and disease.	Prerequisites: A grade of C or better in MDC104.	141
MDC106	Fundamentals of Clinical Medical Assisting II	This course explores all aspects of clinical medical assisting skills, concepts, and procedures in a simulated healthcare setting. Topics include medical specialty practices and basic point-of-care testing (POCT), specimen collection and handling while complying with state and federal government agencies. The course also explores principles and procedures for basic dosage calculation and medication administration specific to medical assisting. Theory and practice of basic phlebotomy procedures and equipment. This course prepares students for the medical assisting national credential examination, and provides tools and strategies for gainful employment.	Prerequisites: MDC105.	205
MDC106DC	Fundamentals of Clinical Medical Assisting II	This course explores all aspects of clinical medical assisting skills, concepts, and procedures in a simulated healthcare setting. Topics include medical specialty practices and basic point-of-care testing (POCT), specimen collection and handling while complying with state and federal government agencies. The course also explores principles and procedures for basic dosage calculation and medication administration specific to medical assisting. Theory and practice of basic phlebotomy procedures and equipment. This course prepares students for the medical assisting national credential examination, and provides tools and strategies for gainful employment.	Prerequisites: MDC105.	174

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MDC130	Medical Assisting Practicum	This course prepares and engages students in a practicum experience with an opportunity to apply both clinical and administrative skills and concepts which include the application of duties, procedures, and knowledge derived from program coursework.	Prerequisites: A grade of C or better in MDC106 or MDC120 with a P grade. Students are responsible to maintain the requirements of the background check, fingerprint clearance card, and health and safety documentation throughout the practicum experience.	200
MDL190	Clinical Laboratory Operations	Overview of laboratory services, laboratory professionals, and the role of a medical laboratory technician (clinical laboratory technician). Understanding of health care reform, reimbursement, cost analysis, coding, credentialing, accreditation, and regulatory agencies. Emphasis on process improvement, laboratory mathematics, statistics, documentation, medico-legal implications, education, management and personnel, and specimen integrity. Application of pre-analytical, analytical, and post-analytical principles, infection control, and laboratory safety. Recognition of acceptable quality control and quality management principles, phlebotomy principles, and lab equipment, glassware, labware, and water purification. Includes information systems and information management in laboratories. Importance of professional growth, communicating with the patient and public, and ethical conduct.	Prerequisites: Acceptance into the Medical Laboratory Science program and permission of Program Director.	LEC 2.0 2.0 2.0
MDL240	Clinical Urinalysis and Body Fluid Analysis	Examines anatomy and physiology of the renal system, renal diseases, and renal function tests. Emphasis on interpretation, evaluation, and reporting of urinalysis and body fluid results, urine and body fluid collection techniques, types, specimen handling and preservation, and instrument calibration, maintenance, and quality control. Application of body fluid analyses, and chemical and microscopic analysis of urine.	Prerequisites: A grade of C or better in MDL190, acceptance into the Medical Laboratory Science program, and permission of the Program Director.	L+L 3.0 5.0 5.0
MDL241	Practicum: Clinical Urinalysis and Body Fluid Analysis	Practicum experience in clinical urinalysis and body fluid analysis based in healthcare facilities or reference laboratories. Assessment of anatomy and physiology of the renal system, renal diseases, and renal function tests. Performance of interpretation, evaluation, and reporting of urinalysis and body fluid results, urine and body fluid collection techniques, types, specimen handling and preservation, and instrument calibration, maintenance, and quality control. Performance of body fluid analyses and chemical and microscopic analysis of urine.	Prerequisites: A grade of C or better in MDL240, acceptance into the Medical Laboratory Science program, and permission of the Program Director.	LAB 1.0 6.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MDL242	Clinical Hematology and Hemostasis	Examines the anatomy and physiology of the hematopoietic and hemostasis systems, hematology and hemostasis case studies, anemia categories, and thrombocyte, hemostatic, and malignant and nonmalignant leukocyte disorders. Emphasis on interpreting, evaluating, and reporting hematology and hemostasis results, anticoagulant therapy, morphology, peripheral smear correlation with analyzer results and patient condition, erythrocyte indices, collection techniques, specimen handling, calibration, and quality control. Methods of analysis on hematology and hemostasis analyzers, and preventive maintenance.	Prerequisites: A grade of C or better in MDL240, acceptance into the Medical Laboratory Science program, and permission of the Program Director.	L+L 6.0 9.0 9.0
MDL243	Practicum: Clinical Hematology and Hemostasis	Practicum experience in clinical hematology and hemostasis based in healthcare facilities or reference laboratories. Assessment of the anatomy and physiology of the hematopoietic and hemostasis systems, hematology case studies, anemia categories, and thrombocyte, malignant and nonmalignant leukocyte disorders. Application of interpreting, evaluating, and reporting hematology results, morphology, peripheral smear correlation with analyzer results, erythrocyte indices, collection techniques, specimen handling, calibration, and quality control. Emphasis on hematology and hemostasis analyzers, and preventive maintenance. Perform hematology and hemostasis analyses.	Prerequisites: A grade of C or better in MDL242, acceptance into the Medical Laboratory Science program, and permission of the Program Director.	LAB 1.0 6.0 0.0
MDL244	Clinical Immunohematology and Immunology	Principles of immunity and immunologic testing. Causes of disorders of the immune system. Study of blood group antigens, antibodies, and genetics. Understanding of donor blood collection, component preparation, and transfusion therapies. Performance of testing techniques and evaluation of data.	Prerequisites: A grade of C or better in MDL242, acceptance into the Medical Laboratory Science program, and permission of the Program	L+L 6.0 9.0 9.0
MDL245	Practicum: Clinical Immunohematology and Immunology	Practicum in immunohematology and immunology in healthcare facilities or reference laboratories. Performance of clinical skills in immunity and immunologic testing, testing for disorders of the immune system, blood group antigens, antibodies, and genetics. Observation of donor blood collection, component preparation, and transfusion therapies. Performance of testing techniques and evaluation of data.	Prerequisites: A grade of C or better in MDL244, acceptance into the Medical Laboratory Science program, and permission of the Program Director.	LAB 1.0 6.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MDL246	Clinical Microbiology	Emphasis on microbial infectious and bioterrorism agents, classification, morphology, phenotyping, diseases, biotechnology and molecular technology, quality assurance and quality control, epidemiological significance, and regulatory standards. Application of antimicrobial, biochemical, and differential testing, drug resistance, selection, inoculation and incubation of culture media, isolation techniques, cell culture and viral detection tests, and macroscopic and microscopic evaluation. Emphasis on staining, rapid and commercial testing methods, safety precautions, specimen collection, handling, storage, and disposal of biological material, pretreatment, decontamination, and concentration techniques, specimen type, source, and common microbial flora, specimen acceptability, and instrumentation.	Prerequisites: A grade of C or better in MDL244, acceptance into the Medical Laboratory Science program, and permission of the Program Director.	L+L 6.0 9.0 9.0
MDL247	Practicum: Clinical Microbiology	Practicum experience in clinical microbiology based in healthcare facilities or reference laboratories. Emphasis on microbial infectious and bioterrorism agents, classification, morphology, phenotyping, diseases, biotechnology and molecular technology, quality assurance and quality control, epidemiological significance, and regulatory standards. Application of antimicrobial, biochemical, and differential testing, drug resistance, selection, inoculation and incubation of culture media, isolation techniques, cell culture and viral detection tests, and macroscopic and microscopic evaluation. Procedures for staining, rapid and commercial testing methods, safety precautions, specimen collection, handling, storage, and disposal of biological material, pretreatment, decontamination, and concentration techniques, specimen type, source, and common microbial flora, specimen acceptability, and instrumentation.	Prerequisites: A grade of C or better in MDL246, acceptance into the Medical Laboratory Science program, and permission of the Program Director.	LAB 1.0 9.0 0.0
MDL248	Clinical Chemistry	Principles and procedures of clinical chemistry and testing for diseases of protein, nonprotein nitrogen compounds, lipid, glucose, bilirubin, liver disease, cardiac and endocrine function, toxicology, therapeutic drug monitoring, acid base balance, electrolytes, and trace elements. Emphasis on quality assurance, quality control, mathematics and statistical analysis, specimen collection, and preanalytical processes. Study of immunoassays, nucleic acid probes, viral and tumor markers, automation of analytical techniques, spectrophotometry, genetic diseases and inborn errors of metabolism, and point-of-care testing. Use of reagents, equipment, supplies, and units of measure.	Prerequisites: A grade of C or better in MDL246, acceptance into the Medical Laboratory Science program, and permission of the Program Director.	L+L 6.0 9.0 9.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MDL249	Practicum: Clinical Chemistry	Practicum in clinical chemistry based in healthcare facilities or reference laboratories. Performance of clinical skills in clinical chemistry and testing for diseases of protein, nonprotein nitrogen compounds, lipid, glucose, bilirubin, liver disease, cardiac and endocrine function, toxicology, therapeutic drug monitoring, acid base balance, electrolytes, genetic diseases and inborn errors of metabolism, and trace elements. Application of quality assurance, quality control, mathematics and statistical analysis, specimen collection, and preanalytical processes. Performance of immunoassays, nucleic acid probes, viral and tumor markers, automation of analytical techniques, spectrophotometry, and point-of-care testing. Use of reagents, equipment, supplies, and units of measure.	Prerequisites: A grade of C or better in MDL248, acceptance into the Medical Laboratory Science program, and permission of Program Director.	LAB 1.0 9.0 0.0
MDL252	Clinical Preparation I	Examines clinical laboratory testing in a simulated laboratory environment. Emphasis on interpretation, evaluation, and reporting of a variety of laboratory results, and includes instrument calibration, maintenance, and quality control.	Prerequisites: A grade of C or better in MDL244, acceptance into the Medical Laboratory Science program, and permission of Program Director.	L+L 0.5 2.5 2.5
MDL263	Clinical Preparation II	Continuation of examination of clinical laboratory testing in a simulated laboratory environment. Emphasis on interpretation, evaluation, and reporting of a variety of laboratory results, and includes instrument calibration, maintenance, and quality control.	Prerequisites: A grade of C or better in MDL248, acceptance into the Medical Laboratory Science program, and permission of Program Director.	L+L 0.5 2.5 2.5
MDL290	Medical Laboratory Science Program Review	Preparation for the professional practice national examinations. Topics include methodologies, techniques, and problem solving relative to urinalysis; body fluids, hematology, hemostasis, immunohematology, immunology, microbiology, and chemistry. Development of a professional practice resume, personalized test taking strategies and examination study plan. Maintenance of professional competency and lifelong learning and enhancing professional practice.	Prerequisites: A grade of C or better in (MDL247 and MDL249), acceptance into the Medical Laboratory Science program and permission of Program Director.	LEC 2.0 2.0 2.0
MDL291	Medical Laboratory Science Program Capstone	Preparation for the professional practice national examinations. Topics include methodologies, techniques, and problem solving relative to urinalysis; body fluids, hematology, hemostasis, immunohematology, immunology, microbiology, and chemistry. Development of personalized test taking strategies and examination study plan.	Prerequisites: A grade of C or better in (MDL247 and MDL249), acceptance into the Medical Laboratory Science program and permission of Program Director.	LEC 1.0 1.0 1.0
MDL295AA	Special Topics: Medical Laboratory Science	Explores a special topic related to medical laboratory science. Topics vary and include concepts relevant to those advancing or pursuing careers in medical laboratory science.	Prerequisites: Permission of Program Director.	L+L 1.0 2.0 1.7

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MDL295AB	Special Topics: Medical Laboratory Science	Explores a special topic related to medical laboratory science. Topics vary and include concepts relevant to those advancing or pursuing careers in medical laboratory science.	Prerequisites: Permission of Program Director.	L+L 2.0 3.0 2.7
MDL295AC	Special Topics: Medical Laboratory Science	Explores a special topic related to medical laboratory science. Topics vary and include concepts relevant to those advancing or pursuing careers in medical laboratory science.	Prerequisites: Permission of Program Director.	L+L 3.0 4.0 4.0
MEC101	HVAC I: Principles and Trade Calculations	Basic principles of heating, ventilating and air conditioning (HVAC). Trade calculations, algebraic and geometric equations, and scientific notation. Use and maintenance of HVAC trade tools.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC103	HVAC II: Piping, Soldering, Brazing and Electrical	Application, preparation and joining of copper and plastic pipe. Soldering and brazing tools, materials, and procedures. Refrigeration cycle, furnace operation and maintenance. Use of multimeter and manometer. Electricity, electrical circuits, and electrical components. Measurement of voltage, current, resistance and circuit continuity. Ohm's Law.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC105	Residential and Industrial Plumbing I	Plumbing practices, history, laws, codes, regulations and responsibility to the public. Usage and maintenance of hand and power tools. Workplace safety and Occupational Safety and Health Administration (OSHA) requirements. Application of basic plumbing calculations and principles of science as they relate to plumbing system installation and maintenance. Characteristics, advantages, disadvantages, and uses of pipe and tube. Fittings for cast-iron, glass, clay, concrete, copper, steel, plastic. Special materials and galvanic action. Piping connections	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC106	HVAC III: Systems	Air distribution systems, measurement instruments and venting and sizing. Gas-fired equipment, furnaces, heating, ventilating, and air conditioning (HVAC) systems, and electric heating systems. Alternating current (AC) motors, circuit components and testing instruments. Maintenance, safety, troubleshooting, and service techniques. Job documentation and customer relations	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC107	Residential and Industrial Plumbing II	Application of advanced plumbing calculations to include percentages, conversions, fractions, decimals, square roots, circles, angles, measurement. First aid, personal safety, and Occupational Safety and Health Act (OSHA) guidelines. Materials handling, usage, advantages, and disadvantages. Fixtures I, II, III, fittings, accessories, and valves. Blueprint reading and freehand, finished, and detailed sketching	Prerequisites: A grade of C or better in MEC105.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MEC108	Residential and Industrial Plumbing III	Water piping materials. Sources and treatment of public, private, and individual water systems. Water distribution and supply systems. Cross-connection protection and pipe identification. Hot water heaters. Sanitary drainage systems. Plumbing calculations and blueprint reading.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC118	Residential and Industrial Plumbing IV	Properties of water and plumbing traps. Air, air chamber, and sizing. High and low level pressure measurement. Manometer, gauge selection and use. Vibration, turbulence, and water hammer. Roof, floor and area drains. Oil and gas fuel systems.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC119	Basic Safety	Overview of safety rules and procedures for working on construction job sites	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
MEC120	Basic Calculations for Construction	Addition, subtraction, multiplication and division of whole, decimal, fraction and metric numbers. Percentage and fraction conversions. Metric units of length, weight, volume and temperature. Metric system as it relates to the construction trade. Basic algebra and geometry operations and equations. Area and volume calculations of shapes.	Prerequisites: None.	L+L 1.5 1.5 1.5
MEC121	Introduction to Hand and Power Tools	Overview of the use, maintenance and safety procedures for common hand and power tools.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
MEC122	Rigging Safety and Equipment	Rigging safety, equipment and inspection. Includes crane hand signals, common rope knots, types of derricks and cranes and safety procedures for rigging and moving materials and equipment	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
MEC124	HVAC IV: Equipment, Devices, Compressors and Pumps	Heat transfer and human comfort. Humidifiers and humidity. Air filters and air filter friction loss. Metering devices and expansion valves. Thermal expansion valves. Compressors and heat pumps. Installation, adjustment, replacement, service, troubleshooting. Reverse-cycling. Leak detection, evacuation, recovery, and charging heating, ventilating, and air conditioning (HVAC) systems. Service equipment of HVAC systems.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC201	HVAC V: Maintenance and Troubleshooting	Tools, instruments, equipment, components, procedures, materials, and tasks for preventative maintenance and troubleshooting of heating, ventilating and air conditioning (HVAC) systems. Microprocessor, gas, electric, and oil heating systems. Furnaces, electric heater packages for cooling, and heat pumps.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC203	HVAC VI: Troubleshooting Heating and Cooling Systems	Cooling and heating systems; heat pumps, Heating, Ventilation and Air Conditioning (HVAC) systems and accessories. Commercial heating and cooling systems. Air and water balancing systems. Steam systems. Customer relations.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MEC205	Residential and Industrial Plumbing V	Gas and plumbing code requirements. Residential, commercial, industrial, institutional plumbing practices. Fixtures, appliances, fixture fittings, valves, and trim. Gas piping installation, pipe sizing, pipe fittings and connections, appliances, regulators, meters, controls, and corrosion. Advanced plumbing calculations. Specific plumbing systems and specialized water systems	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC206	HVAC VII: Air Quality and Energy Conservation	Advanced blueprint reading. Architectural, plumbing, mechanical, and electrical drawings. Submittal, transfer and design. Indoor air quality. Heating, Ventilating and Air Conditioning (HVAC) equipment, components, accessories and systems. Introduction to computers and computer networks. Energy conservation and management.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC207	Residential and Industrial Plumbing VI	Advanced plumbing calculations. Offsets, tank capacities, volume and weight, rations and proportions, sizing, and piping expansion. Energy, temperature, heat transfer, stratification, multiple heaters, and recirculation. Basic electricity and troubleshooting. Safety, current, motors, circuits, humidity and condensation. Plumbing, electrical, heating/ventilation/air conditioning (HVAC), and detail blueprints. Specialized plumbing	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC208	Residential and Industrial Plumbing VII	General considerations, leaks and drainage. Installation, repair, and service of residential, commercial, industrial, and institutional heating systems. In-ground and above-ground water piping, drainage, waste and vent. Fuel gas piping, lead products, water heaters, waste stoppages, and water hammer. Blueprint reading. Installation of waste systems. Interceptors and backwater valves. Heating systems. Water protection, and conservation in heating systems	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MEC218	Residential and Industrial Plumbing VIII	Hydraulic and plumbing theory. Pumps, uses, and design. Pump performance curves, pump installation, and maintenance. Advanced blueprint reading, sketching, and material estimating. Plumbing code. Installation code requirements. Specialty plumbing	Prerequisites: A grade of C or better in MEC208.	LEC 5.0 5.0 5.0
MEC224	HVAC VIII: Water Treatment and HVAC Design	Water problems, remedies, maintenance, and treatment. Commercial water and steam systems. Inspection and evaluation. System start up and shutdown. Cooling towers; evaporative condensers, boilers, chillers, air handlers and forced air systems. Components, accessories and design factors. Refrigerants and oils. Load calculations. Commercial and industrial refrigeration.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MFC101	Technical Documentation	Analysis and interpretation of technical drawings (prints) common to manufacturing. Mathematical calculations for determining dimensions. Introduction and application of geometric dimensioning and tolerancing (GD&T).	Prerequisites: None.	84
MFC110	Inspection Techniques	Set-up and use of inspection tools and equipment per current industry standards. Selection, completion and interpretation of information from inspection forms.	Prerequisites: None.	72
MFC111	Geometric Dimensioning and Tolerance (GDT)	Controls of geometric dimensioning and tolerance (GDT) including the form, orientation, profile and location. Includes qualifying controls per engineering documentation for the American Society of Mechanical Engineers (ASME) Y14.5 2009 Standard.	Prerequisites: None.	102
MFC113	Coordinate Measuring Machines I	Fundamentals and general aspects of coordinate measuring machines (CMM). Basic measuring techniques and operation, including conformance to geometric dimensioning and tolerancing requirements using both manual and programmable (automatic) coordinate measuring machines.	Prerequisites: None.	84
MFC120	Introduction to Manual Machining	Introduces manual machining operations related to drilling, grinding, sawing, milling, and lathe processes. Development of fundamental skills, practices and safety applications in working with manual machine tools, hand tools, and related equipment common to manufacturing. Provides theoretical and practical experiences related to the machining of various material types to produce a product to industry standards.	Prerequisites: None.	168
MFC130	CNC Machine Operator	Designed to provide a fast-track to fundamental knowledge and skills necessary for entry-level, machine operator positions. Introduction to print reading, inspection, and safe startup and operation of multi-axis computer numerical control (CNC) machines. Topics include two and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.	150
MFC131	CNC Machining Level I	Introduction to safe startup and operation of multi-axis computer numerical control (CNC) machines. Topics include two and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.	216
MFC131DC	CNC Machining Level I	Introduction to safe startup and operation of multi-axis computer numerical control (CNC) machines. Topics include two and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.	216

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MFC140	Manual CNC Programming	Introduction to manual computer numerical control (CNC) programming of word address language (G&M code) for CNC machine tools. Multi-axis CNC programming for CNC controlled machines. Computer based tool path verification, CNC controller tool path verification and CNC machine tool program verification.	Prerequisites: None.	67
MFC140DC	Manual CNC Programming	Introduction to manual computer numerical control (CNC) programming of word address language (G&M code) for CNC machine tools. Multi-axis CNC programming for CNC controlled machines. Computer based tool path verification, CNC controller tool path verification and CNC machine tool program verification.	Prerequisites: None.	67
MGT101	Techniques of Supervision	Overview of the foundations of supervision and how to get things done within an organization through other people. The functions of planning, organizing, staffing, motivating and controlling presented	Prerequisites: None.	LEC 3.0 3.0 3.0
MGT105	Leadership for Citizenship	Characteristics and types of leaders, responsibilities of leadership, and ethics of leadership as related to citizenship	Prerequisites: None.	LEC 1.0 1.0 1.0
MGT109	Development of Professional Skills and Standards	Explores the skills and qualities necessary to develop and maintain a successful professional life. Topics include management/leadership skill development, effective job search, image development, career advancement, gender issues, professional conduct, time/financial management, and human relations	Prerequisites: None.	L+L 3.0 3.0 3.0
MGT126	Customer Service Skills and Strategies	Explores strategies to help improve job performance and develop a service-oriented philosophy. Uses practical training concepts and techniques to demonstrate how superior customer service can lead to competitive advantage and profitability in business. Focuses on both internal and external customers, interactions among people, processes, and systems within the organization and how to integrate these areas into a total quality delivery program	Prerequisites: None.	L+L 3.0 3.0 3.0
MGT147	Supply Chain Management	Supply chain management, including basic concepts and underlying principles of logistics and inventory management	Prerequisites: None.	LEC 3.0 3.0 3.0
MGT148	Office Ethics and Culture	Ethical issues and standards in the office; making ethical choices. Relationships and attitudes in the office. Office politics.	Prerequisites: None.	LEC 2.0 2.0 2.0
MGT157	Introduction to Statistical Analysis of Clinical and Bioscience Data for Managers	Introduction to basic concepts and applications of statistics, including data description, estimation probability as techniques for managing, collecting, summarizing and interpreting data. Includes the use of statistical computer software (e.g., SAS) used for the management, analysis and reporting of clinical and bioscience informatics data.	Prerequisites: None.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MGT160	Project Management	Examination of concepts and methodologies for effective project management. Project planning and management from contract negotiations through project completion, including communications, human resources, management, and project scheduling as well as risk and financial management	Prerequisites: Permission of Department or Division.	L+L 3.0 3.0 3.0
MGT175	Business Organization and Management	Covers basic principles of managing quality and performance in organizations. Covers management functions: planning, organizing, leading, and controlling. Emphasizes continual improvement, ethics, and social responsibility	Prerequisites: None.	LEC 3.0 3.0 3.0
MGT180	Retail Management	The role of management in retailing and retail performance. Challenges and processes of retail management across various institutions.	Prerequisites: None.	LEC 3.0 3.0 3.0
MGT227	Training and Instructional Design for Health Information Technology	Overview of learning management systems, instructional design software tools, teaching techniques and strategies, evaluation of learner competencies, maintenance of training records, and measurement of training program effectiveness.	Prerequisites: Permission of Program Director or Instructor.	LEC 3.0 3.0 3.0
MGT228	Management, Planning, and Leadership for Health Information Technology	Principles of leadership and effective management of teams for Health Information Technology. Emphasis on the leadership modes and styles best suited to IT deployment. Survey of health care and public health organization and delivery in the United States, with an emphasis on professional roles, legal, ethical, and regulatory issues, and payment systems. Analysis of health reform initiatives in the U.S. Concept of "meaningful use" of electronic health records.	Prerequisites: A grade of C or better in GBS110 or MGT251 or Corequisites: GBS110 or MGT251.	LEC 3.0 3.0 3.0
MGT229	Management and Leadership I	Covers management concepts and applications for business, industry, and government organizations.	Prerequisites: None.	LEC 3.0 3.0 3.0
MGT230	Management and Leadership II	Includes practical applications of activities, issues, and problems related to current managerial and supervisory skills and talents.	Prerequisites: A grade of C or better in MGT229 or permission of Department or Division.	LEC 3.0 3.0 3.0
MGT242	Project Scope and Procurement Management	Scope management and procurement management in a project environment, including how a project's scope is planned, defined, and verified. Concepts of scope change management. Concepts of procurement management, including procurement planning, supplier solicitation, supplier selection, contract administration, and contract closeout	Prerequisites: A grade of C or better in TQM240 or permission of Instructor.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MGT243	Project Time and Cost Management	Time management and cost management in a project environment, including activity definition, sequencing and duration estimating. Schedule development and specific tools to support schedule creation and control. Project cost management including resource planning, cost estimation, cost budgeting, and cost control	Prerequisites: A grade of C or better in TQM240 or permission of Instructor.	LEC 2.0 2.0 2.0
MGT244	Project Risk and Quality Management	Risk management and quality management in a project environment, including risk identification, risk aversion, and risk response planning. Presents techniques to perform risk analysis and risk response planning on projects. Concepts of quality management including quality planning, quality assurance and quality control. Concepts of quality systems and their applicability to project management	Prerequisites: None.	LEC 2.0 2.0 2.0
MGT245	Project, Human Resources and Communications Management	Concepts of human resource management and communications management in a project environment, including project organizational planning, staff acquisition and team development. Concepts of project communications planning, information distribution, performance reporting, and project closeout	Prerequisites: None.	LEC 2.0 2.0 2.0
MGT246	Principles of Project Management	Project Management principles expected of a Project Management Professional (PMP). Includes an overview of exam format, topics, and study techniques. Focus is on project scope, procurement, time, risk, cost, quality, human resource, communication, and integration management	Prerequisites: A grade of C or better in TQM240 or permission of Instructor.	LEC 3.0 3.0 3.0
MGT247	Compensation and Benefits	Techniques and methodology for planning, coordinating and monitoring effective compensation and benefits programs within human resources.	Prerequisites: None.	LEC 3.0 3.0 3.0
MGT251	Human Relations in Business	Analysis of motivation, leadership, communications, and other human factors. Cultural differences that may create conflict and affect morale individually and within organizations.	Prerequisites: None. MGT101 or MGT175 or MGT229 suggested but not required.	LEC 3.0 3.0 3.0
MGT253	Owning and Operating a Small Business	Starting, organizing, and operating a small business, including location, finance management processes, advertisement and promotion, credit, inventory control and ethics	Prerequisites: None.	LEC 3.0 3.0 3.0
MGT270AA	Management Internship	Management work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 1.0 1.0 0.0
MGT270AB	Management Internship	Management work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 2.0 2.0 0.0
MGT270AC	Management Internship	Management work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MGT276	Human Resources Management	Human resource planning, staffing, training, compensating, and appraising employees in organizations.	Prerequisites: None. MGT101 or MGT175 or MGT229 suggested, but not required.	LEC 3.0 3.0 3.0
MGT277	Labor Relations	Covers the historical, legal, and environmental parameters surrounding current labor/management relations, including contract negotiations and grievance procedures.	Prerequisites: None. MGT101 or MGT175 or MGT229 suggested but not required.	LEC 3.0 3.0 3.0
MGT286	Human Resource Employment Management	Techniques and methodology for coordinating and monitoring effective employment selection practices. Includes description of employment functions, staffing analysis, employment recruitment and advertising, applicant screening, interviewing and reference checking, employee selection and placement within a human resources division	Prerequisites: A grade of C or better in MGT276 or permission of Department or Division.	LEC 3.0 3.0 3.0
MGT289	Professional in Human Resources Test Preparation	Preparation for testing for Professional in Human Resources (PHR) certification. Includes responsibilities of the PHR in the development, implementation and management of budgets, workforce planning and employee training. Also covers compensation and employee relations issues and responsibilities.	Prerequisites: None.	LEC 3.0 3.0 3.0
MGT290	Leadership Through Continuous Improvement: Leading Self	This course focuses on creating a culture of continuous improvement, problem solving and Kaizen thinking. Upon completion of this course the student will be able to create and facilitate a Huddle Board Meeting, conduct Gemba Walks, implement principles of total systems thinking, conduct 5S organizing principles, and problem solving techniques.	Prerequisites: None.	L+L 3.0 3.0 3.0
MGT291	Supervisor Essentials: Aspire to Lead	This course will introduce students to the essential tools and resources needed to be an effective supervisor. Emphasis on the important role leaders play in the success of an organization through compliance training, knowledge of work culture, and demonstrating traits of effective leaders.	Prerequisites: None.	L+L 3.0 3.0 3.0
MGT292	Employee Coaching and Development: Leading Others	Upon completion of this course, students will be able to utilize leadership and coaching skills along with ADOT's development tools and resources to cultivate and improve employee skills and team development and reward success.	Prerequisites: None.	L+L 3.0 3.0 3.0
MGT293	Collaborative Leadership: Leading Teams	This course focuses on the framework for how to effectively hire the right people and create a positive, engaging, growth environment that promotes employee retention. Upon completion of this course the student will be able to utilize emotional intelligence and humble inquiry to improve accountability, performance, collegiality and morale among groups to build more effective and productive teams.	Prerequisites: None.	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MGT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
MGT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
MGT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MGT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
MGT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
MGT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
MHL130	Herstory: Women in Popular Music	Overview of the contributions made by women in the evolution of popular music and its industry	Prerequisites: None.	LEC 3.0 3.0 3.0
MHL140	Survey of Music History	Study of composers, compositions, styles, and periods in music history.	Prerequisites: None.	LEC 3.0 3.0 3.0
MHL143	Music in World Cultures	Non-European musical traditions including the study of music in rituals, musical instruments and the impact of cultures on musical styles	Prerequisites: None.	LEC 3.0 3.0 3.0
MHL145	American Jazz and Popular Music	The study of cultural and social contributions to the evolution of American jazz and popular music from the mid-1800's to present.	Prerequisites: None.	LEC 3.0 3.0 3.0
MHL146	Survey of Broadway Musicals	Survey of Broadway musicals traced from their origins to the present viewed in their cultural, political, and socioeconomic contexts. Emphasis on stylistic periods, composers, lyricists, directors, and choreographers.	Prerequisites: None.	LEC 3.0 3.0 3.0
MHL153	Rock Music and Culture	History of Rock music and how cultural, social, political, and economic conditions have shaped its evolution.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MHL155	Survey of American Music	History of the music of North America from the earliest American Indian music to the present. Introduction to the musical trends, composers, socioeconomic developments and trends, musical forms and styles that influence our modern American musical sense.	Prerequisites: None.	LEC 3.0 3.0 3.0
MHL156	Music in Latin America and the Caribbean	To discuss the role of music in Latin and Caribbean cultures and the impact of these cultures on music. To present a historical survey to the evolution and development of musical styles from rumba to reggae. Among the topics, and to include: origins, gender, race, ethnicity, politics, elements of music, instruments, both sacred and secular music, and significant individuals influencing the evolution of many different genres of music in Latin America and Caribbean cultures.	Prerequisites: None.	LEC 3.0 3.0 3.0
MHL159	Mexican Music History	History of the music of Mexico from early indigenous music to the present. Introduction to the musical origins, genres, and cultural influences in the context of social and historical events in Mexico.	Prerequisites: None.	LEC 3.0 3.0 3.0
MHL194	Music and Culture	Introduction to the study of multicultural music in its social, cultural, historical and economic contexts. Performance of music using percussion, rhythm, and the human body. Historical and social aspects of global cultures' musical expressions.	Prerequisites: A grade of C or better in MTC101 or a higher level MTC course; or Corequisites: MTC105 and MTC106 or permission of Instructor.	LEC 3.0 3.0 3.0
MHL204	Hip-Hop Music and Culture	A history of Hip-Hop's musical and artistic elements and how cultural, social, political, and economic conditions have shaped its evolution.	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.	LEC 3.0 3.0 3.0
MHL241	Music History and Literature to 1750	In-depth study of music history from the primitive era through the Baroque period.	Prerequisites: A grade of C or better in MTC155 and MTC156 or Corequisites: MTC155 and MTC156 or permission of Instructor.	LEC 3.0 3.0 3.0
MHL242	Music History and Literature 1750 to Present	In-depth study of music history from the Classical period through the Contemporary period	Prerequisites: A grade of C or better in MHL241 or permission of Instructor.	LEC 3.0 3.0 3.0
MHL295	Topics in Music	Exploration of selected topics in music. Focuses on a theme, era, genre, concept, or critical approach. Analysis and interpretation of topic's representation, development, and significance in a variety subjects related to music humanities. Includes reading, listening analysis and interpretation of music and musical texts.	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MHL298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
MIC101	Fundamentals of Healthcare Interpreting	This course introduces the field of interpreting, interpretation models, cognitive processes associated with interpretation, professional ethical standards, employment opportunities, bilingual customer service, and working conditions. Topics include pronunciation, medical vocabulary, resources, legal issues, code of ethics, standards of practice, certification, interpreter assessments/qualifications, and protocol associated with various settings. Upon completion, students should be able to interpret English/Spanish and Spanish/English simulated health care encounters, explain how to prepare for and manage an interpreted encounter, and apply ethical standards to a variety of working situations.	Prerequisites: 1. A grade of C or better in RDG100 or higher or appropriate reading placement into CRE101. 2. Receive a Pass on the bilingual oral exam.	80
MIC103	Medical and Clinical Development	Basic anatomy, physiology, and medical terminology in Spanish and English for health care settings. Emphasis on pronunciation of commonly used medical abbreviations for medical specialists and branches of medicine. Students will analyze, define, and correctly spell medical terms and abbreviations. Systems to be covered are: cardiovascular, respiratory, digestive, musculoskeletal, genitourinary, endocrine, immune, and nervous. Common test procedures for each system. Cancer and first response interpretation roles will also be covered. Students also participate in activities to prepare for clinical externships, taken by in-person simulation or in person at a clinical site. Students will review professional conduct, dress code, bilingual customer service, and downtime activities.	Prerequisites: MIC101 or SPA205 with a C or better, or with Program Manager approval.	80

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MIC104	Medical Spanish/English Interpreting	This course covers Spanish/English interpreting in a medical context and setting. The course introduces the field of interpreting, interpretation models, cognitive processes associated with interpretation, professional ethical standards, bilingual customer service and working conditions. Students will focus on pronunciations, medical terminology, resources, legal issues, code of ethics, standards of practice, certification requirements, interpreter assessments/qualifications and protocol associated with various settings. Students will also focus on review of professional conduct and first response interpretation. Upon completion, students should be able to interpret English/Spanish and Spanish/English simulated health care encounters, explain how to prepare for and manage an interpreted encounter, and apply ethical standards to a variety of settings. This course is designed and aligned with the purpose of preparing students to take the Certification Commission for Healthcare Interpreters (CCHI) certification exam and earn their CCHI certification.	Prerequisites: Program admission. Successful completion of RDG100 or higher or appropriate reading placement into CRE101. Receive a 'Pass' on the bilingual oral exam.	80

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MIC105	Medical Interpreter Clinical Practicum	Practical training and application of healthcare interpreting under direct supervision of clinical or hospital preceptor. Students will train with staff interpreters or dual-role interpreters. Documentation of daily interpreter attendance logs and a satisfactory performance evaluation are required to successfully complete the clinical. Students must meet the clinical facilities requirements prior to beginning. Clinical hours will vary and students are expected to travel and have reliable transportation.	Prerequisites: 1. A grade of C or better in (MIC101 and MIC103), or (SPA205 and SPA206), or MIC104, or permission of Program Manager. 2. Background check requirements in compliance with the Maricopa County Community College District Supplemental Background Check Policy. 3. Students also must provide a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Students must maintain current fingerprint clearance throughout the clinical(s). 4. Complete and submit the Allied Health Student Health and Safety Documentation Checklist, with included documentation 5. Students are responsible to meet the requirements of the background check, fingerprint clearance card, and health and safety documentation	40
MIC106	Medical Interpreter Clinical and Simulated Hybrid Practicum	Practical training and application of healthcare interpreting through simulated clinical experiences. Students will conduct a total of 40 hours of simulated clinicals where they will interpret on behalf of the patient and healthcare staff. Students will receive daily performance evaluations and must successfully complete all competencies and attendance requirements to successfully complete this course. Students who are enrolled in the Medical Interpreter-Spanish program or the Spanish Interpreting for Healthcare Professionals program are required to either complete a practicum at a clinical site or a simulated clinical interpreting experience as part of the certificate of competency as well as maintain eligibility for the national certification exam through the Commission of Certified Healthcare Interpreters (CCHI).	Prerequisites: A grade of C or better in (MIC101 and MIC103), or (SPA205 and SPA206), or MIC104, or permission of Program Manager.	40

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MIS101	Introduction to the United States Army	Introduces the personal challenges and competencies that are critical for effective leadership and communication. Students learn how the personal development of life skills such as cultural understanding, goal setting, time management, stress management and comprehensive fitness relate to leadership, officership and the Army profession. Focuses on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining an understanding of the Army ROTC program, its purpose in the Army, and its advantages for the student. Includes physical training assessments, tactical training, as well as lecture-based instruction.	Prerequisites: None.	LEC 4.0 3.0 0.0 LAB 0.0 2.0 0.0
MIS102	Foundation of Agile and Adaptive Leadership	Introduces the professional challenges and competencies that are needed for effective execution of the profession of arms and Army communication. Through this course, students learn how ethics and values shape the Army and the specific ways that these ethics are inculcated into Army culture. Explores the seven Army values and the warrior ethos, investigate the profession of arms and Army leadership as well as an overview of the Army, and gains practical experience using critical communication skills. Includes physical training assessments, tactical training, as well as lecture-based instruction.	Prerequisites: A grade of C or better in MIS101.	LEC 4.0 3.0 0.0 LAB 0.0 2.0 0.0
MIS201	Army Leadership and Decision Making	Academically challenging course where students study, practice and apply the fundamentals of Army leadership, officership, Army values and ethics, personal development and small-unit tactics at the platoon level. Requires the student to demonstrate writing skills and present information briefings as preparation for development in becoming a successful future officer. Includes reading assignments, homework assignments, small group assignments, briefings, case studies, practical exercises, a mid-term exam and final exam. Also includes physical training assessments, tactical training, as well as lecture-based instruction.	Prerequisites: A grade of C or better in MIS101 and MIS102.	LEC 4.0 3.0 0.0 LAB 0.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MIS202	Army Doctrine and Team Development	Academically challenging course where students study, practice and apply the fundamentals of the leadership, officer skills, Army values and ethics, personal development and tactics at the small-unit level. Focuses on cross-cultural competencies as they relate to Army doctrine and how they apply in a combatant commander's engagement strategies. Stresses Army values, teamwork and warrior ethos and their relationship to the law of land warfare and philosophy of military service. Covers the ability to lead and follow through team building exercises in small units up to squad level. Requires the student to demonstrate writing skills and present information briefings as preparation for development in becoming a successful future officer. Also includes physical training assessment, tactical training, as well as lecture-based instruction.	Prerequisites: A grade of C or better in MIS101, MIS102 and MIS201.	LEC 4.0 3.0 0.0 LAB 0.0 2.0 0.0
MIT106	Industrial Safety	Safety, health management, and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, management responsibilities, and OSHA 10 certification.	Prerequisites: None.	LEC 2.0 2.0 2.0
MIT120	Industrial Technology Fundamentals	Theories and concepts in industrial technology basics and OSHA 10 certification. Introductory concepts in industrial math, hand and power tools, technical drawings, rigging, and materials handling. Emphasis on communication and employability skills. Included labs emphasize and anchor the course material. Safety and management expectations. Defense in depth strategy and conduct of verifications. Maintenance procedures. Work control process. Performance of work standards and documentation including pre-job preparation, pre-job notification, job review, job verification and job close out specific to nuclear power plant operations.	Prerequisites: None.	L+L 3.0 5.0 5.0
MIT121	Industrial Technology I-A	Principles of Industrial Maintenance Technology. Modules include theory and applications in tools of the trade, fasteners and anchors, oxyfuel cutting, gaskets and packing, technical mathematics, and technical drawings. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT120 or Corequisites: MIT120 or permission of Instructor.	L+L 3.0 5.0 5.0
MIT122	Industrial Technology I-B	Principles of Industrial Maintenance Technology. Modules include theory and applications in pumps and valves, test instruments, rigging, mobile and support equipment, and lubrication. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT120 or Corequisites: MIT120 or permission of Instructor.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MIT123	Industrial Mechanical Technology II-A	Basic layout, introduction to piping components, copper and plastic piping practices, introduction to ferrous metal piping practices, identifying, installing and maintaining valves, hydrostatic and pneumatic testing, introduction to bearings, and low-pressure steam systems. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT122 or permission of Instructor.	L+L 3.0 5.0 5.0
MIT124	Industrial Mechanical Technology II-B	High pressure steam systems and auxiliaries, distillation towers and vessels, heaters, furnaces, heat exchangers, cooling towers, fin fans, and introduction to tube work. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT122 or permission of Instructor.	L+L 3.0 5.0 5.0
MIT133	Industrial Electrical and Instrumentation Technology II-A	Industrial safety for E and I technicians, introduction to the National Electrical Code, electrical theory, alternating current, electrical and instrumentation test equipment, flow, pressure, level, and temperature. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT122 or permission of Instructor.	L+L 3.0 5.0 5.0
MIT134	Industrial Electrical and Instrumentation Technology II-B	Process mathematics, hand bending, tubing, clean, purge, and test tubing and piping systems, instrument drawings and documents, conductors and cables, and conductor terminations and splices. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT122 or permission of Instructor.	L+L 3.0 5.0 5.0
MIT209	Automated Manufacturing	Evolution of automation in manufacturing from fixed (hard) automation to Computer Integrated Manufacturing (CIM) is presented with numerical control (NC); computer-aided design/computer-aided manufacturing (CAD/CAM); automated material handling; automation communication protocol. Manufacturing management strategies include statistical process control (SPC); material requirements planning (MRP); manufacturing resource planning (MRPII); and just-in-time (JIT). Hands-on experience with programmable logic controllers (PLC) and robotics included.	Prerequisites: A grade of C or better in ELT131 or ELE131 or equivalent.	L+L 3.0 6.0 6.0
MKT101	Introduction to Public Relations	Emphasizes public relations techniques used both within and outside the business organization, including operation of a PR counseling firm	Prerequisites: None.	LEC 3.0 3.0 3.0
MKT109	Introduction to Fashion Merchandising	Explores the various levels and specialized segment of the fashion industry, the principles of fashion, the fundamentals of merchandising apparel, consumers' influence on demand and marketing activities.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MKT110	Marketing and Social Networking	Theory and practice in the use of social media in marketing. Topics may include a history of social media, preparation for social marketing, the power of collective influence, and how to engage with social media. Reviews social mediums, social networks, platforms and other marketing tools used to create a social media campaigns.	Prerequisites: None.	LEC 3.0 3.0 3.0
MKT111	Applied Marketing and Social Networking	Examination of the strategic use of digital and social media marketing platforms and tools for global communication and networking, including analysis of various digital and social media platforms and tools for developing brands, creating professional networks and creating engaging content. Hands-on use of social media platforms and tools to conduct research, develop strategies for creating, integrating, and evaluating social media marketing campaigns, and development of metrics to measure effectiveness.	Prerequisites: A grade of C or better in MKT110.	L+L 3.0 4.0 4.0
MKT112	Retail Customer Service	Introduction to the field of retail sales. Emphasis on customer service and sales techniques	Prerequisites: None.	LEC 1.0 1.0 1.0
MKT114	Retail Inventory Control	Retail inventory control procedures. Emphasis on the role of the professional sales associate within a retail company and in the handling of merchandise	Prerequisites: A grade of C or better in MKT112.	LEC 1.0 1.0 1.0
MKT151	Display and Visual Merchandising	An examination of the principles of design including line, color, balance, and texture as they relate to the display of merchandise. Participation in displays, field trips, and individual projects	Prerequisites: None.	L+L 3.0 4.0 4.0
MKT200	Retail Buying	Examines management/buyer role in investment, pricing, planning, controlling sales and inventories Any BPC/CIS spreadsheet course recommended.	Prerequisites: None. A grade of C or better in any BPC/CIS spreadsheet course recommended.	LEC 3.0 3.0 3.0
MKT263	Advertising Principles	Introduces the advertising function within business, including media study, creative strategies, and advertising campaigns MKT271 suggested, but not required.	Prerequisites: None. MKT271 suggested but not required.	LEC 3.0 3.0 3.0
MKT267	Principles of Sales	Analyzes and applies the steps and techniques used in personal selling. Highlights the role of the professional sales representative and his/her functions as they relate to the company's mission and customer expectations.	Prerequisites: None.	LEC 3.0 3.0 3.0
MKT268	Merchandising	Surveys structure and operation of retail organizations. Emphasizes merchandising to include price, location, time promotion and quantity.	Prerequisites: None. MKT271 suggested but not required.	LEC 3.0 3.0 3.0
MKT271	Principles of Marketing	An analysis of the marketing process and environment with regard to the product, pricing, distribution, and communication in order to satisfy buyer needs	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MKT273	Marketing Research	Planning and preparing for a marketing research effort and presentation of research findings in a professional manner. Includes the study of problem definition, sampling methods, statistical analysis, presentation techniques, and evaluation of data	Prerequisites: A grade of C or better in MKT271 or permission of Instructor.	LEC 3.0 3.0 3.0
MKT274AC	Fashion Merchandising Study Tour	A tour of the fashion merchandising industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of this multifaceted career	Prerequisites: Permission of Department or Division.	LAB 3.0 15.0 3.0
MKT277	Advanced Sales	Advanced selling and communication techniques.	Prerequisites: A grade of C or better in MKT267 or permission of Department or Division.	LEC 3.0 3.0 3.0
MKT280AA	Marketing Internship	Marketing work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 1.0 1.0 0.0
MKT280AB	Marketing Internship	Marketing work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 2.0 2.0 0.0
MKT280AC	Marketing Internship	Marketing work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 3.0 3.0 0.0
MKT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MKT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
MKT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
MKT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MKT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
MKT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
MKT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
MMT184	Digital Animation I	The art of animation (animated sequences, special effects, titles, etc.) using the computer. Construction characters, background graphics, color, scaling, storyboard, cells, timing, editing, and surface rendering. Screening and discussion of selected animated short films and videos.	Prerequisites: A grade of C or better in (ART111 or ART116) or permission of Instructor. Corequisites: AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
MMT185	3D Modeling and Animation I	Basic concepts of 3D modeling. Anatomy of computer geometry; basic elements that make computer models-curves, surfaces, non-uniform rational basis spline (NURBS), and polygons. 3D translation, shading, materials, and rendering.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.	L+L 3.0 6.0 6.0
MMT186	Modeling for Digital Media	Development of 3-D models for multimedia productions. 3-D logos, objects, and advanced animation projects using special effects.	Prerequisites: A grade of C or better in AVC/MMT184 or permission of Instructor. Xref: AVC184	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MMT190	Art of Web Site Design	Introduction to design production for websites. Layout, typography and presentation style for HTML (Hyper Text Markup Language). Design of mock-ups using digital design software to produce artistic form and content for the Web using Hyper Text Markup Language (HTML), digital text, and graphics. Discussion of color, proportion, typography and Web-specific design principles. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability.	Prerequisites: A grade of C or better in AVC100, or permission of Instructor.	L+L 3.0 6.0 6.0
MMT216	Multimedia Project Management	Interactive video and multimedia project management including defining, analyzing, designing, and validating interactive/multimedia applications; building and managing development and production teams; planning, budgeting, and scheduling; interactive/multimedia authoring; project implementation; and writing RFPs (Request For Proposal).	Prerequisites: None.	L+L 3.0 6.0 6.0
MMT285	3D Modeling and Animation II	Advanced techniques for 3D modeling and computer animation. Creating and applying 2D background and 3D model textures, creating and applying special effects to models and animation, designing, modeling, and animating a digital 3D character from a character study.	Prerequisites: A grade of C or better in AVC/MMT185. Xref: AVC185	L+L 3.0 6.0 6.0
MMT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
MMT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
MMT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MNG300	Management Principles	Overview of the opportunities and challenges involved in the management process. Exploration of the functions of management, business ethics and social responsibility, entrepreneurial mindsets, operations management, decision making, and human resources. Emphasis placed on managing for excellence in both performance and employee satisfaction.	Prerequisites: A grade of C or better in (ACC212, GBS205, GBS221, and GBS233), or permission of Instructor.	LEC 3.0 3.0 3.0
MNG305	Organizational Management and Behavior	Overview of management skills and concepts as they relate to organizational culture and behavior. Focus on organizational structure and dynamics. Emphasis on leadership skills, communication, motivating employees, and decision making.	Prerequisites: A grade of C or better in (ACC212, GBS205, GBS221, and GBS233), or permission of Instructor.	LEC 3.0 3.0 3.0
MNG310	Accounting for Managers	Examination of financial and managerial accounting concepts relevant to making business decisions based on financial information and for evaluation of company performance. Topics include accounting's conceptual framework, financial statement analysis, and managerial decision making.	Prerequisites: A grade of C or better in ACC212, or permission of Instructor.	LEC 3.0 3.0 3.0
MNG405	Applied Human Resource Management	Overview of human resources management, focusing on skills and knowledge necessary to effectively lead employees. Detailed coverage of jobs and labor, talent development, compensation, and employee relations. Emphasis on how human resource management enhances organizational performance and success.	Prerequisites: A grade of C or better in MNG300, or permission of Instructor.	LEC 3.0 3.0 3.0
MNG410	Project Management Principles	Integrated introduction to Project Management. Examination of fundamental managerial and technical aspects of Project Management activities. Focus on initiating, planning, executing, and assessing projects.	Prerequisites: A grade of C or better in MNG300, or permission of Instructor.	LEC 3.0 3.0 3.0
MNG415	Change Management	Overview of managing change within organizations. Emphasis on theories, processes, and applications. Explore strategies for leading and implementing change initiatives and managing employees through change.	Prerequisites: A grade of C or better in MNG300, or permission of Instructor.	LEC 3.0 3.0 3.0
MNG425	Strategic Management	Overview of theory and application of strategic management principles. Exploration of an organization's position, capabilities, and resources used to gain a competitive advantage. Emphasis on the alignment of goals, strategies, and action plans with organizational objectives.	Prerequisites: A grade of C or better in (BUS305, MNG300, MNG305, and MNG310), or permission of Instructor.	LEC 3.0 3.0 3.0
MNG490	Management Capstone	Demonstration of acquired knowledge and skills through analysis of complex business cases. Includes the development of a career plan, with a focus on career research, application materials, and the development of a career strategy. Students will present a portfolio featuring their academic works.	Prerequisites: A grade of C or better in (BUS305, BUS310, MNG300, MNG305, and MNG310), or permission of Instructor.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MNT110	Nanotechnology: What It Is and Why It Matters	Designed to provide students with a strong fundamental understanding of the scientific principles, processing, and applications of nanotechnology. Includes the concepts of chemical bonding, quantum mechanics, and microstructure applied to various nanomaterials and their use in electronic devices, composites, computing, and various other biological, medical, energy-related, and current consumer applications. Introduces analytical techniques used in nanotechnology, as well as possible societal applications.	Prerequisites: None.	LEC 3.0 3.0 3.0
MNT112	Semiconductor Industry Overview	Provides an overview of the semiconductor industry and the manufacturing process, including raw materials to finished products. Covers key events, various career paths, and types of skills and qualifications. Emphasis on quality control standards, environmental and ethical considerations, economic and political impacts, and future trends.	Prerequisites: None.	LEC 3.0 3.0 3.0
MNT115	Semiconductor Manufacturing Processes	Covers semiconductor manufacturing principles and processes, including MEMS, materials, safety, equipment, and strategies for maintaining contaminant-free manufacturing environments.	Prerequisites: None.	LEC 3.0 3.0 3.0
MNT119	Introduction to Vacuum Technology	Equips technicians with essential knowledge and skills in vacuum technology critical to semiconductor manufacturing.	Prerequisites: None.	LEC 1.0 1.0 1.0
MNT120	Introduction to Microelectromechanical Systems (MEMS)	Overview of fundamentals of the scientific principles, processing, and applications of microelectromechanical systems (MEMS). Covers topics in applications, fabrication methods, characterization, and commercialization concepts as well includes surface micromachining, patterning, etching and deposition processes in addition to cleanroom protocol and safety. Also covers research and documentation types and applications.	Prerequisites: None.	L+L 3.0 4.0 4.0
MNT130	Introduction to Light and Lasers	Introduces the fundamentals of light, optics, and lasers. Covers the nature and properties of light (such as energy, amplitude, wavelength, frequency, period, phase, propagation). Addresses geometrical optics (reflection, diffraction, imaging, thin lens formula, lens maker's equation), wave optics (interference, diffraction, polarization), and the basic principles and practical applications of lasers. Covers optical handling and positioning, light sources, laser classifications and safety. Contributes to knowledge and skills required for the Photonics Technician Operator certification exam.	Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or MAT15+ or higher, OR an appropriate district placement for MAT15+ or higher, OR permission of Instructor or Department/Division Chair.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MNT140	Careers and Professional Skills in Nanotechnology	Introduction to professional skills unique to the field of nanotechnology fabrication. Emphasis on teamwork, problem solving, cultural diversity in the workplace, communication, and continuous professional development.	Prerequisites: None.	LEC 1.0 1.0 1.0
MNT201	Materials, Safety, and Equipment for Nanotechnology	Safety procedures and equipment used in the micro and nanotechnology industries. Covers chemical, biological, and energy safety protocol as well as infrastructure facilities and systems. Also includes an overview of the structural, chemical, and physical classification of materials.	Prerequisites: None.	L+L 3.0 4.0 4.0
MNT210	Basic Nanotechnology Processes	Introduction to basic nanotechnology processes and a comparison of top-down and bottom-up manufacturing processes. Covers characteristics of plasma and its application to additive and subtractive processes. Also includes basic pattern transfer processes, laser ablation, and chemical and physical vapor deposition.	Prerequisites: None.	L+L 3.0 4.0 4.0
MNT215	Micro and Nano Fabrication Tools and Techniques	Introduction to basic micro and nanotechnology tools and processes and a comparison of top-down and bottom-up manufacturing processes. Covers characteristics of plasma and its application to additive and subtractive processes. Also includes basic pattern transfer processes, laser ablation, and chemical and physical vapor deposition. Aligned with materials, synthesis, and processing standards recognized by ASTM International.	Prerequisites: None.	L+L 3.0 4.0 4.0
MNT220	Materials in Nanotechnology	Examination of material used in the field of nanotechnology. Covers colloids, nanoparticles, oxides, and quantum dots in addition to self-assembly applications. Also includes biocompatibility and the dry etch material fabrication process.	Prerequisites: None.	L+L 3.0 4.0 4.0
MNT225	Material Properties and Effects of Size	Examination of materials used in the field of nanotechnology. Covers nanoparticles, oxides, and dielectric materials selection and modification. Also includes biocompatibility and applications for macroscale surfaces and interfaces.	Prerequisites: A grade of C or better in MNT201 or permission of Instructor.	L+L 3.0 4.0 4.0
MNT230	Patterning for Nanotechnology	Overview of patterning processes in nanotechnology. Includes photolithography techniques, technology, and tools. Covers photoresist applications and unique lithography techniques, including block polymer patterning.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MNT235	Nanotechnology Characterization Tools and Techniques	Overview of characterization tools and techniques for nanotechnology structures and materials. Includes procedures for light, physical, and electron beam characterization. Also includes tools and processes for advanced Scanning Probe Microscopy (SPM) and surface analysis. Aligns with ASTM Nano-Characterization standards and its exam. Additional applications enable students to prepare for certification examinations.	Prerequisites: A grade of C or better in MNT201 or permission of Instructor.	L+L 3.0 4.0 4.0
MNT240	Nanotechnology Applications	An introduction to the practical application of emerging technologies in nanoscience. Includes applications for health sciences, energy, manufacturing, electronics, the food industry, and the environment.	Prerequisites: None.	L+L 3.0 4.0 4.0
MNT245	Advanced Topics in Light and Lasers	Advanced principles and applications of light and lasers. Addresses Photonic Integrated Circuits (PIC) concepts, materials, fabrication technologies, and applications. Describes silicon PIC and III-V semiconductor devices in addition to completion of applicable calculations. Addresses lasers and PICs in diverse applications in telecommunications, data servers, health and medical, and other fields.	Prerequisites: A grade of C or better in MNT130, or OPT105, or permission of Instructor. MAT182 is recommended but not required.	L+L 3.0 4.0 4.0
MNT250	Characterization of Nanotechnology Structures and Materials	Overview of characterization tools and techniques for nanotechnology structures and materials. Includes in-situ and ex-situ characterization as well as procedures for light, physical and electron beam characterization. Also includes tools and processes for advanced Scanning Probe Microscopy (SPM) and surface analysis.	Prerequisites: None.	L+L 3.0 4.0 4.0
MPT101	Technical Documentation	Analysis and interpretation of technical drawings (prints) common to manufacturing. Mathematical calculations for determining dimensions. Introduction and application of Geometric Dimensioning and Tolerancing (GD&T).	Prerequisites: None.	L+L 3.0 5.0 5.0
MPT101MP	Technical Documentation	Analysis and interpretation of technical drawings (prints) common to manufacturing. Mathematical calculations for determining dimensions. Introduction and application of Geometric Dimensioning and Tolerancing (GD&T).	Prerequisites: None.	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0
MPT110	Inspection Techniques	Setup and use of inspection tools and equipment per current industry standards. Selection, completion and interpretation of information from inspection forms.	Prerequisites: None.	L+L 3.0 5.0 5.0
MPT110MP	Inspection Techniques	Setup and use of inspection tools and equipment per current industry standards. Selection, completion and interpretation of information from inspection forms.	Prerequisites: None.	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MPT111	Geometric Dimensioning and Tolerance (GDT)	Controls of geometric dimensioning and tolerance (GDT) including the form, orientation, profile and location. Includes qualifying controls per engineering documentation for the American Society of Mechanical Engineers (ASME) Y14.5 2009 Standard.	Prerequisites: None.	L+L 3.0 5.0 5.0
MPT111MP	Geometric Dimensioning and Tolerance (GDT)	Controls of geometric dimensioning and tolerance (GDT) including the form, orientation, profile and location. Includes qualifying controls per engineering documentation for the American Society of Mechanical Engineers (ASME) Y14.5 2009 Standard.	Prerequisites: None.	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0
MPT113	Coordinate Measuring Machines I	Fundamentals and general aspects of Coordinate Measuring Machines (CMM). Basic measuring techniques and operation, including conformance to geometric dimensioning and tolerancing requirements using both manual and programmable (automatic) coordinate measuring machines.	Prerequisites: A grade of C or better in (MPT101 or MPT101MP) and (MPT110 or MPT110MP), or permission of Program Director.	L+L 3.0 4.0 4.0
MPT120	Introduction to Manual Machining	Introduces manual machining operations related to drilling, grinding, sawing, milling, and lathe processes. Development of fundamental skills, practices and safety applications in working with manual machine tools, hand tools, and related equipment common to manufacturing. Provides theoretical and practical experiences related to the machining of various material types to produce a product to industry standards.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: (MPT101 or MPT101MP) and (MPT111 or MPT111MP), or permission of Program Director.	L+L 4.0 6.0 6.0
MPT120MP	Introduction to Manual Machining	Introduces manual machining operations related to drilling, grinding, sawing, milling, and lathe processes. Development of fundamental skills, practices and safety applications in working with manual machine tools, hand tools, and related equipment common to manufacturing. Provides theoretical and practical experiences related to the machining of various material types to produce a product to industry standards.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: (MPT101 or MPT101MP) and (MPT111 or MPT111MP), or permission of Program Director.	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0
MPT130	CNC Machine Operator	Designed to provide a fast track to fundamental knowledge and skills necessary for entry-level machine operator positions. Introduction to print reading, inspection, and safe start-up and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include two- and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.	L+L 6.0 10.0 10.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MPT130MP	CNC Machine Operator	Designed to provide a fast track to fundamental knowledge and skills necessary for entry-level machine operator positions. Introduction to print reading, inspection, and safe start-up and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include two- and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0
MPT131	CNC Machining Level I	Introduction to safe start-up and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include two- and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: A grade of C or better in MPT120 or MPT120MP or permission of Program Director.	L+L 6.0 10.0 10.0
MPT131MP	CNC Machining Level I	Introduction to safe start-up and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include two- and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: A grade of C or better in MPT120 or MPT120MP or permission of Program Director.	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0
MPT132	CNC Machining Level II	Safe setup and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include multi-axis programming, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: A grade of C or better in MPT130 or MPT130MP or MPT131 or MPT131MP or permission of Program Director.	L+L 3.0 5.0 5.0
MPT132MP	CNC Machining Level II	Safe setup and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include multi-axis programming, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: A grade of C or better in MPT130 or MPT130MP or MPT131 or MPT131MP or permission of Program Director.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
MPT140	Manual CNC Programming	Introduction to Manual Computer Numerical Control (CNC) programming of Word Address Language (G&M Code) for CNC machine tools. Multi-axis CNC programming for CNC controlled machines. Computer based tool path verification, CNC controller tool path verification and CNC machine tool program verification.	Prerequisites: A grade of C or better in (MPT130 or MPT130MP) or (MPT131 or MPT131MP) or machine shop experience or permission of	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
MPT150	Introduction to SolidWorks	Introduction to CAD modeling, solid part generation, assembly of parts, and working drawing creation. Applications of CAD/CAM in Computer Integrated Technology (CIM).	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
MPT151	Solid Design I: SolidWorks	Introduction to solid modeling and parametric design of mechanical components. Use of SolidWorks commands. Creation of single part in two-dimensional (2D) sketch, three-dimensional (3D) solid. Feature based components and feature associativity. Initial preparation for the Certified Solid Works Associate (CSWA) exam.	Prerequisites: A grade of C or better in (MPT101 or MPT101MP) and (MPT111 or MPT111MP), or permission of Program Director.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MPT152	Solid Design: Certified SolidWorks Associate/Certified SolidWorks Professional Test Preparation	Preparation for latest Certified SolidWorks Associate (CSWA) or Certified SolidWorks Professional (CSWP) exam. Includes exam objectives, solid design, assemblies, COSMOSXpress, and technical documentation in current version.	Prerequisites: Permission of Program Director.	L+L 1.0 2.0 2.0
MPT213	Coordinate Measuring Machines II	Advanced techniques and operation of Coordinate Measuring Machine (CMM). Includes alignments, Computer-Aided Design (CAD) use, program control, scanning, and dimensioning. Offline programming for operation of CMM. Conformance to geometric dimensioning and tolerancing and manufacturing documentation. Implementation of measurement strategies and time-saving techniques for creating measurement routines.	Prerequisites: A grade of C or better in MPT113 or permission of Program Director.	L+L 3.0 4.0 4.0
MPT214	3D Scanning and Reverse Engineering: Geomagic	Principles of digital 3D Scanning and reverse engineering. Data acquisition of organic and mechanical components. Transformation of data into solid model geometry to create parts of equal or superior quality for machining or 3D printing.	A grade of C or better required in all Prerequisites. Prerequisites: MPT113 or permission of Program Director. Prerequisites or Corequisites: MPT151 or permission of	L+L 3.0 5.0 5.0
MPT215	Workplace Quality Systems	History of quality systems and procedures. Benefits of ISO 9000 procedures. The twenty elements of ISO 9000. Components and requirements of the International Organization for Standardization (ISO) 9000 quality and periodic audits.	Prerequisites: None.	L+L 3.0 3.0 3.0
MPT216	Applied Statistical Process Control Methods	Identification of quality characteristics derived from variable and attribute data. Usage of statistical rules for interpretation of control charts. Analysis and recommendation of appropriate actions on factors affecting process variation.	Prerequisites: A grade of C or better in MPT215 or permission of Program Director.	L+L 3.0 4.0 4.0
MPT217	Lean and Six Sigma Applied Concepts	Lean manufacturing and Six Sigma methodologies and application to an organization. Identification of waste and application of cost to poor quality process within an organization. Quality System tools and implementation. Emphasis on organizational buy in.	Prerequisites: A grade of C or better in MPT215 or permission of Program Director.	L+L 3.0 3.0 3.0
MPT218	Advanced Quality Process Methods	High-level quality improvement process applied to manufacturing. Specific emphasis on experimental methods focused on waste reduction and general quality and process improvement. Understanding key process variables and decision-making methods based on established procedures. Applying statistical methods to process improvement.	Prerequisites: A grade of C or better in (MPT101, MPT110, MPT111, and MPT113), or permission of Program Director.	L+L 3.0 4.0 4.0
MPT220	Manual Machining: NIMS Level I Certification	Preparation for latest National Institute for Metalworking Skills (NIMS) Machining Level I certification in Drill Press, Manual Milling, Turning, and Grinding.	Prerequisites: A grade of C or better in MPT120, or MPT120MP, or permission of	L+L 6.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MPT221	Manual Machining: NIMS Level II Certification	Preparation for current National Institute for Metalworking Skills (NIMS) Machining Level II certification in Manual Milling, Turning, and Grinding.	Prerequisites: A grade of C or better in MPT220, or (Level I NIMS Certifications in: Drill Press, Lathe Between centers, Lathe Chucking, Mill, and Surface Grinding), or permission of Program Director.	L+L 3.0 5.0 5.0
MPT250	Solid Design II: Advanced Part Modeling: SolidWorks	Creating mechanical assemblies using SolidWorks design tools. Advanced feature tools including constraints and motion. Skill enhancement in the creation of advanced assemblies and part design, standard and advanced mates, and performing mass properties analysis.	Prerequisites: A grade of C or better in MPT151 or permission of Program Director.	L+L 3.0 5.0 5.0
MPT251	Solid Design: Documentation/GD&T: SolidWorks	Creation of engineering drawings. Parts and assemblies using associative mechanical design software. Principles and applications presented in accordance with the American Society of Mechanical Engineers (ASME) Y14 series of standards. Drawing sheets and templates, views, projections, dimensions and annotations, Geometric Dimensioning and Tolerancing (GD&T), assembly drawings, Bill of Materials (BOM), and assembly configurations.	Prerequisites: A grade of C or better in MPT151 or permission of Program Director.	L+L 3.0 5.0 5.0
MPT252	Solid Design: Simulation: SolidWorks	Principles of Finite Element Analysis (FEA), stress and gap analysis, and the Finite Element Method (FEM). Application of fixtures, loads, and connections to assemblies and models. Conducting static and dynamic simulation studies. Evaluation of simulation results and determination of Factor of Safety (FOS).	Prerequisites: A grade of C or better in MPT250 or permission of Program Director.	L+L 3.0 5.0 5.0
MPT253	Solid Design: Surface Modeling: SolidWorks	Creation and manipulation of freeform shapes and surfaces using SolidWorks mechanical design software. Surface body design using 3D sketch geometry and solid features. Verification of surface integrity and quality.	Prerequisites: A grade of C or better in MPT250 or permission of Program Director.	L+L 3.0 4.0 4.0
MPT254	Solid Design: Sheet Metal: SolidWorks	Design of sheet metal parts and assemblies. Creation of sheet metal production drawings. Conversion of solid models to sheet metal. Creation of welded structures with standard structural members using SolidWorks Weldments feature. Design of weld beads and weld joints.	Prerequisites: A grade of C or better in MPT250 or permission of Program Director.	L+L 3.0 4.0 4.0
MPT255	Solid Design 3D Printing	3D printing/additive manufacturing with various additive manufacturing materials. Model orientation for optimal printing and 3D layer slicing, infill control, and orientation. Foundation and support structure design. Fused Deposition Modeling (FDM), Stereolithography Apparatus (SLA), and metal 3D printing.	Prerequisites: A grade of C or better in [(MPT111 or MPT111MP) and MPT250], or permission of Program Director.	L+L 4.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MPT260	Computer Aided Manufacturing (CAM) I	Introduction to Computer-Aided Manufacturing (CAM) system programming for Computer Numerical Control (CNC) machines using computer graphics for programming and tool path geometry. Computer programming for simultaneous 3-axis CNC machines, fourth and fifth positioning machining centers, and 2-axis turning centers.	Prerequisites: A grade of C or better in MPT130, or MPT130MP, or MPT131, or MPT131MP, or permission of Program Director.	L+L 3.0 5.0 5.0
MPT260MP	Computer Aided Manufacturing (CAM) I	Introduction to Computer-Aided Manufacturing (CAM) system programming for Computer Numerical Control (CNC) machines using computer graphics for programming and tool path geometry. Computer programming for simultaneous 3-axis CNC machines, fourth and fifth positioning machining centers, and 2-axis turning centers.	Prerequisites: A grade of C or better in MPT130, or MPT130MP, or MPT131, or MPT131MP, or permission of Program Director.	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0
MPT261	MasterCam Certified Programmer Mill Level I: Test Preparation: CPgM1	Review of the latest Certified Programmer Mill Level I (CPgM1) exam in preparation for exam. Competency of geometry construction, tool plane and work plane construction, Computer Numerical Control (CNC), milling tool path generation, and tool path verification with core Mastercam software.	Prerequisites: Permission of Program Director.	L+L 1.0 2.0 2.0
MPT262	Computer Aided Manufacturing (CAM) II	Advanced Computer-Aided Manufacturing (CAM) system programming for Computer Numerical Control (CNC) machines using computer graphics for programming and tool path geometry. Computer programming for mill turns and five axis simultaneous machining centers.	Prerequisites: A grade of C or better in MPT260, or MPT260MP, or permission of Program Director.	L+L 3.0 5.0 5.0
MPT262MP	Computer Aided Manufacturing (CAM) II	Advanced Computer-Aided Manufacturing (CAM) system programming for Computer Numerical Control (CNC) machines using computer graphics for programming and tool path geometry. Computer programming for mill turns and five-axis simultaneous machining centers.	Prerequisites: A grade of C or better in MPT260, or MPT260MP, or permission of Program Director.	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0
MPT270	Tooling, Fixtures, and Gauges	Various types of tools, fixtures, and gauges and their function as related to manufacturing processes. Clamping and workholding principles as well as use of appropriate hardware.	Prerequisites: A grade of C or better in [(MPT120, or MPT120MP, or four National Institute of Metalworking Skills (NIMS) in CNC Machining or Manual Machining) and (MPT150 or MPT151)], or CAD101, or CAD201, or Certified SolidWorks Associate (CSWA), or permission of Program	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MPT282AA	Volunteerism for Manufacturing: A Service Learning Experience	Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Program Director.	LAB 1.0 1.0 0.0
MPT282AB	Voluteerism for Manufacturing: A Service Learning Experience	Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Program Director.	LAB 2.0 2.0 0.0
MPT282AC	Volunteerism for Manufacturing: A Service Learning Experience	Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Program Director.	LAB 3.0 3.0 0.0
MPT290AA	Manufacturing Production Internship	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Eighty (80) hours of designated work experience.	Prerequisites: Permission of Program Director.	LAB 1.0 6.0 0.0
MPT290AB	Manufacturing Production Internship	Construction internship office/field experience with private/public agencies or citizen volunteer groups. One hundred and sixty (160) hours of designated work experience.	Prerequisites: Permission of Program Director.	LAB 2.0 12.0 0.0
MPT290AC	Manufacturing Production Internship	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Two hundred and forty (240) hours of designated work.	Prerequisites: Permission of Program Director.	LAB 3.0 18.0 0.0
MPT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Program Director. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of Program Director.	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MPT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Program Director. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of Program Director.	LAB 2.0 10.0 0.0
MPT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Program Director. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of Program Director.	LAB 3.0 15.0 0.0
MPT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Program Director. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of Program Director.	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MPT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director.	LAB 1.0 1.0 0.0
MPT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director.	LAB 2.0 2.0 0.0
MPT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director.	LAB 3.0 3.0 0.0
MSP101	Mortuary Science: Orientation and History	Designed to orient prospective students to the roles, functions, and responsibilities of funeral service professionals. Overview of the requirements, governing agencies, and employment outlook in the field. Includes a historical overview of funeral service with emphasis on individuals, events, and forces that have influenced contemporary funeral principles and practices.	Prerequisites: None.	LEC 3.0 3.0 3.0
MSP105	Cremation for Mortuary Science	Overview of cremation topics, including proper procedures, legal considerations, services, merchandise, trends, and the history of cremation.	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0
MSP201	Mortuary Science, Sociology, and Religion	Survey of basic principles of sociology as they relate to funeral service. Emphasis on family structures, social structures, and social factors. Exploration of cultural and religious funeral customs.	Prerequisites: Admission to the Mortuary Science program.	LEC 3.0 3.0 3.0
MSP202	Embalming	Study of the disinfection, temporary preservation and restoration of the deceased human body by physical and chemical means for the specific purpose to delay organic decomposition and apply practices for reverent care of the deceased.	Prerequisites: Admission to the Mortuary Science program.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MSP202LL	Embalming Lab	Field experience involving observation and practice of embalming processes in a laboratory setting. Includes writing case study reports. Study of anatomical considerations for mortuary science students.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP202 and admission to the Mortuary Science program.	LAB 1.0 2.0 2.0
MSP203	Microbiology for Mortuary Science	Survey of basic principles of microbiology. Emphasis on sanitation, disinfection, public health, and embalming practice.	Prerequisites: Admission to the Mortuary Science program.	LEC 3.0 3.0 3.0
MSP204	Chemistry for Mortuary Science	Survey of the basic principles of chemistry as they relate to funeral service. Emphasis on the chemical principles and precautions involved in the preservation and disinfection of the deceased human body.	Prerequisites: Admission to the Mortuary Science program.	LEC 3.0 3.0 3.0
MSP205	Funeral Directing I	Funeral directing, documentation procedures, and regulatory compliance from time of death to disposition. Includes establishing professional relationships with family members and funeral profession and allied colleague.	Prerequisites: Admission to the Mortuary Science program.	LEC 3.0 3.0 3.0
MSP206	Funeral Directing II	Operation of the established funeral home, including principles and product knowledge in the area of funeral service management and merchandising.	Prerequisites: A grade of C or better in MSP205.	LEC 3.0 3.0 3.0
MSP207	Mortuary Science Restorative Art	Care and restoration of the deceased human body to create natural form and appearance. Includes anatomical aspects and color theory.	Prerequisites: Admission to the Mortuary Science program.	LEC 3.0 3.0 3.0
MSP207LL	Mortuary Science Restorative Art Lab	Care and restoration of the deceased human body to create natural form and appearance. Includes anatomical aspects and color theory.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP207 and admission to the Mortuary Science program.	LAB 1.0 2.0 2.0
MSP208	Funeral Service Law: Legal, Ethical, and Regulatory Considerations	Exploration of funeral service regulation by state and federal government agencies. Includes cemetery code, dispositions, Federal Trade Commission (FTC), licensing, and crematory law. Examination of torts, wills, estates, contract law, liability, and probate considerations for the funeral service practitioner. Includes ethical considerations, rights, duties, and responsibilities for the funeral service practitioner.	Prerequisites: Admission to the Mortuary Science program.	LEC 3.0 3.0 3.0
MSP209	Pathology for Mortuary Science	Study of disease processes and their impact on the human body, with emphasis on those conditions which relate to or affect the handling of human remains.	Prerequisites: Admission to the Mortuary Science program.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MSP210	Psychology and Counseling for Mortuary Science	Survey of the basic principles of psychology and counseling, as they relate to funeral service. Includes psychological concepts in the areas of grief, bereavement, mourning, aftercare and crisis intervention with emphasis in the role of the funeral service practitioner.	Prerequisites: Admission to the Mortuary Science program.	LEC 2.0 2.0 2.0
MSP211	Compendium for Mortuary Science	Comprehensive review of exam skills and coursework prior to taking the National Board Exam for Mortuary Science. Analysis of skills and tasks an entry-level funeral practitioner would possess. This course develops skills for recall, application, and analysis of content in the domains of funeral service arts and funeral service sciences.	Prerequisites: Admission to the Mortuary Science program.	LEC 3.0 3.0 3.0
MSP282AA	Service-Learning Experience in Mortuary Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
MSP282AB	Service-Learning Experience in Mortuary Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
MSP282AC	Service-Learning Experience in Mortuary Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
MSP296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MSP296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
MSP296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
MSP296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MST140	Microsoft Networking Essentials	Emphasis on local area network with overview of wide area networks. Includes terminology, hardware and software components, connectivity, network architecture, packet structure, topologies, communication standards and protocols, and security issues. Preparation for Microsoft certification examination.	Prerequisites: None. (BPC110 or CIS105 and CIS121AB) suggested but not required.	L+L 3.0 4.0 4.0
MST150	Installing and Configuring Microsoft Windows	In-depth exploration of how to effectively install and configure the current version of, Windows. Includes features of Windows, virtualization improvements, network connectivity, access to resources, monitor and maintain Windows clients, and backup and recovery.	Prerequisites: None. CIS190 or CNT140AB suggested but not required.	L+L 3.0 4.0 4.0
MST155DC	Installation, Storage, and Compute with Windows Server	This course focuses primarily on the installation, storage, and compute features and their functionality that is available within Windows Server. As Information Technology pushes towards more cloud based solutions and makes our classic approach obsolete, this course will help students prepare for a career within an Information Technology enterprise and help distinguish themselves in today's competitive job market. This course covers various topics like Windows Server installation, Hyper-V deployments and storage options in relation to this new cloud based reality.	Prerequisites: A grade of C or better in MST150++ or permission of Instructor.	L+L 4.0 5.0 5.0
MST157DC	Networking with Windows Server	This course focuses on the networking features and their functionality available within Windows Server. It builds upon the skills from the Installation, Storage, and Compute with Windows Server course (MST155DC) and will develop skills related to Software-Defined Networking (SDN) solutions within Hyper-V, remote connectivity with VPN and Direct Access, and providing Internet connectivity with Domain Name System (DNS), Dynamic Host Configuration Protocol (DHCP), and Internet Protocol Address Management (IPAM). This course helps prepare for the 70-741 industry certification test.	Prerequisites: A grade of C or better in MST155DC or permission of Instructor.	L+L 4.0 5.0 5.0
MST158DB	Installing and Configuring Windows Server	In-depth exploration of how to effectively install and configure Windows Server. Includes roles and features of Server, virtualization with Hyper-V, core network services, Active Directory, and Group Policy. Designed to prepare students for the corresponding Microsoft Windows Server Installation and Configuration examination (70-410).	Prerequisites: A grade of C or better in (MST140 or CNT140 or CNT140AA) and (MST150 or MST150SV or MST150VI or MST150XP) or permission of Instructor.	L+L 4.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MST158DC	Identity Management with Windows Server 2016	Prepares students to manage Windows Server 2016 tasks. Configure and manage multiple services, such as Identity Management and Active Directory. Learn how to install and configure domain controllers and create and manage users, groups, and computers within Organizational Units. Prepares students for the Microsoft exam, Identity with Windows Server 2016-70-742.	Prerequisites: A grade of C or better in MST157DC.	L+L 4.0 5.0 5.0
MST160	Azure Administrator	Teaches IT professionals how to manage Azure subscriptions, secure identities, administer the infrastructure, configure virtual networking, connect Azure and on-premises sites, manage network traffic, implement storage solutions, create and scale virtual machines, implement web apps and containers, backup and share data, and monitor solutions.	Prerequisites: A grade of C or better in MST150WT, or permission of Instructor.	L+L 4.0 5.0 5.0
MST260	Microsoft Azure Cloud Development and Operations	Designed to provide technical information and skills required to develop and operate Microsoft Azure cloud infrastructure environments. Describes the design processes and implementation strategies for application and infrastructure that enable continuous integration, testing, and delivery, as well as infrastructure as code and process monitoring. Emphasizes processes, and technologies required to increase software delivery velocity and improve service reliability. Helps to prepare students for the Microsoft AZ-400, Azure DevOps Engineer or DevOps Institute, DevOps Foundation exams.	Prerequisites: A grade of C or better in (CIS156 and MST160) or permission of Instructor.	L+L 3.0 4.0 4.0
MTC098	Music Theory Boot Camp	Intensive review of music theory fundamentals to develop and/or refresh skills necessary for advanced study.	Prerequisites: None.	LEC 1.0 1.0 1.0
MTC101	Introduction to Music Theory	Designed to develop written and aural skills necessary for advanced study of music theory and skills. Recommended for music majors	Prerequisites: None.	LEC 3.0 3.0 3.0
MTC103	Introduction to Aural Perception	An introduction to the aural skills necessary to hear relationships of intervals, rhythms, melody, and harmony in music.	Prerequisites: None.	L+L 1.0 2.0 2.0
MTC105	Music Theory I	The chronological study of music theory including: harmony, melody, texture, structure and timbre through analysis, original compositions and basic exercises to demonstrate musical concepts.	Prerequisites: A grade of C or better in MTC101 or permission of Instructor. Corequisites: MTC106.	LEC 3.0 3.0 3.0
MTC106	Aural Perception I	The development of listening and performing skills through dictation, sight singing and keyboard harmony	Prerequisites: None. Corequisites: MTC105.	L+L 1.0 2.0 2.0
MTC110	Music Notation for Songwriting	Basic musical notational system with emphasis on note reading, staff placement, meter, rhythmic patterns, basic harmonic patterns, chords and chord symbols, lead sheet forms, scales and keys	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MTC122	Fretboard Harmony	An in-depth study of functional and theoretical practice as applied to the fretboard of the guitar through understanding of chord symbols, intervals and rhythm	Prerequisites: A grade of C or better in MTC101.	LEC 3.0 3.0 3.0
MTC130	Jazz Theory	Develop written and aural theory skills necessary in the jazz idiom.	Prerequisites: A grade of C or better in (MTC101 and MTC103), or permission of Instructor.	LEC 2.0 2.0 2.0
MTC155	Music Theory II	A continuation of Music Theory I with emphasis on harmony and part-writing procedures	Prerequisites: A grade of C or better in MTC105. Corequisites: MTC156.	LEC 3.0 3.0 3.0
MTC156	Aural Perception II	A continuation of Aural Perception I, including harmonic practices.	Prerequisites: A grade of C or better in MTC106. Corequisites: MTC155.	L+L 1.0 2.0 2.0
MTC180	Computer Literacy for Musicians	Instruction in basic computer literacy, including generic applications and music-specific programs with hands-on experience. Ability to read music notation required.	Prerequisites: A grade of C or better in MTC101, or MTC105, or Corequisites: MTC105, or permission of Instructor.	L+L 3.0 4.0 4.0
MTC203	Jazz Composition	Composition and analysis of standard song forms as well as other standard compositional practices and forms idiomatic to jazz	Prerequisites: A grade of C or better in MTC155 or MUP165 or permission of Instructor.	L+L 3.0 3.0 3.0
MTC205	Music Theory III	The study of chromatic harmony and melody, modulation techniques and expanded chords. The analysis of formal structure	Prerequisites: A grade of C or better in MTC155. Corequisites: MTC206.	LEC 3.0 3.0 3.0
MTC206	Aural Perception III	A development of listening and performing skills, including an introduction of chromatic harmonic techniques and concepts of style.	Prerequisites: A grade of C or better in MTC156. Corequisites: MTC205.	L+L 1.0 2.0 2.0
MTC240	Composition	Introduction to the basics of music composition, stressing techniques and procedures for developing original ideas.	Prerequisites: A grade of C or better in (MTC105 and MTC106 or equivalent) and permission of Instructor.	L+L 3.0 0.6 4.68
MTC255	Music Theory IV	A continuation of Music Theory III, including 20th century theories and techniques	Prerequisites: A grade of C or better in MTC205. Corequisites: MTC256.	LEC 3.0 3.0 3.0
MTC256	Aural Perception IV	A continuation of Aural Perception III, including extended chords.	Prerequisites: A grade of C or better in MTC206. Corequisites: MTC255.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MTC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
MTC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
MTC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
MUC109	Music Business: Content Creation and Copyright	Designed to provide an overview of content creation and copyright considerations within the Music Industry. Topics include songwriting and music creation, copyright, publishing and licensing, studio production, media applications of music, business ownership and operations, and emerging technologies.	Prerequisites: None.	LEC 3.0 3.0 3.0
MUC110	Music Business: Marketing and Monetization	Designed to provide an overview of the marketing and monetization of music. Topics include music label operations; contracts; marketing, promotion, and merchandising; agents, managers, and attorneys; concert promotion and touring; and unions and guilds.	Prerequisites: None.	LEC 3.0 3.0 3.0
MUC111	Digital Audio Workstation I (DAW I)	Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MUC195, or MUC195AA, or FMP105, or permission of Instructor.	L+L 3.0 5.0 5.0
MUC112	Digital Audio Workstation II (DAW II)	Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management.	Prerequisites: A grade of C or better in MUC111, and (MUC195 or MUC195AA).	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUC114	Song Publishing and Marketing	Publishing and marketing of songs including services that publishers provide and what to consider when choosing one, a summary of various aspects and types of contracts, working as a staff writer, publisher marketing, self marketing, and additional markets.	Prerequisites: None.	LEC 1.0 1.0 1.0
MUC115	Song Copyrighting and Demos	Terms involved with copyright laws. Clarification of when copyright begins, ownership of copyright and registration, limitations of copyright, and when works become public domain. Phases of making a demonstration tape or CD. Promotion and presentation of a demo.	Prerequisites: None.	LEC 1.0 1.0 1.0
MUC120	Introduction to Sound Design for Film and Video	Basic principles of recording and mixing sound for film and video. Includes voice-over, automatic dialog replacement (ADR), foley, ambience, special effects and music. Emphasis on analog and digital recording techniques in the field as well as in a controlled environment.	Prerequisites: A grade of C or better in (FMT100 and FMT136) or permission of Instructor.	LEC 3.0 3.0 3.0
MUC122	Sound Design I	Introduction to Sound Design and Audio Post-Production for Multimedia. Includes creating and editing Sound Effects, ADR, Foley, Music, and Ambience, such as Film, TV, Video Gaming, Theatre, and Dance. Emphasis on computer assisted production using Digital Audio Workstations and sound design techniques using industry-standard equipment.	Prerequisites: None.	L+L 3.0 5.0 5.0
MUC135	Introduction to Disc Jockey Techniques	Development of beginning level live-performance disc jockey techniques. Emphasis on understanding the construction of industry-formatted dance songs, cueing, segueing/mixing methods, the relationship of beats per minute to segueing, and programming songs to entertain a live audience. Covers the history of the live performance DJ and strategies for soliciting employment in the field.	Prerequisites: None.	L+L 3.0 3.0 3.0
MUC136	Turntablism: The Art of the Scratch DJ	Covers the skills required in vinyl manipulation; examines the development of turntable techniques and the contributions made by individual turntable artists.	Prerequisites: None.	L+L 3.0 4.0 4.0
MUC137	Digital DJ Performance Techniques	Covers the skills required for live performance employing digital media with an emphasis on programs such as Serato Scratch Live and Ableton Live.	Prerequisites: None.	L+L 3.0 4.0 4.0
MUC138	Disc Jockey Laboratory	Operation, scope, roles and responsibilities in the commercial music production process.	Prerequisites: None.	LAB 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUC139	Introduction to Emcee-Rapping Techniques	Development of beginning level live-performance and recording emcee-rap techniques. Emphasis on understanding rhyme, structure, breath control, stage presence, and performance. Covers the history of the DJ/emcee and origins of the rapper, song structure, enunciation, vocal delivery, breath control, melody, and pacing while staying on beat.	Prerequisites: None.	L+L 3.0 4.0 4.0
MUC140	Songwriting	An introduction to the art and craft of songwriting through the study and analysis of diverse songwriters and musical styles, and creation of original songs.	Prerequisites: A grade of C or better in MTC101, or MTC105, or permission of Instructor.	LEC 3.0 3.0 3.0
MUC145	Recording Studio Business Operations	Operation, scope, roles and responsibilities in the commercial music production process. Focuses on the business aspects and daily management of the professional recording studio. Includes strategies for project management, client service, marketing, equipment acquisition, staffing, and employment.	Prerequisites: None.	LEC 3.0 3.0 3.0
MUC180	Computer Literacy for the Music Business	Basic computer literacy, including business applications used in the Music Industry, with hands-on experience.	Prerequisites: A grade of C or better in MUC109 or permission of Instructor or Department or Division Chair.	L+L 3.0 3.0 3.0
MUC181	Popular Music Orchestration and Arranging	Basic orchestration and arranging techniques as used in popular music genres including jazz, pop, and rock music for vocal and instrumental music performance ensembles. Idiomatic uses of harmony, melodic rhythm, voicing, tonal color and notation.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: (MTC155 or higher level of MTC music theory) and MTC180.	LEC 3.0 3.0 3.0
MUC191	Electronic Music I	An introduction to creating music with computers, utilizing the Musical Instrument Digital Interface (MIDI) protocol, synthesizers, digital audio software/hardware, and MIDI controllers.	Prerequisites: None.	L+L 3.0 4.0 4.0
MUC192	Electronic Music II	Continued study of creating music with computers, utilizing the Musical Instrument Digital Interface (MIDI) configurations, audio editing, and music software/hardware at the intermediate level. Emphasis on more complex configurations and their applications in compositions.	Prerequisites: A grade of C or better in MUC191.	L+L 3.0 4.0 4.0
MUC193	Computer-Based Sound Synthesis	Principles of sound synthesis using computer-based methods. Synthesis methods include subtractive, additive, frequency modulation, sample and synthesis, and hybrid. Emphasis on synthesis techniques for use in electronic music.	Prerequisites: A grade of C or better in MUC191 or permission of Instructor.	L+L 3.0 4.0 4.0
MUC195	Studio Music Recording I	Basic principles of studio sound recording. Emphasis on musical acoustics, operation of recording equipment, studio setups, and multitrack recording. Includes studio session process and musical production decisions.	Prerequisites: None.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUC195AA	Studio Music Recording I	Basic principles of studio sound recording. Emphasis on musical acoustics, operation of recording equipment, studio setups, and multitrack recording. Includes studio session process and musical production decisions.	Prerequisites: None.	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0
MUC196	Studio Music Recording II	Emphasis on signal-processing equipment, mixing consoles, and advanced musical recording session procedures, production, and engineering. Includes mix-down and resultant master tape of a musical recording session.	Prerequisites: A grade of C or better in MUC195 or MUC195AA.	L+L 3.0 5.0 5.0
MUC196AA	Studio Music Recording II	Emphasis on signal-processing equipment, mixing consoles, and advanced musical recording session procedures, production, and engineering. Includes mix-down and resultant master tape of a musical recording session.	Prerequisites: A grade of C or better in MUC195 or MUC195AA.	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0
MUC197	Live Sound Reinforcement I	Basic principles of live sound engineering. Emphasis on signal flow, acoustic, sound reinforcement set-ups and installation, signal processing, microphone selections and placement. Includes setting up sound systems and mixing live music.	Prerequisites: None.	L+L 3.0 4.0 4.0
MUC198	Live Sound Reinforcement II	Emphasis on musical production decisions. Front-of-house and monitor console placement, loudspeaker arrangements, power considerations, program material and sound pressure levels. Includes setting up of sound system and mixing live performances with various styles of music. In addition to mixing at alternate locations.	Prerequisites: A grade of C or better in MUC197.	L+L 3.0 4.0 4.0
MUC209	Music Industry Entrepreneurship	Operation, scope, and career opportunities in the music business. Focuses on music in the areas of entrepreneurship, visionary development and the collaboration process.	Prerequisites: A grade of C or better in MUC109 and MUC110 or permission of Instructor.	LEC 3.0 3.0 3.0
MUC210	Advanced Industry Topics: Concert Promotion and Touring	Operation, scope, and career opportunities in the music business. Focuses on advanced aspects of concert promotion, touring and festival production. Areas of focus include marketing, planning, operations, talent buying, and budgeting for profitable and successful music-performance stage shows.	Prerequisites: A grade of C or better in MUC109 or permission of Instructor or Department or Division Chair.	LEC 3.0 3.0 3.0
MUC211	Advanced Industry Topics: Artist Management and Development	Operation, scope, and career opportunities in the music business. Focus on advanced aspects of artist management and development. Include roles and responsibilities of an Artist Manager, the nature and structure of the relationship between an Artist and Artist Manager, and the development of business, and career management techniques for Artist Managers.	Prerequisites: A grade of C or better in MUC109 or permission of Instructor or Department or Division Chair.	LEC 3.0 3.0 3.0
MUC215	Music Industry Seminar: Innovation in Music Technology	Seminar in Music Industry technology with an emphasis on current product and service innovations. Emphasis on marketing and promotional uses of new technology.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUC216	Music Workshop/Seminar	Workshop seminar in commercial music disciplines.	Prerequisites: None.	LEC 1.0 1.0 1.0
MUC218	Audio Mixing Techniques	Approaches in final mixing for different musical genres. Develop critical listening skills, and applying these techniques to students' projects. Professional-type facilities and equipment available for student use.	Prerequisites: A grade of C or better in (MUC111 and MUC196), or permission of Instructor.	L+L 3.0 4.0 4.0
MUC220	Advanced Sound Design for Film and Video	Explores techniques and advanced applications used in designing sound using original student footage on a non-linear editing system.	Prerequisites: A grade of C or better in FMT/MUC120 or permission of Instructor. Xref: FMT120	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0
MUC222	Sound Design II	Intermediate level Sound Design and Audio Post-Production for Multimedia.	A grade of C or better required in all Prerequisites. Prerequisites: MUC122. Prerequisites or Corequisites: MUC191 or MUC111 or permission of Instructor.	L+L 3.0 5.0 5.0
MUC237	Electronic Dance Music Production	Process and skills required for music production employing digital media, with an emphasis on producing music on digital audio workstations.	Prerequisites: A grade of C or better in MUC191 or permission of Instructor.	L+L 3.0 4.0 4.0
MUC240	Creative Music Production	Operation, scope, roles and responsibilities in the commercial music production process. Focuses on creative aspects of commercial music production, including song selection, realization of artistic vision, studio selection, musician and vocal staff selection, coaching for optimal performance, analyzing song structure and sound quality and trouble-shooting problems in the overall artistic impression of the finished music product. Lab work includes creation and execution of a finished professional-quality music production.	Prerequisites: A grade of C or better in [(MTC101 and MTC103) or (MTC105 and MTC106)], and (MUC112, MUC192, and MUC295), or permission of Instructor.	L+L 4.0 5.0 5.0
MUC241	Business Principles of Music Production	Operation, scope, roles and responsibilities in the commercial music production process. Focuses on business aspects of commercial music production, including project management, budgeting, production personnel, deal structures, revenue sources, copyright, publishing percentages and career strategies.	Prerequisites: A grade of C or better in (MUC109 and MUC110) or permission of Instructor.	LEC 3.0 3.0 3.0
MUC242	Music Genres and Styles	Operation and development of creative skills in the commercial music production process. Geared towards music producers and emphasizing analysis and comprehension of commercial music styles and genres, including: pop, country, rock, soul, rhythm and blues, funk, and hip-hop. Study of the thematic organization of popular musical styles.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUC261	Modern Arranging I	Basic arranging techniques as used in jazz and rock idioms for combo and special ensembles. Idiomatic uses of harmony, melodic rhythm, voicing, tonal color and notation.	Prerequisites: A grade of C or better in MUP164 and MUP165 or permission of Instructor.	LEC 3.0 3.0 3.0
MUC262	Modern Arranging II	Arranging for larger ensembles, including strings, jazz ensemble, woodwinds and synthesizers. Detailed study of harmony, form and orchestration.	Prerequisites: A grade of C or better in MUC261 or permission of Instructor.	LEC 3.0 3.0 3.0
MUC274	Music Industry Study Tour	A tour of the music industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of professional opportunities and careers.	Prerequisites: None.	LAB 2.0 2.0 0.0
MUC280	Recording Studio Maintenance	Introduction to the techniques, electronics, and tools used to perform basic recording studio, live sound, and electronic musical instrument equipment maintenance	Prerequisites: A grade of C or better in MUC195AA or MUC111 or permission of instructor.	L+L 3.0 3.0 3.0
MUC281	Electronic Music III	Continued study of the production of music using electronic processes. Emphasis on more complex configurations and their applications in live performance or studio use.	Prerequisites: A grade of C or better in MUC192.	L+L 3.0 4.0 4.0
MUC289	Live Sound Reinforcement III	Focus on audio engineering and media production for performances and events. The course will cover advanced audio concepts and techniques, basic lighting, rigging, and media. Students will apply their knowledge assisting as part of productions, events, advanced projects or other activities related to the course material.	Prerequisites: A grade of C or better in MUC198.	L+L 3.0 6.0 6.0
MUC290AA	Music Business Internship	Music Business Internship work experience. Perform a variety of activities, to fulfill the routines and responsibilities of the department or business where the internship is served. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 1.0 1.0 0.0
MUC291AA	Disc Jockey Internship	Disc Jockey (DJ) internship work experience, which may include emcee-rapping and/or electronic dance music production, under the supervision of an experienced industry professional. Perform a variety of activities to fulfill the routines and responsibilities of the department or business where the internship is served.	Prerequisites: Permission of Department or Division.	L+L 1.0 1.0 0.0
MUC292	Sound Design III	Advanced Sound Design Production for Multimedia: Designed to provide an atmosphere of team research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use.	Prerequisites: A grade of C or better in MUC222, or permission of Instructor.	L+L 3.0 5.0 5.0
MUC293	Self-Promotion for Music	Designed to provide the skills and knowledge required for effective self-promotion. Focus on career goal development, market analysis, communication and networking skills, and the development of a self-promotional campaign.	Prerequisites: A grade of C or better in MUC109, or permission of Instructor.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUC294	Portfolio for Music	Includes developing a portfolio that demonstrates music related skills and marketing of songs, recordings, and musical performances.	Prerequisites: A grade of C or better in MUC293.	LEC 1.0 1.0 1.0
MUC295	Studio Music Recording III	Producing and engineering a recording project. Covers how recording studios work and how recording projects are organized from pre-production through delivery of the final mix.	Prerequisites: A grade of C or better in MUC196 and (MUC111 or permission of Instructor).	L+L 3.0 6.0 6.0
MUC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
MUC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUC296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
MUC296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
MUC297AA	Audio Production Internship	Music Internship work experience in a business or industry. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 1.0 1.0 0.0
MUC297AB	Audio Production Internship	Music Internship work experience in a business or industry eighty (80) hours of designated work per credit.	Prerequisites: A grade of C or better in MUC110.	L+L 2.0 2.0 0.0
MUC297AC	Audio Production Internship	Music Internship work experience in a business or industry eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	L+L 3.0 3.0 0.0
MUC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
MUC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
MUE107	Woodwinds Methods I	Practical class with emphasis on techniques of playing and teaching woodwind instruments including embouchure, breath control, tone, mouthpiece selection, and literature.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUE108	Percussion Methods I	Practical class with emphasis on techniques of playing and teaching percussion instruments including hand position, rudiments, stick control, and elements of reading rhythms.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUE109	Brass Methods I	Practical class with emphasis on techniques of playing and teaching brass instruments including embouchure, breath control, tone, and literature.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUE110	Strings Methods I	Practical class with emphasis on techniques of playing and teaching string instruments including tone control and literature.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUE111	Guitar Methods	Practical class with emphasis on both classical and popular techniques, methods, materials, solo/ensemble literature and repertoire used in all levels of guitar. Instructional approaches to the guitar as both a harmonizing instrument and in an ensemble setting.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUE207	Woodwinds Methods II	Continuation of Woodwinds Methods I with additional emphasis on skills including ensemble performance, transposition, increasing range and literature.	Prerequisites: A grade of C or better in MUE107 or permission of Instructor.	L+L 1.0 3.0 3.0
MUE208	Percussion Methods II	Continuation of Percussion Methods I with additional emphasis on ensemble techniques and representative literature.	Prerequisites: A grade of C or better in MUE108 or permission of Instructor.	L+L 1.0 3.0 3.0
MUE209	Brass Methods II	Continuation of Brass Methods I with additional focus on skills including ensemble performance, transposition, increasing range and solo literature.	Prerequisites: A grade of C or better in MUE109 or permission of Instructor.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUE210	Strings Methods II	Continuation of String Methods I with additional focus on skills including fingering and bowing techniques, and solo/ensemble literature.	Prerequisites: A grade of C or better in MUE110 or permission of Instructor.	L+L 1.0 3.0 3.0
MUE240	Introduction to Choral Methods	Overview of techniques, methods, materials, style characteristics, and repertoire used in directing choral music at the secondary level including simulated teaching, conducting, and the demonstration of vocal and choral performance practices.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUE250	Vocal Pedagogy/Voice Methods	Study of the anatomy, physiology, and acoustics of singing as applied to healthy vocal function and the teaching of singing. Topics include: overview of techniques, materials, and literature used in teaching singing.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUE296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
MUE296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUE296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0
MUE296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
MUE298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
MUE298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUE298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
MUP100	Introduction to Digital Musicianship	A music performance class that provides foundational skills in the use of digital concepts, tools, software applications, and technology to improve performance ability and music making concepts that align with current trends in the music industry.	Prerequisites: None.	LEC 2.0 2.0 2.0
MUP101AA	Private Instruction: Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101AD	Private Instruction: Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101AG	Private Instruction: Harpsichord	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP101AJ	Private Instruction: Organ	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101AM	Private Instruction: Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101AP	Private Instruction: Trumpet	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101AS	Private Instruction: French Horn	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101AV	Private Instruction: Trombone	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP101AY	Private Instruction: Euphonium	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101BB	Private Instruction: Tuba	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101BE	Private Instruction: Flute	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101BH	Private Instruction: Oboe	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101BK	Private Instruction: Clarinet	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP101BN	Private Instruction: Bassoon	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101BQ	Private Instruction: Saxophone	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101BT	Private Instruction: Violin	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101BW	Private Instruction: Viola	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101BZ	Private Instruction: Violoncello	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP101CC	Private Instruction: Contrabass	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101CF	Private Instruction: Popular Music Bass Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101CI	Private Instruction: Percussion	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101CJ	Private Instruction: Harp	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meetint departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101CK	Private Instruction: Popular Music Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP101CL	Private Instruction: Popular Music Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101CM	Private Instruction: Popular Music Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101CN	Private Instruction: Popular Music Drum	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101CO	Private Instruction: Popular Music Production	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP101CP	Private Instruction: Popular Electronic Music Performance	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP101CQ	Private Instruction: Popular Music Turntablism	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 1.0 0.6 0.0
MUP102AA	Private Instruction: Voice	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102AD	Private Instruction: Piano	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102AG	Private Instruction: Harpsichord	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102AJ	Private Instruction: Organ	Private Instruction emphasizing musicianship, liturature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP102AM	Private Instruction: Guitar	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102AP	Private Instruction: Trumpet	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102AS	Private Instruction: French Horn	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102AV	Private Instruction: Trombone	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102AY	Private Instruction: Euphonium	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP102BB	Private Instruction: Tuba	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102BE	Private Instruction: Flute	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102BH	Private Instruction: Oboe	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102BK	Private Instruction: Clarinet	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102BN	Private Instruction: Bassoon	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP102BQ	Private Instruction: Saxophone	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102BT	Private Instruction: Violin	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102BW	Private Instruction: Viola	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102BZ	Private Instruction: Violoncello	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102CC	Private Instruction: Contrabass	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP102CF	Private Instruction: Popular Music Bass Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102CI	Private Instruction: Percussion	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102CJ	Private Instruction: Harp	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102CK	Private Instruction: Popular Music Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102CL	Private Instruction: Popular Music Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP102CM	Private Instruction: Popular Music Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102CN	Private Instruction: Popular Music Drum	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102CO	Private Instruction: Popular Music Production	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102CP	Private Instruction: Popular Electronic Music Performance	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 2.0 1.2 0.0
MUP102CQ	Private Instruction: Popular Music Turntablism	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP127	Class Guitar I	Emphasis on note-reading and folk-style harmonic accompaniment. Includes finger-style playing. Stresses development of efficient practice techniques and proper sitting and hand positions.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP128	Class Guitar II	Note-reading range including second position and parts of higher positions. Classical, popular, Latin, and other styles of music. Theory including scales, keys, and chord construction. Technical exercises of both hands.	Prerequisites: A grade of C or better in MUP127 or permission of Instructor.	L+L 1.0 3.0 3.0
MUP130	Introduction to Class Piano	Basic introduction to piano techniques and fundamentals of music including hand position, sight-reading of both melodic and harmonic materials, and the introduction of scale patterns. Designed for those with little or no piano experience.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP131	Class Piano I	Development of beginning piano techniques and the fundamentals of music including basic hand position, music-reading skills of melodic and harmonic material, major scales, transposition, and harmonizations including the I, IV, V7 chords.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP132	Class Piano II	Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading.	Prerequisites: A grade of C or better in MUP131 or permission of Instructor.	L+L 1.0 3.0 3.0
MUP133	Class Voice I	Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and performances in class of solo vocal literature.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP134	Class Voice II	Continuation of Class Voice I including the elements of stage presence and diction.	Prerequisites: A grade of C or better in MUP133 or permission of Instructor.	L+L 1.0 3.0 3.0
MUP140	Elementary Piano Pedagogy	An overview of instructional methods, techniques, materials, and repertoire, intended for teaching piano students at the elementary level. Includes creating studio documents, teaching functional skills, peer piano teaching, and observing piano instruction.	Prerequisites: Permission of Instructor.	LEC 2.0 2.0 2.0
MUP141	Intermediate Piano Pedagogy	Overview of techniques, methods, materials, stylistic characteristics, and repertoire used in teaching piano students at the intermediate and early advanced levels including peer piano teaching, performance and competition preparation, and observation of piano instruction.	Prerequisites: Permission of Instructor.	LEC 2.0 2.0 2.0
MUP149	Gospel Chorus	A mixed chorus with emphasis on college/community participation and preparation of a variety of Gospel Music for public performance. Auditions may be required.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP150	Community Chorus	A mixed chorus with emphasis on college/community participation and preparation of a variety of choral literature for public performance. Auditions may be required.	Prerequisites: None.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP151AA	Private Instruction: Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AA.	L+L 1.0 0.6 0.0
MUP151AD	Private Instruction: Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AD.	L+L 1.0 0.6 0.0
MUP151AG	Private Instruction: Harpsichord	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AG.	L+L 1.0 0.6 0.0
MUP151AJ	Private Instruction: Organ	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AJ.	L+L 1.0 0.6 0.0
MUP151AM	Private Instruction: Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AM.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP151AP	Private Instruction: Trumpet	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AP.	L+L 1.0 0.6 0.0
MUP151AS	Private Instruction: French Horn	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AS.	L+L 1.0 0.6 0.0
MUP151AV	Private Instruction: Trombone	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AV.	L+L 1.0 0.6 0.0
MUP151AY	Private Instruction: Euphonium	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, and percussion.	Prerequisites: A grade of C or better in MUP101AY.	L+L 1.0 0.6 0.0
MUP151BB	Private Instruction: Tuba	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BB.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP151BE	Private Instruction: Flute	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BE.	L+L 1.0 0.6 0.0
MUP151BH	Private Instruction: Oboe	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BH.	L+L 1.0 0.6 0.0
MUP151BK	Private Instruction: Clarinet	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BK.	L+L 1.0 0.6 0.0
MUP151BN	Private Instruction: Bassoon	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BN.	L+L 1.0 0.6 0.0
MUP151BQ	Private Instruction: Saxophone	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BQ.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP151BT	Private Instruction: Violin	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BT.	L+L 1.0 0.6 0.0
MUP151BW	Private Instruction: Viola	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BW.	L+L 1.0 0.6 0.0
MUP151BZ	Private Instruction: Violoncello	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BZ.	L+L 1.0 0.6 0.0
MUP151CC	Private Instruction: Contrabass	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101CC.	L+L 1.0 0.6 0.0
MUP151CF	Private Instruction: Popular Music Bass Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CF.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP151CI	Private Instruction: Percussion	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101CI.	L+L 1.0 0.6 0.0
MUP151CJ	Private Instruction: Harp	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101CJ.	L+L 1.0 0.6 0.0
MUP151CK	Private Instruction: Popular Music Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CK.	L+L 1.0 0.6 0.0
MUP151CL	Private Instruction: Popular Music Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CL.	L+L 1.0 0.6 0.0
MUP151CM	Private Instruction: Popular Music Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CM.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP151CN	Private Instruction: Popular Music Drum	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CN.	L+L 1.0 0.6 0.0
MUP151CO	Private Instruction: Popular Music Production	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CO.	L+L 1.0 0.6 0.0
MUP151CP	Private Instruction: Popular Electronic Music Performance	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CP.	L+L 1.0 0.6 0.0
MUP151CQ	Private Instruction: Popular Music Turntablism	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CQ.	L+L 1.0 0.6 0.0
MUP152AA	Private Instruction: Voice	Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AA.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP152AD	Private Instruction: Piano	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AD.	L+L 2.0 1.2 0.0
MUP152AG	Private Instruction: Harpsichord	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AG.	L+L 2.0 1.2 0.0
MUP152AJ	Private Instruction: Organ	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AJ.	L+L 2.0 1.2 0.0
MUP152AM	Private Instruction: Guitar	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AM.	L+L 2.0 1.2 0.0
MUP152AP	Private Instruction: Trumpet	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AP.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP152AS	Private Instruction: French Horn	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AS.	L+L 2.0 1.2 0.0
MUP152AV	Private Instruction: Trombone	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AV.	L+L 2.0 1.2 0.0
MUP152AY	Private Instruction: Euphonium	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AY.	L+L 2.0 1.2 0.0
MUP152BB	Private Instruction: Tuba	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BB.	L+L 2.0 1.2 0.0
MUP152BE	Private Instruction: Flute	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BE.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP152BH	Private Instruction: Oboe	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BH.	L+L 2.0 1.2 0.0
MUP152BK	Private Instruction: Clarinet	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BK.	L+L 2.0 1.2 0.0
MUP152BN	Private Instruction: Bassoon	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BN.	L+L 2.0 1.2 0.0
MUP152BQ	Private Instruction: Saxophone	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BQ.	L+L 2.0 1.2 0.0
MUP152BT	Private Instruction: Violin	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BT.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP152BW	Private Instruction: Viola	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BW.	L+L 2.0 1.2 0.0
MUP152BZ	Private Instruction: Violoncello	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BZ.	L+L 2.0 1.2 0.0
MUP152CC	Private Instruction: Contrabass	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102CC.	L+L 2.0 1.2 0.0
MUP152CF	Private Instruction: Popular Music Bass Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CF.	L+L 2.0 1.2 0.0
MUP152CI	Private Instruction: Percussion	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102CI.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP152CJ	Private Instruction: Harp	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102CJ.	L+L 2.0 1.2 0.0
MUP152CK	Private Instruction: Popular Music Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CK.	L+L 2.0 1.2 0.0
MUP152CL	Private Instruction: Popular Music Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CL.	L+L 2.0 1.2 0.0
MUP152CM	Private Instruction: Popular Music Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CM.	L+L 2.0 1.2 0.0
MUP152CN	Private Instruction: Popular Music Drum	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CN.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP152CO	Private Instruction: Popular Music Production	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CO.	L+L 2.0 1.2 0.0
MUP152CP	Private Instruction: Popular Electronic Music Performance	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CP.	L+L 2.0 1.2 0.0
MUP152CQ	Private Instruction: Popular Music Turntablism	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CQ.	L+L 2.0 1.2 0.0
MUP153	Concert Choir	A mixed choir designed to emphasize choral techniques and performance of all styles of choral literature. Public performances are scheduled each semester.	Prerequisites: None.	L+L 1.0 5.0 5.0
MUP154AA	Jazz Vocal Ensemble	Practical and performing experience in vocal jazz. Includes music from the 1920's through the present.	Prerequisites: Auditions required or permission of Instructor.	L+L 1.0 3.0 3.0
MUP154AB	Jazz Vocal Ensemble	Practical and performing experience in vocal jazz. Includes music from the 1920's through the present. Requires participation in various public performances on campus and in the community throughout the semester.	Prerequisites: Auditions required and two semesters in A Cappella Choir or permission of Instructor.	L+L 2.0 5.0 5.0
MUP155	Handbell Choir (Bell Canto)	Emphasis on practical and performing skills in bell ringing. Preparation of all styles of bell literature. Scheduled public performances during the year.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP157	Treble Choir	A high voice chorus designed to emphasize choral technique and performance of all styles of appropriate choral literature. Public performances are scheduled during the year. Auditions may be required.	Prerequisites: None.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP158	Popular Music Ensemble	Emphasizes instrumental and vocal techniques and the preparation of all styles of rock band literature. Introduces music business. Requires participation in public and private performances throughout the semester.	Prerequisites: Prerequisites: None. Auditions may be required.	L+L 1.0 2.0 2.0
MUP159	Community Orchestra	Emphasis on college/community participation and the preparation of orchestral literature for public performance. Auditions may be required.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP160	Orchestra	A class designed to emphasize orchestral ensemble techniques and the preparation of all styles of orchestral literature. Public performances are scheduled during the year. Auditions may be required.	Prerequisites: None.	L+L 1.0 5.0 5.0
MUP161	Community Band	Emphasis on college/community participation and the preparation of band literature for public performance. Auditions may be required.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP162	Band	Designed to emphasize instrumental techniques and the preparation of all styles of band literature for ensemble performance. Includes public performances.	Prerequisites: None.	L+L 1.0 5.0 5.0
MUP163	Jazz Ensemble	Practical and performance experience in various jazz styles. Open to all students on the basis of auditions.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP164	Jazz Improvisation I	Theoretical and performance skills in many styles of jazz improvisation.	Prerequisites: None.	L+L 2.0 3.0 3.0
MUP165	Jazz Improvisation II	Intermediate theoretical and performance skills in many styles of jazz improvisation.	Prerequisites: A grade of C or better in MUP164 or permission of Instructor.	L+L 2.0 3.0 3.0
MUP166	Jazz Piano I	Introduction to basic jazz piano skills, including chord construction, chord voicings, accompanying and solo piano arrangements.	Prerequisites: A grade of C or better in MUP131 or permission of Instructor.	L+L 1.0 2.0 2.0
MUP167	Jazz Piano II	Continued development of jazz piano techniques with emphasis on voicing formulas for ninth, eleventh, thirteenth, and altered dominant chords	Prerequisites: A grade of C or better in MUP166 or permission of Instructor.	L+L 1.0 2.0 2.0
MUP168	Mariachi Band	Emphasis on college and community participation and the preparation of mariachi band literature for public performance. Auditions may be required.	Prerequisites: None.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP169	Guitar Ensemble	Ensemble of the entire guitar family that may include standard, requinto, alto, bass, and contrabass guitars that emphasizes guitar techniques and the preparation of all styles of guitar ensemble literature. Literature will include modern and historical guitar ensemble repertoire, new works, arrangements, and transcriptions from various musical periods and traditions as well as guitar literature from a diverse number of world musical traditions. Guitar techniques are studied and refined as they relate to the literature performed. Emphasis placed on reading and listening skills, rehearsal and preparation, conducting and performance cues, and performance experience in various guitar styles. Concerts presented throughout the semester.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP171	Opera Workshop	A workshop in the study and performance of operatic literature.	Prerequisites: None.	L+L 2.0 5.0 5.0
MUP181	Chamber Music Ensembles	Practical and performance experience in instrumental, vocal, and mixed ensembles.	Prerequisites: None.	L+L 1.0 2.0 2.0
MUP182	Chamber Singers	Practical and performance experience in various styles of vocal music.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP183	Jazz Combo	Jazz Combo participation provides an opportunity for students to develop improvisational skills in a variety of styles from historical and contemporary jazz practice, while offering a creative outlet for composers and arrangers.	Prerequisites: None.	L+L 1.0 2.0 2.0
MUP185	Flute Choir	Ensemble of the entire flute family that may include piccolo, E flat flute, C flutes, alto flutes, and bass flute. Literature will include commissioned works, original works for standard flute choir, and transcriptions from various musical periods.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP190	Percussion Ensemble	Practical and performance experience in various percussion styles. Percussion literature from a diverse number of world musical traditions. Western European art music, various African traditions, Indian music, Japanese music, Indonesian music, Mexican, Central, and South American music, and percussion compositions from the American Experimental Tradition rehearsed and performed. Concerts presented throughout the semester. Percussion techniques are studied and refined as they relate to the literature performed. Emphasis placed on reading and listening skills, increased aesthetic discrimination. Informed performance practice and skills on all percussion instruments and traditions.	Prerequisites: None.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP201AA	Private Instruction: Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, harp and percussion.	Prerequisites: A grade of C or better in MUP151AA.	L+L 1.0 0.6 0.0
MUP201AD	Private Instruction: Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AD.	L+L 1.0 0.6 0.0
MUP201AG	Private Instruction: Harpsichord	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AG.	L+L 1.0 0.6 0.0
MUP201AJ	Private Instruction: Organ	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AJ.	L+L 1.0 0.6 0.0
MUP201AM	Private Instruction: Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AM.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP201AP	Private Instruction: Trumpet	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AP.	L+L 1.0 0.6 0.0
MUP201AS	Private Instruction: French Horn	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AS.	L+L 1.0 0.6 0.0
MUP201AV	Private Instruction: Trombone	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AV.	L+L 1.0 0.6 0.0
MUP201AY	Private Instruction: Euphonium	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AY.	L+L 1.0 0.6 0.0
MUP201BB	Private Instruction: Tuba	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BB.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP201BE	Private Instruction: Flute	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BE.	L+L 1.0 0.6 0.0
MUP201BH	Private Instruction: Oboe	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BH.	L+L 1.0 0.6 0.0
MUP201BK	Private Instruction: Clarinet	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BK.	L+L 1.0 0.6 0.0
MUP201BN	Private Instruction: Bassoon	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BN.	L+L 1.0 0.6 0.0
MUP201BQ	Private Instruction: Saxophone	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BQ.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP201BT	Private Instruction: Violin	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BT.	L+L 1.0 0.6 0.0
MUP201BW	Private Instruction: Viola	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BW.	L+L 1.0 0.6 0.0
MUP201BZ	Private Instruction: Violoncello	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BZ.	L+L 1.0 0.6 0.0
MUP201CC	Private Instruction: Contrabass	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151CC.	L+L 1.0 0.6 0.0
MUP201CF	Private Instruction: Popular Music Bass Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CF.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP201CI	Private Instruction: Percussion	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151CI.	L+L 1.0 0.6 0.0
MUP201CJ	Private Instruction: Harp	Private Instruction emphasizing developmental improvement of musicianship, and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, percussion, and harp.	Prerequisites: A grade of C or better in MUP151CJ.	L+L 1.0 0.6 0.0
MUP201CK	Private Instruction: Popular Music Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CK.	L+L 1.0 0.6 0.0
MUP201CL	Private Instruction: Popular Music Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CL.	L+L 1.0 0.6 0.0
MUP201CM	Private Instruction: Popular Music Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CM.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP201CN	Private Instruction: Popular Music Drum	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CN.	L+L 1.0 0.6 0.0
MUP201CO	Private Instruction: Popular Music Production	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CO.	L+L 1.0 0.6 0.0
MUP201CP	Private Instruction: Popular Electronic Music Performance	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CP.	L+L 1.0 0.6 0.0
MUP201CQ	Private Instruction: Popular Music Turntablism	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CQ.	L+L 1.0 0.6 0.0
MUP202AA	Private Instruction: Voice	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AA.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP202AD	Private Instruction: Piano	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AD.	L+L 2.0 1.2 0.0
MUP202AG	Private Instruction: Harpsichord	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AG.	L+L 2.0 1.2 0.0
MUP202AJ	Private Instruction: Organ	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AJ.	L+L 2.0 1.2 0.0
MUP202AM	Private Instruction: Guitar	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AM.	L+L 2.0 1.2 0.0
MUP202AP	Private Instruction: Trumpet	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AP.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP202AS	Private Instruction: French Horn	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AS.	L+L 2.0 1.2 0.0
MUP202AV	Private Instruction: Trombone	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AV.	L+L 2.0 1.2 0.0
MUP202AY	Private Instruction: Euphonium	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AY.	L+L 2.0 1.2 0.0
MUP202BB	Private Instruction: Tuba	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BB.	L+L 2.0 1.2 0.0
MUP202BE	Private Instruction: Flute	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BE.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP202BH	Private Instruction: Oboe	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BH.	L+L 2.0 1.2 0.0
MUP202BK	Private Instruction: Clarinet	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BK.	L+L 2.0 1.2 0.0
MUP202BN	Private Instruction: Bassoon	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BN.	L+L 2.0 1.2 0.0
MUP202BQ	Private Instruction: Saxophone	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BQ.	L+L 2.0 1.2 0.0
MUP202BT	Private Instruction: Violin	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BT.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP202BW	Private Instruction: Viola	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BW.	L+L 2.0 1.2 0.0
MUP202BZ	Private Instruction: Violoncello	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BZ.	L+L 2.0 1.2 0.0
MUP202CC	Private Instruction: Contrabass	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152CC.	L+L 2.0 1.2 0.0
MUP202CF	Private Instruction: Popular Music Bass Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CF.	L+L 2.0 1.2 0.0
MUP202CI	Private Instruction: Percussion	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152CI.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP202CJ	Private Instruction: Harp	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152CJ.	L+L 2.0 1.2 0.0
MUP202CK	Private Instruction: Popular Music Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CK.	L+L 2.0 1.2 0.0
MUP202CL	Private Instruction: Popular Music Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CL.	L+L 2.0 1.2 0.0
MUP202CM	Private Instruction: Popular Music Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CM.	L+L 2.0 1.2 0.0
MUP202CN	Private Instruction: Popular Music Drum	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CN.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP202CO	Private Instruction: Popular Music Production	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CO.	L+L 2.0 1.2 0.0
MUP202CP	Private Instruction: Popular Electronic Music Performance	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CP.	L+L 2.0 1.2 0.0
MUP202CQ	Private Instruction: Popular Music Turntablism	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CQ.	L+L 2.0 1.2 0.0
MUP209	Elements of Conducting	Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles	Prerequisites: None.	LEC 2.0 2.0 2.0
MUP217	Music Theatre: Broadway Solos	Study and in-class performance of scenes and solos from Broadway musical literature.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP218	Audition Techniques: Music Theater	Practice in the techniques of auditioning for musical theater. Identification and illustration techniques of the vocal and acting music theater audition.	Prerequisites: None.	L+L 1.0 3.0 3.0
MUP227	Class Guitar III	Additional fingerboard positions. Ensemble techniques and performance.	Prerequisites: A grade of C or better in MUP226 or permission of Instructor.	L+L 1.0 3.0 3.0
MUP228	Class Guitar IV	Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques.	Prerequisites: A grade of C or better in MUP227 or permission of Instructor.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP231	Class Piano III	Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants.	Prerequisites: A grade of C or better in MUP132 or permission of Instructor.	L+L 1.0 3.0 3.0
MUP232	Class Piano IV	Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature.	Prerequisites: A grade of C or better in MUP231 or permission of Instructor.	L+L 1.0 3.0 3.0
MUP233	Class Voice III	Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications.	Prerequisites: A grade of C or better in MUP134.	L+L 1.0 3.0 3.0
MUP234	Class Voice IV	Emphasis on the preparation of solo vocal literature for the purpose of evaluation and the integration of the music with the drama of the music.	Prerequisites: A grade of C or better in MUP233 or permission of Instructor.	L+L 1.0 3.0 3.0
MUP240	Piano Literature	A chronological study and analysis of the repertoire for piano and other keyboard instruments from the late sixteenth century to the twenty-first century. Emphasis on the evolution of the piano, musical periods, and characteristics of the musical forms found in keyboard repertoire. Includes historical and biographical context related to major piano composers.	Prerequisites: A grade of C or better in MUP140 or permission of Instructor.	LEC 2.0 2.0 2.0
MUP241	Piano Artistry	Overview of topics and issues including practice skills, rhythm, technique, musicianship such as dynamics, ornamentation, pedaling, touch, phrasing, articulation, voicing, balance, and the manipulation of time, necessary for pianists and piano teachers in working for expression, finesse and artistry.	Prerequisites: A grade of C or better in MUP240 or permission of Instructor.	LEC 2.0 2.0 2.0
MUP250AA	Survey of Diction for Singers (English)	Introduction to the use of phonetics in the study of English song literature.	Prerequisites: None.	L+L 1.0 2.0 2.0
MUP250AB	Survey of Diction for Singers (Italian/Latin)	Introduction to the use of phonetics in the study of Italian/Latin song literature	Prerequisites: None.	L+L 1.0 2.0 2.0
MUP250AC	Survey of Diction for Singers (German)	Introduction to the use of phonetics in the study of German song literature.	Prerequisites: None.	L+L 1.0 2.0 2.0
MUP250AD	Survey of Diction for Singers (French)	Introduction to the use of phonetics in the study of French song literature.	Prerequisites: None.	L+L 1.0 2.0 2.0
MUP251AA	Private Instruction: Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AA.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP251AD	Private Instruction: Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AD.	L+L 1.0 0.6 0.0
MUP251AG	Private Instruction: Harpsichord	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AG.	L+L 1.0 0.6 0.0
MUP251AJ	Private Instruction: Organ	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AJ.	L+L 1.0 0.6 0.0
MUP251AM	Private Instruction: Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AM.	L+L 1.0 0.6 0.0
MUP251AP	Private Instruction: Trumpet	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AP.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP251AS	Private Instruction: French Horn	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AS.	L+L 1.0 0.6 0.0
MUP251AV	Private Instruction: Trombone	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AV.	L+L 1.0 0.6 0.0
MUP251AY	Private Instruction: Euphonium	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AY.	L+L 1.0 0.6 0.0
MUP251BB	Private Instruction: Tuba	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BB.	L+L 1.0 0.6 0.0
MUP251BE	Private Instruction: Flute	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BE.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP251BH	Private Instruction: Oboe	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BH.	L+L 1.0 0.6 0.0
MUP251BK	Private Instruction: Clarinet	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BK.	L+L 1.0 0.6 0.0
MUP251BN	Private Instruction: Bassoon	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BN.	L+L 1.0 0.6 0.0
MUP251BQ	Private Instruction: Saxophone	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BQ.	L+L 1.0 0.6 0.0
MUP251BT	Private Instruction: Violin	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BT.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP251BW	Private Instruction: Viola	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BW.	L+L 1.0 0.6 0.0
MUP251BZ	Private Instruction: Violoncello	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BZ.	L+L 1.0 0.6 0.0
MUP251CC	Private Instruction: Contrabass	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201CC.	L+L 1.0 0.6 0.0
MUP251CF	Private Instruction: Popular Music Bass Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CF.	L+L 1.0 0.6 0.0
MUP251CI	Private Instruction: Percussion	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201CI.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP251CJ	Private Instruction: Harp	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music najors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202CJ.	L+L 1.0 0.6 0.0
MUP251CK	Private Instruction: Popular Music Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CK.	L+L 1.0 0.6 0.0
MUP251CL	Private Instruction: Popular Music Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CL.	L+L 1.0 0.6 0.0
MUP251CM	Private Instruction: Popular Music Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CM.	L+L 1.0 0.6 0.0
MUP251CN	Private Instruction: Popular Music Drum	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CN.	L+L 1.0 0.6 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP251CO	Private Instruction: Popular Music Production	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CO.	L+L 1.0 0.6 0.0
MUP251CP	Private Instruction: Popular Electronic Music Performance	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CP.	L+L 1.0 0.6 0.0
MUP251CQ	Private Instruction: Popular Music Turntablism	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CQ.	L+L 1.0 0.6 0.0
MUP252AA	Private Instruction: Voice	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AA.	L+L 2.0 1.2 0.0
MUP252AD	Private Instruction: Piano	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AD.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP252AG	Private Instruction: Harpsichord	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AG.	L+L 2.0 1.2 0.0
MUP252AJ	Private Instruction: Organ	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AJ.	L+L 2.0 1.2 0.0
MUP252AM	Private Instruction: Guitar	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AM.	L+L 2.0 1.2 0.0
MUP252AP	Private Instruction: Trumpet	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AP.	L+L 2.0 1.2 0.0
MUP252AS	Private Instruction: French Horn	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AS.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP252AV	Private Instruction: Trombone	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AV.	L+L 2.0 1.2 0.0
MUP252AY	Private Instruction: Euphonium	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AY.	L+L 2.0 1.2 0.0
MUP252BB	Private Instruction: Tuba	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BB.	L+L 2.0 1.2 0.0
MUP252BE	Private Instruction: Flute	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BE.	L+L 2.0 1.2 0.0
MUP252BH	Private Instruction: Oboe	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BH.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP252BK	Private Instruction: Clarinet	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BK.	L+L 2.0 1.2 0.0
MUP252BN	Private Instruction: Bassoon	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BN.	L+L 2.0 1.2 0.0
MUP252BQ	Private Instruction: Saxophone	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BQ.	L+L 2.0 1.2 0.0
MUP252BT	Private Instruction: Violin	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BT.	L+L 2.0 1.2 0.0
MUP252BW	Private Instruction: Viola	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BW.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP252BZ	Private Instruction: Violoncello	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BZ.	L+L 2.0 1.2 0.0
MUP252CC	Private Instruction: Contrabass	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202CC.	L+L 2.0 1.2 0.0
MUP252CF	Private Instruction: Popular Music Bass Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CF.	L+L 2.0 1.2 0.0
MUP252CI	Private Instruction: Percussion	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202CI.	L+L 2.0 1.2 0.0
MUP252CJ	Private Instruction: Harp	Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202CJ.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP252CK	Private Instruction: Popular Music Voice	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CK.	L+L 2.0 1.2 0.0
MUP252CL	Private Instruction: Popular Music Piano	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CL.	L+L 2.0 1.2 0.0
MUP252CM	Private Instruction: Popular Music Guitar	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CM.	L+L 2.0 1.2 0.0
MUP252CN	Private Instruction: Popular Music Drum	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CN.	L+L 2.0 1.2 0.0
MUP252CO	Private Instruction: Popular Music Production	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CO.	L+L 2.0 1.2 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP252CP	Private Instruction: Popular Electronic Music Performance	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CP.	L+L 2.0 1.2 0.0
MUP252CQ	Private Instruction: Popular Music Turntablism	Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CQ.	L+L 2.0 1.2 0.0
MUP270	Musical Theatre Workshop	Workshop in the study and performance of Musical Theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: None.	L+L 2.0 5.0 5.0
MUP270AA	Musical Theatre Workshop	Workshop in the study and performance of musical theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: None.	LAB 1.0 3.0 3.0
MUP273	Musical Theatre Production	Principles and techniques for musical theatre production performance. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: By audition.	LAB 1.0 5.0 5.0
MUP282AA	Volunteerism for Music: A Service Learning Experience	Service-learning field experience within private/public agencies, citizen volunteer groups, and on-campus sites. 50 hours of designated work per credit. Standard grading available according to procedures outlined in catalog.	Prerequisites: None.	LAB 1.0 1.0 0.0
MUP282AB	Volunteerism for Music: A Service Learning Experience	Service-learning field experience within private/public agencies, citizen volunteer groups, and on-campus sites. 50 hours of designated work per credit. Standard grading available according to procedures outlined in catalog.	Prerequisites: None.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP282AC	Volunteerism for Music: A Service Learning Experience	Service-learning field experience within private/public agencies, citizen volunteer groups, and on-campus sites. 50 hours of designated work per credit. Standard grading available according to procedures outlined in catalog.	Prerequisites: None.	LAB 3.0 3.0 0.0
MUP288	Basics of Piano Accompanying Vocal	Introduction to piano accompanying with emphasis on basic skills needed to accompany solo voice, choral singing, and congregational singing.	Prerequisites: A grade of C or better in MUP151AD or MUP231 or permission of Instructor.	LEC 2.0 2.0 2.0
MUP289	Basics of Piano Accompanying Instrument	Introduction to piano accompanying with emphasis on basic skills needed to accompany solo instruments, chamber music and musicals.	Prerequisites: A grade of C or better in MUP151AD or MUP231 or permission of Instructor.	LEC 2.0 2.0 2.0
MUP296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
MUP296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
MUP296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
MUP298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
MUP298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MUP298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
MWR101	Introduction to Millwrighting	Fundamental millwright trade skills, employee/employer roles and responsibilities, and safe work practices needed for entry-level performance in the construction industry. Emphasis on attaining standard industry safety credentials, practical experience using terminology and basic measuring techniques. Response to environmental and energy efficient building concepts through green construction methods. Training for job site hazard recognition, accident prevention, and safe tool and equipment operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR102	Millwrighting Safety and Health Certifications	Construction hazard awareness and individual responsibility for workplace safety and health, including assessing danger, employing prevention measures, and responding to emergencies. Safe and proper use of hand and power tools, first aid, and cardiopulmonary resuscitation (CPR), and Occupational Safety and Health Administration (OSHA) regulations.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR103	Machinery Installation and Erection I	Fundamental machinery installation skills including industry standard practices such as general and assembly drawing interpretation, site inspection criteria, communication skills, pre-installation inspection, storage, and staging. Includes tools and techniques for moving, lifting, elevating machines, and equipment placement. Emphasis on measuring and layout accuracy. Jobsite safety and following instructions will be stressed.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR104	Machinery Installation and Erection II	Machinery installation skills used in manufacturing applications. Disassembling machinery for inspection and maintenance. Review equipment manufacturers' operating and maintenance guides and assembly instructions. Identification of component locations; measurements and tolerances; installation requirements; and alignment of parts using machine drawings. Review of safety, precision measuring tools, rigging tasks, and following instructions.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MWR105	Millwrighting General Skills	Overview of hand and power tools, and stationary machinery general skills used in millwright trade. In-depth review of standard tools including identification, safe operating, inspection, and manufacturer guidelines. Routine cutting, shaping and smoothing of materials with emphasis on measuring and layout accuracy in precision bench skills and field operations. Review of project drawings to promote development of job planning, preparation, and math skills. Shop safety during bench layout, drill press, band saw, and grinder operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR106	Math for Millwrighting, Hand, Power and Precision Tools	Fundamental operations with whole numbers, common fractions, decimals, percentages, and ratio and proportion. Measurement tools. Fundamentals of Algebra, linear equations, includes applied math problems. Use, maintenance and safety procedures for common hand and power tools used in the construction industry.	Prerequisites: A grade of C or better in (MWR103 and registered apprentice status) or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR107	Drives, Pulleys and Belts	Identification, application, and installation skills for typical power drive systems. Demonstrations and practice exercises on the belt, chain and gear drives. Review of safety, rigging tasks, machinery fastening methods, and mechanical shop drawings.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR108	Reading Mechanical Prints	Types of blueprints, sketching, and basic print reading. Symbols for materials, construction details, standards, and specifications. Interpretation of two-dimensional views to convey shape, characteristics, construction, and scope of project. Standard drawing methods and how to read visual and verbal cues. Recognizing shop drawings, locating machinery, calculating dimensions, equipment layout, and views.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR109	Turbine Familiarization	Function and performance of a General Electric Frame 5 Gas Turbine. Component descriptions and machine drawings, assembly/disassembly tasks and key bolting procedures.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR110	Cutting and Burning	Overview of cutting and burning skills using oxygen/acetylene torch equipment. In-depth review of torch cutting principles will cover parts identification, gas characteristics, torch accessories and tips, safe operating and inspection criteria, and manufacturers' guidelines for use and care.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR111	Tools and Equipment Applications	Discuss the safe and appropriate use of fall protection and emergency response procedures. Tool applications to provide opportunities for tool skill mastery and equipment operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR115	Millwright General Skills B - Millwright Apprenticeship	Hand and power tools, shop equipment, and precision instruments to complete various machining operations. Provides millwright skills and experience using stationary machining equipment.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MWR121	Structural Welding A - Millwright Apprenticeship	Careful examination of applicable codes. Includes terminology, shielded metal arc welding (SMAW) processes, equipment and safety requirements, electrode identification and applications, welding positions and deposits. Practical experience to include symbol identification, print interpretation, code citation, safe equipment setup and operation, and recognition/remediation of welding flaws. Course will focus on the written examination and production of practical test plates required for American Welding Society (AWS) D1.1 certification.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR131	Structural Welding B - Millwright Apprenticeship	Provides practical experience for structural welding skills used in commercial and industrial construction. Review of welding terminology, welding processes, welding equipment, and safety requirements. Discusses electrode characteristics and metal inert gas/tungsten inert gas (MIG/TIG) welding applications. Course focuses on the written examination and production of practical test plates required for American Welding Society (AWS) D1.1 certification.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR201	Shaft Alignment I	Terms, characteristics, and operating principles for the transit and laser levels. Procedures for establishing machinery and equipment elevation and alignment using precision optical instruments and installation procedures. Topics include transit and jig transit characteristics, instrument increments of measurement and accuracy, site inspection, setting up levels, determining benchmarks, and taking and recording elevation readings.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR202	Conveyor Systems	Proper layout and component alignment of machinery, equipment, and conveyor systems. Identification of proper alignment procedures. Belt splicing. Analysis of effects of improper installation on maintenance and lifespan of equipment and conveyor systems.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR203	Speciality Machinery I	Fundamentals and theory of hydraulics and pneumatics. Types, components, construction, and assembly of pumps and compressors. Inner workings of industrial pumps and compressors. Auxiliary equipment and accessories.	Prerequisites: (Registered apprentice status and a grade of C or better in MWR202) or permission of the Apprenticeship Coordinator.	LEC 5.0 5.0 5.0
MWR204	Speciality Machinery II	Design, terminology, installation and operation of centrifugal and axial draft fans, monorail systems, steam turbines and generators. Layout and fabrication of monorail hangers, turns, and dips	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MWR205	Shaft Alignment II	Terms, characteristics, and methods for aligning machine shafts. Comprehensive review of alignment principles including conventional dial indicator and computer-aided. Setting up indicators, taking and recording indicator readings, and determining alignment correction.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR206	Rigging Hardware and Procedures	Lifting theory and practical rigging methods and procedures. Rigging attachment procedures, lifting equipment, limits of operation, and communication practices. United Brotherhood of Carpenters (UBC) rigging qualification cards.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR207	Advanced Precision Alignment Instruments	Computer aided transit and laser levels. Procedures for using Computer-aided Design (CAD), Global Positioning System (GPS) and Satellite instruments and computer programs using metric circle, GPS coordinates, degrees, minutes, and seconds on veneer scales. Utilization of computer programs for layout.	Prerequisites: A grade of C or better in (MWR201 and registered apprentice status) or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR208	Compressor Theory and Maintenance	Fundamentals and theory of hydraulics and pneumatics. Types, components, construction, and assembly of pumps and compressors. Inner workings of industrial pumps and compressors. Design and installment of auxiliary equipment and accessories.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR209	Introduction to Wind Turbines	Design, function and installation of wind turbine equipment. Methods, sequences and procedures for housings, bolting, power, drive assembly and other components. Jobsite safety, print interpretation, material identification, and use of system devices and maintenance criteria. Completion of hands-on component installation projects.	Prerequisites: A grade of C or better in (MWR109 and registered apprentice status) or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR210	Solar Installer	Characteristics, design, and installation of concentrated photovoltaic (CPV) components. Methods, sequences, and procedures for layout, assembly, mounting, and elevating/positioning for solar array construction. Includes industry overview and outlook for renewable energy production.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR218	Compressor Theory and Maintenance - Millwright Apprenticeship	Operating theory and components of types of positive displacement compressors. Compressor configuration, operating parameters, safety, and maintenance procedures are examined.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
MWR219	Turbine Maintenance - Millwright Apprenticeship	Explores the machines and auxiliary equipment used in the power production industry. Highlights the function and performance of a typical gas turbine, and includes hydraulic bolting procedures.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
MWR298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
MWR298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
MWR298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
NAV101	Elementary Navajo I	Basic grammar, pronunciation, and vocabulary of the Navajo language. Practice of listening, speaking, reading, and writing skills. Includes the study of the Navajo culture with participation in an off-campus Navajo cultural event	Prerequisites: None.	LEC 4.0 4.0 4.0
NAV102	Elementary Navajo II	Continued study of grammar, pronunciation, and vocabulary of the Navajo language. Emphasis on listening, speaking, reading, and writing skills.	Prerequisites: A grade of C or better in NAV101 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
NAV115	Beginning Navajo Conversation I	Beginning conversational Navajo with emphasis on basic listening and speaking skills, including basic pronunciation, vocabulary, sentence structure, and cultural awareness	Prerequisites: None.	LEC 3.0 3.0 3.0
NAV201	Intermediate Navajo I	Continued study of the Navajo language. Continued practice and development of listening, speaking, reading, and writing skills. Emphasis on fluency and accuracy of the Navajo language. Includes continued study of Navajo people and cultures.	Prerequisites: A grade of C or better in NAV102 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NAV202	Intermediate Navajo II	Continued study of the Navajo language. Continued practice and development of listening, speaking, reading, and writing skills. Emphasis on fluency and accuracy of the Navajo language. Includes continued study of Navajo people and cultures.	Prerequisites: A grade of C or better in NAV201 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
NCE101	Introduction and Overview of Cancer Disease	Introduction and overview of the disease and treatment of cancer including cancer origin, development, pathology, staging, hematopoiesis, epidemiology, diagnosis modalities, treatment options, cancer research and differentiation of solid tumors versus nonsolid tumors. Effective analysis, synthesis, and evaluation of topics through written discourse.	Prerequisites: Health care professional or permission of Department or Division.	LEC 2.0 2.0 2.0
NCE102	Exploring the World of Nursing for the High School Student (Summer Camp)	Overview of the philosophy, core values, policies, competencies and curricular components of the Maricopa Community College District Nursing Program (MCCDNP). Introduce the use of the nursing process, utilization of critical thinking skills, and sound decision-making principles in the clinical setting. Examine the communication process, time management, stress reduction, and the transition in role expectations between High school and College Students. Explore the roles of Licensed Practical Nurse (LPN), Registered Nurse (RN) and advance practice nursing. Clinical experience (job shadowing) will be held in participating hospitals.	Prerequisites: None. Corequisites: HCC/RES109. Xref: HCC109	LAB 1.5 4.5 4.5
NCE103	Behavioral Health Technician	Students learn to care for patients with a wide variety of mental illnesses to include anxiety, mood, personality and psychotic disorders, as well as post-traumatic stress syndrome and behavioral issues. Behavioral health technicians follow physician/nurse instructions and hospital procedures. Identification of modalities to monitor patient's mental and emotional status, physical symptoms related to mental disorders, and recognition of medication side effects. A variety of therapies will be covered to include rehabilitation and treatment programs, as well as recreational activities used as treatment options.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: NUR158, or NCE150, or permission of Division or Department Chair.	LEC 4.0 4.0 4.0
NCE105	Job Preparation for the Health Care Professional	Designing and creating resumes/curriculum vitae, job interview skills, electronic portfolio, and job searching in the health care market. Appearance, dress, and questioning skills emphasized. Role-playing exercises of correct interviewing techniques.	Prerequisites: None.	LEC 0.5 0.5 0.5
NCE106	Decision Making in Nursing	Principles and application of a clinical judgment decision-making model in nursing. Description and application of critical thinking and clinical reasoning skills and their relationship to the clinical judgment decision-making model.	Prerequisites: None. Corequisites: NUR152 or NUR172 or NUR252 or NUR283.	LEC 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE110	Basic First Aid	Basic first aid principles and interventions for the lay person. Topics include lacerations and bleeding control, seizures, chest pain, heat related problems, orthopedic injuries, and treatment of bites, stings, and burns	Prerequisites: None.	LEC 0.5 0.5 0.5
NCE112	Wilderness First Aid	Knowledge and skills to care for an injured or suddenly ill person in remote locations. Treatment of wounds, bone, joint and soft-tissue injuries. Treatment and immobilization for head and neck injuries. Signs, symptoms and treatment for a seizure and animal bites and stings. Assessment and treatment of patients with chest pain, diabetes and asthma. Treatment for specific environmental emergencies	Prerequisites: None.	LEC 1.0 1.0 1.0
NCE115	Nursing Healthcare Transition and Safe Passage	Overview of American nursing practice, including historical and current perspectives. Key components of transitioning to Registered Nurse role in the United States. Contrasting Registered Nurse roles in US and in other countries. Career development and successful transitioning to role of nurse in the United States.	Prerequisites: Permission of Instructor.	LEC 2.0 2.0 2.0
NCE118	Ventilator Management for Nurses	Nursing care and management of the mechanically ventilated patient. Adjuncts to airway management including types and indications for use. Initiation, management and weaning of mechanical ventilation.	Prerequisites: Registered nurse or licensed practical nurse or respiratory therapist.	LEC 0.5 0.5 0.5
NCE131	Recognizing Skin Rashes in the School Aged Child	Recognition of common childhood rashes, identify allergic rash manifestations, communicable rashes and infectious rashes.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LEC 0.5 0.5 0.5
NCE150	Advanced Placement: Nurse Assisting	Prepares the advanced placement nursing assistant student for the Certified Nursing Assistant (CNA) certification or Licensed Nursing Assistant (LNA) examination. The student will care for clients across the wellness/illness continuum within the scope of practice of the CNA/LNA. Includes basic problem solving processes specific to meeting the basic and holistic needs of clients, therapeutic communication skills, as well as interventions to ensure the needs and safety of the client. Provides opportunity for the student to show proficiency in the performance of basic nursing assistant skills and procedures through laboratory activities and participation in the care of clients. Licensing is the exclusive responsibility of the Arizona State Board of Nursing.	Prerequisites: One year full-time employment OR two years part-time employment of direct patient care within the past five years OR students who have successfully completed course work that included direct patient care experiences in allied health, medicine or nursing in the past five years, OR permission of the Division Chairperson.	L+L 2.0 4.4 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE153	Restorative Nursing Assistant	Additional skills for nurse assisting in restorative care settings, such as reinforcing client performance of Activities of Daily Life and assistive efforts for optimizing client independence.	Prerequisites: Permission of Department or Program Director, or a grade of C or better in NCE150 or NUR158 or current CNA certificate. CNA certificate must remain in active status throughout the term of the course.	L+L 1.75 1.75 1.75
NCE161	Foundation in Patient Advocacy	Foundational knowledge and skills needed for the emerging profession of patient Advocacy. Role of the patient advocate, health care delivery methods, best practices, consumer and provider perspectives, insurance benefits and costs, and legal implications.	Prerequisites: None.	LEC 2.0 2.0 2.0
NCE165	Legal Aspects of Nursing	Principles of legal aspects in nursing, rules of liability, negligent conduct and principles of malpractice. Review of the scope of nursing practices, and other legal matters.	Prerequisites: None.	LEC 1.0 1.0 1.0
NCE168	End of Life Care Training	Nursing care at the end of life, pain management, symptom management, ethical issues, communication, cultural considerations, loss, grief and bereavement. Achievement of quality palliative care and preparation for and care at the time of death	Prerequisites: None.	LEC 1.0 1.0 1.0
NCE170	Pharmacology for Nurses	Review and update of selected pharmacological classifications. Includes dosages, administration methods and reactions.	Prerequisites: (Current license as Practical Nurse or Registered Nurse) or registered as student nurse or permission of Instructor.	LEC 3.0 3.0 3.0
NCE173	Venipuncture	Development of clinical skills for venipuncture. Emphasis on review of anatomy and physiology of vasculature of the arm, medical asepsis, and procedure.	Prerequisites: Permission of Instructor.	LEC 1.0 0.5 0.5 LAB 0.0 24.0 1.5
NCE175	Licensed Practical Nurse Update	Role and responsibilities of the Licensed Practical Nurse. Application of nursing care for medical-surgical patients, use of the nursing process and administration of medications. Includes expanded role of the Licensed Practical Nurse, principles of safe nursing practice, legal/ethical issues, human growth and development, therapeutic communication and physical assessment skills. For Licensed Practical Nurses returning to active nursing in the acute care setting.	Prerequisites: Current license as a Practical Nurse.	LEC 10.0 6.0 6.0 LAB 0.0 12.0 12.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE200	Contemporary Leadership Concepts for Health Care	Introduction to leadership and management concepts for work-readiness in health care fields. Professional role development of the beginning registered nurse. Includes organizational design and governance as well as leadership and management theories and qualities for the health care employee.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LEC 1.0 1.0 1.0
NCE201	Physical Assessment	Basic health assessment by collecting health histories and performing physical examinations. Relationship of sciences and humanities to holistic aspects of health. Assessment for normal, variations of normal, and deviations from normal findings.	Prerequisites: Current Practical Nurse (PN) or Registered Nurse (RN) license or permission of Instructor.	LEC 3.0 3.0 3.0
NCE202	Overview of Physical Assessment of the Adult Client	Overview of interviewing techniques and approaches to documenting a comprehensive health history and physical examination assessment techniques. Emphasis on the nursing process and health assessment skills. Performance of beginning level physical assessment.	Prerequisites: (Current Nursing or Allied Health student, or current Arizona Registered Nurse (RN) license, or Licensed Practical Nurse (LPN) license, or recent graduate of an accredited nursing program) and permission of Instructor.	LEC 1.0 1.0 1.0
NCE203	Interpretation of Laboratory Diagnostic Examinations	Utilization of laboratory diagnostic examination results for evaluation of patient conditions. Normal results for selected body fluids. Abnormal results related to pathophysiological conditions of adults. Incorporation of results of examinations to assess, modify, and evaluate therapy for patients with specific conditions.	Prerequisites: Registered Nurse or Licensed Practical Nurse Nursing students or permission of Instructor.	LEC 0.5 0.5 0.5
NCE204	Hemodynamics	Events of the cardiac cycle related to normal hemodynamic waveforms and pressures. Purpose, procedure and potential complications related to hemodynamic invasive lines. Trouble shooting and preventative procedures for hemodynamic invasive lines. Normal and abnormal pressure forms related to various forms of pathophysiology. Treatments and interventions for specific cardiac diseases. Impact of paced rhythms, and intraaortic balloon pumps on normal hemodynamic waveforms. Safe removal procedure for hemodynamic devices.	Prerequisites: Registered nurse (RN) respiratory therapist or cardiovascular technician with knowledge of dysrhythmia recognition.	LEC 1.0 1.0 1.0
NCE205	Emergency Room Nursing	Roles of emergency health team. Medical/legal issues specific to emergency room care. Triage classifications for specific emergency room/department situations, nursing care for selected conditions, trauma, and disease processes. Organ donation issues, discharge procedures and client education.	Prerequisites: Registered Nurse (RN) or Licensed Practical Nurse (LPN) or currently enrolled in a nursing program or permission of Instructor.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE207	Recognition and Nursing Management of the Deteriorating Patient	This course will provide a scenario/simulation-based problem solving approach to recognize and manage the patient who has the potential for a deteriorating status in a wide variety of concept-oriented conditions. The ultimate goal is to prevent or reverse the clinical deterioration and achieve optimum patient outcomes.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.	LEC 0.5 0.5 0.5
NCE208	Neonatal Pathophysiology	Pathophysiology and physiologic adaptations of the neonate to include assessment and management of respiratory, cardiac, hematological, immunological, neurological and fluid and electrolyte disorders. Acid-base regulation and hemodynamic dysfunction.	Prerequisites: Registered therapist registered nurse (RN) or pharmacist with neonatal experience.	LEC 3.0 3.0 3.0
NCE209	SCHOOL HEALTH ASSISTING	The role of the school health assistant. Legal issues related to the school health setting. Performance of vision, hearing, and scoliosis screenings. Documentation, vital signs, triage guidelines in the school health setting. Common diseases that affect school-age children. Child abuse issues and protocol. Common medications and their side effects. Documentation and procedures related to drug administration	Prerequisites: None.	LEC 3.0 3.0 3.0
NCE210	School Nurse Emergency Assessment Skills	Update of emergency assessment in the school setting. Includes emergency assessment of seizures, asthma, head and neck injuries, heat-related problems, bites, stings, and burns, and orthopedic injuries.	Prerequisites: School nurse, school health aide or other health professional or permission of Instructor.	LEC 1.0 1.0 1.0
NCE211	Advanced Mental Health Assessment Skills for Healthcare	Comprehensive study of mental health first aid, trauma-informed care, and motivational interviewing. Preparation for certifications in motivational interviewing and mental health first aid.	Prerequisites: Healthcare professional license or certification, or permission of Instructor.	LEC 1.0 1.0 1.0
NCE212	Patient Education	Current concepts relevant to planning and implementing a teaching plan, and the role the nurse has in patient education. Patient education instructional methods, educational theories, nursing process and case management in patient education. Focus on patient advocacy through education.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LEC 0.5 0.5 0.5
NCE213ND	Long-Term Care Nursing Update	Medicare and insurance documentation procedures for the long-term care patient. Medical-legal issues that pertain to the long-term care patient. Specific nursing procedures performed for the long-term care patient.	Prerequisites: Registered nurse (RN) licensed practical nurse (LPN) or health worker currently employed in a long-term care setting.	LEC 0.5 0.5 0.5
NCE214CA	Basic Electrocardiogram Interpretation	Focuses on recognition of common cardiac rhythms. Includes major and minor reportable occurrences which affect a patient's status and priority interventions.	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE214ME	Advanced Metrology and IV Drug Therapy	Advanced course in intravenous and pediatric calculations. Preparation for NCLEX-RN exam and Registered Nurse review of complex medication calculations. Emphasis on safe clinical practice using the nursing process to analyze and calculate pediatric fractional doses and critical care medications.	Prerequisites: Registered nurse or current student in Associate Degree Nursing program.	LEC 1.0 1.0 1.0
NCE214MF	Advanced IV Drug Therapy	Advanced course in drug calculation and administration using the ratio/proportion and dimensional analysis methods. Focus on intravenous medications and titrations for critical care, pediatric and high risk obstetric medications.	Prerequisites: Current student in Associate Degree Nursing program or permission of Instructor.	LEC 0.5 0.5 0.5
NCE214MI	Math and Medications for Intermediate Nursing Students	Focus on basic mathematical concepts to calculate metric-apothecary conversion, dosage problems, intravenous flow rates using the ratio/proportion and dimensional analysis methods. These calculations will focus application to acute care, long-term care, and pediatric specialty areas.	Prerequisites: Current student in Nursing program or permission of Department or Division.	LEC 0.5 0.5 0.5
NCE214MM	Math/Methods of Drug Calculation	Focuses on basic mathematical concepts using decimals and fractions to calculate fractional and metric-apothecary conversion dosage problems and intravenous flow rates. Emphasis on the dimensional analysis problem solving method	Prerequisites: None.	LEC 1.0 1.0 1.0
NCE214MO	Math/Methods for Beginning Nursing Students	Focus on basic mathematical concepts to calculate metric-apothecary conversion, dosage problems and intravenous flow rates. Includes calculation problems with oral, parenteral, and reconstitution medications. Emphasis on the ratio/proportion and dimensional analysis problem solving methods.	Prerequisites: Current student in Associate Degree Nursing program or permission of Instructor.	LEC 0.5 0.5 0.5
NCE214ND	Nursing Developmental Skills for Health Providers	Updating specific nursing areas in order to enhance success in nursing courses and/or employment.	Prerequisites: Previous coursework or experience in nursing related skills or permission of Instructor.	LEC 1.0 1.0 1.0
NCE214OP	Orientation to Nursing Program	Overview of the philosophy, mission, vision, Nurse of the Future Competencies, student learning outcomes, and the constructivist framework of the MaricopaNursing program. Student expected to be prepared with basic concepts of therapeutic communication, the nursing process, pharmacology, introductory concepts of intravenous therapy and knowledge of fundamental concepts. Primary content areas: nursing process, with emphasis on the use of the nursing process to develop a plan of care; utilization of critical thinking skills; problem-solving strategies, the communication process; psychiatric nursing competencies and role transition between LPN and RN scope of practice.	Prerequisites: Designee/advanced placement into the Nursing Program or permission of the Nursing Director.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE214PO	Tutored NCLEX Review For Nursing Students	Brief review of nursing care by systems using an NCLEX review book. Focus on nursing process, prioritizing, and critical thinking related to application of nursing care in case study situations. Also practice multiple-choice questions.	Prerequisites: Currently enrolled nursing student, or permission of Instructor.	LEC 2.0 2.0 2.0
NCE215AA	Nursing Update: Pain Management	Comprehensive pain assessment and pain management. Pharmacological agents, treatment modalities, and delivery systems. Regulatory agency policies, standards of care, and documentation guidelines.	Prerequisites: Registered Nurse or Licensed Practical Nurse or currently enrolled in a nursing program or permission of Instructor.	LEC 0.5 0.5 0.5
NCE215AB	Nursing Update: Wound and Skin Care	Wound and skin assessment and documentation guidelines. Skin care protocols and interventions to prevent pressure ulcers and promote optimal healing. Wound care products and treatment options.	Prerequisites: Registered Nurse or Licensed Practical Nurse or currently enrolled in a nursing program or permission of Instructor.	LEC 0.5 0.5 0.5
NCE215AC	Nursing Update: Stoma Care	Care of the patient with fecal and urinary diversions. Appliance selection, stoma care, and management of potential complications. Includes nutritional, psychological, and educational aspects of care.	Prerequisites: Registered Nurse or Licensed Practical Nurse or currently enrolled in a nursing program or permission of Instructor.	LEC 0.5 0.5 0.5
NCE215AD	Nursing Update: Advances in Diabetes Management	Diabetes management and implications. Risk factors of diabetes and lifestyle modifications. Medication updates and new technological advances for the treatment of Type I and Type II diabetes.	Prerequisites: None.	LEC 0.5 0.5 0.5
NCE215AE	Nursing Update: Cardiac Care	Provides nurses with up-to-date information on prevention, diagnosis, and treatment of cardiovascular and related diseases.	Prerequisites: Registered Nurse (RN) or Licensed Practical Nurse (LPN) or other licensed personnel working with cardiac	LEC 0.5 0.5 0.5
NCE215ND	Nursing Skills Update	Enhancement and reinforcement of specific nursing skills. Special needs patients, patient assessment techniques, medicolegal responsibilities, and diagnostic procedures.	Prerequisites: None.	LEC 0.5 0.5 0.5
NCE216AA	School Health Update: Assessment Skills	Assessment skills for the school health setting. Assessment and management of selected school health problems including abdominal pain, head and spinal cord injuries, and environmental hazards.	Prerequisites: Registered Nurse or Licensed Practical Nurse or currently enrolled in a nursing program or permission of Instructor.	LEC 0.5 0.5 0.5
NCE216ND	School Nurse Skills Update	Enhancement and reinforcement of specific skills encountered in the school health setting. Special needs of physically and emotional disabled children. Review of special procedures and medications used with special children populations.	Prerequisites: Current school nurse or school health aide.	LEC 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE218	Ventilator Management for Critical Care and Emergency Room Nurses	Patient care including indications, management and complications in mechanically ventilated patients. Types of mechanical ventilation, pharmacological management, care of the mechanically ventilated patient, intubation and extubation, and tracheostomy management.	Prerequisites: Health care professional, or permission of Department or Division.	LEC 0.5 0.5 0.5
NCE219	Advanced First Aid for School Health Staff	Advanced first aid principles and interventions for staff working in a school health setting. Topics include assessment and management of medical emergencies such as asthma, anaphylaxis, environmental emergencies, seizures and playground trauma	Prerequisites: (Basic first aid training or experience) or permission of Instructor.	LEC 0.5 0.5 0.5
NCE220	Advanced IV Therapy Skills for RNs	Intravenous (IV) therapy skills utilized by the Registered Nurse in home health, long term care, and the acute care setting. Includes principles of care for specific central venous catheters, and infusion pumps. Also, legal implications of advanced IV practice.	Prerequisites: Current license as Registered Nurse or enrolled in an accredited RN program or permission of Instructor.	LEC 0.5 0.5 0.5
NCE221	Patient Care Technician Skills	Patient care technician skills and techniques which include: drawing blood, performing a variety of specimen collections, observing and reporting patient status, assisting in patient preparation and electrode placement for electrocardiograms, suctioning patients, performing urinary catheterizations, documentation and reporting of skill completion, maintaining patient confidentiality, and recognizing legal and ethical commitments related to patient care technician skills.	Prerequisites: Certified Nurse Assistant (CNA), Nurse Assistant course or equivalent within the past year, and permission of Continuing Education Program Director and/or Instructor.	LEC 3.0 2.5 2.5 LAB 0.0 24.0 1.5
NCE223	LPN-IV Therapy and Medication Skills	Terminology and anatomy related to intravenous therapy. Drug response factors, dosage, calculations, intravenous site dressing change, intravenous administration equipment, and initiating intravenous therapy. Documentation and procedures for laboratory check lists. Meets state nursing board requirements for initiating intravenous therapy and administrating intravenous medications.	Prerequisites: Current license as Practical Nurse or permission of Instructor.	LEC 2.5 2.0 2.0 LAB 0.0 24.0 1.5
NCE224	Nursing Case Management	Case management and managed care responsibilities, insurance strategies, utilization management, legal and ethical issues, quality improvement and discharge planning.	Prerequisites: Registered Nurse (RN) Licensed Practical Nurse (LPN) social worker or permission of Instructor.	LEC 3.0 3.0 3.0
NCE225	Introduction to School Nursing	Registered nursing skills necessary to prepare for employment in a School Health Setting. Triaging, school health office management skills, and legal issues and scope of practice of the school nurse. Health screening basics and immunization protocols, emergency response skills, and health teaching.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or recent graduate of an accredited nursing program or permission of Instructor.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE226	Pediatric Nursing Clinical Skills	Clinical application of nursing theory to the pediatric patient. Focuses on effective physical assessment techniques, and changes in nursing skills for the pediatric patient.	Prerequisites: Registered Nurse (RN), or Licensed Practical Nurse (LPN), or permission of Instructor. Corequisites:	LAB 1.0 45.0 3.0
NCE227	Science of Pediatric Nursing	Preparation for relocation to the pediatric unit the hospital nurse. Application of pediatric nursing theory based upon the nursing process.	Prerequisites: Registered Nurse (RN), or Licensed Practical Nurse (LPN), or permission of Instructor. Corequisites:	LEC 1.0 1.0 1.0
NCE228	Holistic Nursing Fundamentals-Certification Exam Preparation	Preparation for the holistic nursing certification examination. Includes holistic nursing philosophy, foundations, core values, standards, and principles. Covers self-care and self-reflection, theories, Integrative Health and Wellness Assessments (IHWA), in addition to development of, goals, and strategies for implementation of individualized care plans. Also includes complementary modalities as well as theories and research in the field of holistic nursing.	Prerequisites: None.	LEC 3.0 3.0 3.0
NCE230	PICC Line Insertion	Overview of the care, maintenance and insertion of Peripherally Inserted Central Catheter (PICC) lines. Advantages of PICC lines, legal implications, types, as well as anatomy and physiology for proper insertion.	Prerequisites: Current license as a Registered Nurse.	L+L 0.5 24.0 1.5
NCE231	Pharmacology for Critical Care and Emergency Room Nurses	Pharmacology update for emergency department and critical care personnel on new drug therapies and related patient care protocols. Pharmacological management of cardiac and respiratory system disorders, complications, and emergency interventions. Patient management protocols for conscious sedation. New pharmacological agents for the treatment and management of diabetes and other endocrine disorders.	Prerequisites: Registered Nurse or permission of Instructor.	LEC 1.0 1.0 1.0
NCE232	Health Assessment of the School Age Child	Comprehensive health assessment foundation. Development of interviewing skills, obtaining health histories, and conducting physical examinations on the school age child. Identification and management of minor illnesses and health problems common to school age children.	Prerequisites: School nurse or current Registered Nurse (RN) licensure.	LEC 3.0 3.0 3.0
NCE233	Nursing Care of the Special Needs Child	Overview of congenital and acquired pediatric conditions, chronic illnesses and physical challenges that may lead to developmental delay or educational dysfunction. Application of the nursing process to provide care for the special needs child. Developmental assessment tools, skilled nursing interventions and environmental factors. Resources for disabled and chronically ill children through family, educational system and the community.	Prerequisites: School nurse or current Registered Nurse (RN) licensure.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE234	Fundamentals of School Nursing Practice	Assessment, development, implementation and evaluation of school health programming. Focus on nursing theory as it relates to school health programming. Program management, professional development, dealing with change, health education, interdisciplinary interaction and the role of the professional nurse in the school setting.	Prerequisites: School nurse or current Registered Nurse (RN) licensure.	LEC 3.0 3.0 3.0
NCE235	Conscious Sedation	Conscious sedation criteria and protocols. Nursing responsibilities and interventions pre-, intra- and post- procedure. Medications commonly used for conscious sedation, monitoring equipment, potential complications and required documentation.	Prerequisites: Registered nurse (RN) or permission of Instructor.	LEC 0.5 0.5 0.5
NCE237	Care and Management of Vascular Access Devices	Types of vascular catheters, types of clients who use them and clinical indications for each. Care for the different devices, differences in tip locations and the types of infusion therapies infused through each device.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.	LEC 0.5 0.5 0.5
NCE242	Twelve Lead Electrocardiogram (EKG) Interpretation	Normal and abnormal wave forms of the cardiac cycle. Normal and abnormal heart axis. Differences between ventricular and supraventricular tachycardia. Various types of blocks. Identification of heart chamber enlargement. Injury, ischemic and necrotic heart patterns. Effect of specific drugs and electrolyte disorders on electrocardiograms (EKG).	Prerequisites: Basic electrocardiogram (EKG) experience or previous course work in dysrhythmia interpretation or permission of Instructor.	LEC 0.5 0.5 0.5
NCE243	Nursing Skill and Competency Review	Resume writing, interpersonal and therapeutic communication, teamwork concepts, IV Skills and pharmacological review. Central line catheter care, nutritional management, urinary catheterization, NG insertion and suctioning, respiratory management, basic wound care, and patient assessment skills.	Prerequisites: Permission of Instructor.	LEC 3.5 2.5 2.5 LAB 0.0 90.0 6.0
NCE245	Introduction to Holistic Nursing	Philosophy and theories of holism applied to nursing practice. Focus on the physical, emotional, psychological, social, and spiritual needs of the client. Emphasis on application of the nursing process from a holistic perspective. Healing relationship model, self-care concept, nurse-patient communication, health care ethics, therapeutic environment, and cultural sensitivity.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LEC 1.0 1.0 1.0
NCE246AA	Basic Fetal Heart Monitoring	Application of basic concepts and knowledge of fetal monitoring to assist the antepartum and intrapartum nurse in providing effective nursing care to ensure fetal well-being.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE249	Basic Critical Care Nursing	Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the following systems: cardiac, respiratory, neuroscience, gastrointestinal, renal, endocrine and hematology, hemodynamics and ventilator management.	Prerequisites: Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.	LEC 4.0 4.0 4.0
NCE249AA	Critical Care: Cardiac	Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the cardiac system.	Prerequisites: Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.	LEC 1.0 1.0 1.0
NCE249AB	Critical Care: Respiratory	Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the respiratory system.	Prerequisites: Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.	LEC 1.0 1.0 1.0
NCE249AC	Critical Care: Neurologic	Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the neurologic system.	Prerequisites: Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.	LEC 1.0 1.0 1.0
NCE249AD	Critical Care: Endocrine and Renal	Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the endocrine and renal systems.	Prerequisites: Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.	LEC 0.5 0.5 0.5
NCE249AE	Critical Care: Gastrointestinal	Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the gastrointestinal system.	Prerequisites: Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.	LEC 0.5 0.5 0.5
NCE251	Telemetry Nursing	Cardiac anatomy and physiology and the conduction system. Elements of a cardiac assessment. Recognition of arrthymia and cardiac abnormalities seen on electrocardiogram (EKG). Indications for temporary and permanent pacing. Drug groups and their interactions specific to the cardiac patient. Normal and abnormal lab values for the cardiac patient. Pre- and post-procedure care for cardiac procedures. Nursing interventions and emergency treatment.	Prerequisites: Registered Nurse (RN) and a grade of C or better in NCE214CA or equivalent.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE255	Death, Grief, and Bereavement	Grief and bereavement care for the client and family. Ethical and cultural issues in terminal care, children and death, AIDS related death issues, suicide, homicide and survivor interventions	Prerequisites: None.	LEC 2.0 2.0 2.0
NCE257	Science of Maternity Nursing	Preparation for relocation to the maternal/child health unit the hospital nurse. Application of maternal/child nursing theory based upon the nursing process.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LEC 1.0 1.0 1.0
NCE258	Maternity Nursing Clinical Skills	Clinical application of nursing theory to the maternal/child patient. Focuses on effective physical assessment techniques, determining neonatal status, and maternal physiological and psychological well-being.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LAB 1.0 1.0 1.0
NCE259	Advanced Critical Care Nursing	Provides the experienced Critical Care Nurse with an opportunity to build on basic critical care knowledge. Advanced concepts in assessment, hemodynamic monitoring, pathophysiology of disease processes, and use of the Nursing Process for critically ill patients with complex, multisystem disorders. Designed to help prepare experienced Critical Care Nurses for the certification examination for Critical Care Nursing offered by the American Association of Critical Care Nurses.	Prerequisites: A grade of C or better in NCE249 or Registered Nurse working in Critical Care or permission of Instructor.	LEC 4.0 4.0 4.0
NCE260	Intra-Aortic Balloon Pump	Mechanics of the cardiac cycle. Physiologic effects of the intra-aortic balloon pump. Indications and contraindications. Components, operation, care and maintenance of the intra- aortic balloon pump. Complications and nursing implications with the use of the intra-aortic balloon pump.	Prerequisites: Registered Nurse (RN) or cardiovascular technician who has completed a Basic EKG course and has Critical Care Training.	LEC 0.5 0.5 0.5
NCE261	Ultrasound-Guided Peripheral Intravenous Access	Technique of ultrasound-guided peripheral venous access. Client selection for procedure, selection of vasculature, and troubleshooting using ultrasound guidance equipment. Use of equipment and hands-on, simulated practice of catheter placement.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.	L+L 0.5 24.0 1.5
NCE262	Legal Medical Consulting	Role of the legal medical consultant in specific litigation. Importance of the law library. Definition of ethics, professionalism, standards of practice, discovery and disclosure. Steps and procedures involved with legal research. Role of the legal medical expert as a witness. Alternative conflict resolution. Role of independent medical examination. Role of the insurance industry and risk management in legal medical issues.	Prerequisites: Licensed medical personnel or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE264	Advanced Legal Medical Consulting/Civil Procedure	Reinforcement and broadening of knowledge and skills required for a career in legal medical consulting. Civil litigation process from initial client contact, discovery, and trial to post trial period. Intensive case analysis and thorough exploration of legal theory, procedure, and strategy. Discussion of the Federal and Arizona Rules of Civil Procedure and hands on experience in the preparation of legal documents and the trial notebook	Prerequisites: A grade of C or better in NCE262 or equivalent.	LEC 3.0 3.0 3.0
NCE265	Triage Skills for Urgent Care Staff	Identification of high risk aspects of frequent medical complaints. Instruction in avoiding errors when triaging patients in the urgent care setting.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LEC 0.5 0.5 0.5
NCE266	Recognition and Management of the Patient with Allergies	Allergy process, types of allergies and their presentations, levels and types of reactions, as well as treatment, diagnostic testing and prevention strategies.	Prerequisites: Health care professional or permission of Department or Division.	LEC 0.5 0.5 0.5
NCE267	IV Medication Administration and Advanced Metrology	Knowledge and skills to safely prepare and administer intravenous medications and solutions. Includes advanced metrology to accurately calculate IV drug dosages and infusion rates.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	L+L 1.0 2.0 2.0
NCE268	Non Rash Infectious Diseases in the Pediatric Patient	Epidemiology and symptomology of non rash producing infectious diseases often seen in children and identify ways to prevent, reduce, and control their spread. Meningococcal disease, Tuberculosis, influenza, Methicillin Resistant Staph Aureus (MRSA), pertussis, conjunctivitis, mononucleosis, streptococcal infections, hepatitis, and enterovirus D68.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LEC 0.5 0.5 0.5
NCE271	Pediatric Diabetes	Provides an overview of diabetes in the pediatric population. Epidemiology and etiology, types of diabetes in children and symptom recognition, medication and diet management, complications, new technological devices, and family interventions.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	LEC 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE272	Certified Medication Assistant	Completion of this course will qualify the student to sit for the certification examination to administer prescribed medications within defined state laws (Legislation A.R.S.32-1650.01).	Prerequisites: Students will need to have been a Certified Nursing Assistant (CNA) or a Licensed Nursing Assistant (LNA) for a minimum of six months, or completed the CNA or LNA course within the past year, or completed semester I of the Practical Nurse (PN) program, or completed the first block of the Registered Nurse (RN) program, or permission of the Director or Program Director as students who have completed components of nursing programs may qualify for a CMA waiver.	L+L 4.0 6.0 8.0
NCE273	Rehabilitation Technician	The rehabilitation technician (RT) performs patient related care tasks, assists patients with activities of daily living and provides direct patient care under supervision of the licensed nurse and or licensed therapist. Obtains and records patient vital signs. Monitors and records daily intake and output. Obtains specimens, including non-invasive body fluids and blood specimens. Performs electrocardiogram (ECG) electrode placement, running ECG strips, and blood glucose monitoring. Assists physician, licensed nurse, or licensed therapist with diagnostic tests, clinical procedures, and other tasks as requested. Communicates patient needs and observed/reported changes in patient condition to supervising licensed nurse, physician or licensed therapist. Documents all interactions as directed by licensed nurse, physician, or licensed therapist. Assists licensed therapist in performing therapeutic procedures. Carries out assigned rehab tech duties such as cleaning treatment areas, completing equipment maintenance and transporting patients.	Prerequisites: Valid certification or license as a nurse assistant (CNA or LNA) OR completion of a nurse assistant program within the past twelve (12) months OR permission of the Nursing Director.	L+L 2.0 2.5 3.0
NCE274	Industry Telemetry Nursing	Overview of cardiac anatomy, physiology, and the conduction system. Demonstration of a cardiac assessment, review of normal and abnormal lab values, arrhythmias, and cardiac abnormalities seen on an electrocardiogram (ECG). Introduction to medications specific to the cardiac patient. Overview of cardiac procedures, nursing interventions, and emergency treatment.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	L+L 4.0 4.5 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE275	Registered Nurse Update	Update of current general principles of nursing care, procedures and medication.	Prerequisites: Current Registered Nurse License.	LEC 10.0 6.0 6.0 LAB 0.0 12.0 12.0
NCE276	Clinical Teaching in Nursing: An Overview	Applies Nurse of the Future Competencies and educational Constructivism learning theory to develop a foundation for nursing faculty. Designed to assist instructor to consistently plan, guide, and evaluate learning activities for nursing students in clinical environments.	Prerequisites: Current Registered Nurse License.	LEC 1.0 1.0 1.0
NCE277	Clinical Teaching in Nursing: A Practicum Experience	Overview of the process, concepts and skills related to supervising nursing students in the clinical area with application of concepts learned. A mentored clinical experience to guide and facilitate the student in the development of skills of clinical instruction.	Prerequisites: Current Arizona Registered Nurse License, BSN required, but MSN preferred as per our accrediting and approval bodies. All health and safety requirements per the current Maricopa Nursing Clinical Instructor Handbook must be met prior to admission into this course.	LEC 1.5 0.5 0.5 LAB 0.0 45.0 3.0
NCE278	Critical Care Nursing	Foundations in critical care for nurses who are interested in entering the critical care environment or nurses who seek to increase their expertise in critical care. Includes basic anatomy, physiology, and pharmacology. Disease management for the following systems: cardiac, respiratory, neuroscience, gastrointestinal, renal, endocrine and hematology, hemodynamics and ventilator management. The lab includes case studies, simulation, and lab practice.	Prerequisites: Current license as a Registered Nurse or recent graduate of an accredited nursing program or permission of Instructor or employer. Licensed Practical Nurses will be allowed to take the course by request of their employer or with permission of Instructor.	L+L 4.0 4.5 5.0
NCE282AA	Volunteerism for Nursing: A Service Learning Experience	Service-learning field experience within human service organization/agency.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
NCE290	Concepts of Aging	Examine several concepts of aging: physiological, cognitive, spirituality, health promotion, and pharmacology of the older adult. Focus will be placed on caring for the aging patient and their family.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.	LEC 1.0 1.0 1.0
NCE291	Nursing Skills and Patient Care in Simulation	Review of basic skills. Remediation, guided learning, and simulation performance.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.	LAB 1.0 45.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NCE292	Simulation for Patient Care Experiences	Review and practice of nursing skills. Remediation, guided learning, and simulation performance.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.	LAB 2.0 90.0 6.0
NCE292AA	Simulated Patient Care	Review of practical nursing skills. Includes simulated patient experience in various focus areas.	Prerequisites or Corequisites: Permission of Program Director.	LAB 2.0 90.0 6.0
NCE292AB	Patient Care Experiences	Practical nursing skills. Includes patient care experiences.	Prerequisites: A grade of C or better in NCE292AA. Prerequisites or Corequisites: Current Nursing Health and Safety Clearance.	LAB 2.0 90.0 6.0
NCE293	Team Management of Deteriorating Patients in Simulation	Development of skills needed to effectively identify, assess, monitor, and respond to patients who are either deteriorating or at risk of deteriorating related to injury or disease process.	Prerequisites: Current licensure as a health professional or registered as a student in a health professional program of study, or permission of	LAB 2.0 90.0 6.0
NCE298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
NCE298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
NCE298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NDT101	Introduction to Neurodiagnostics	Introduction to neurodiagnostic testing principles and procedures, including basic electronic concepts, the operation of electroneurodiagnostic and polysomnographic equipment, common diagnoses, activations, montages, safety, infection control, and patient care.	Prerequisites: Admission into the Clinical Neurodiagnostic Technology program. Corequisites: NDT101LL.	LEC 3.0 3.0 3.0
NDT101LL	Introduction to Neurodiagnostics Laboratory	Application of introductory neurodiagnostic testing, including measurement, electrode application, equipment operation, and procedures.	Prerequisites: Admission into the Clinical Neurodiagnostic Technology program. Corequisites: NDT101.	LAB 1.0 3.0 3.0
NDT102	Applied Neuroanatomy and Physiology	Introduction to neuroanatomy and physiology as it relates to the field of neurodiagnostics.	Prerequisites: A grade of C or better in BIO160 or BIO202 and admission into the Clinical Neurodiagnostic Technology program.	LEC 3.0 3.0 3.0
NDT103LL	Intermediate Neurodiagnostic Laboratory	Introduction to the application of Electroencephalography (EEG) with practical application skills for Polysomnography (PSG) and Electroneurodiagnostic (END) clinical procedures.	Prerequisites: A grade of C or better in NDT101LL and admission into the Clinical Neurodiagnostic Technology program. Corequisites: PSG201.	LAB 1.0 3.0 3.0
NDT200LL	Clinical Preparation Laboratory	Application of Electroencephalography (EEG) and Polysomnography (PSG) to meet clinical standards with measurement, electrode application, equipment operation, and procedures.	Prerequisites: A grade of C or better in EEG202LL and PSG202LL and admission into the Clinical Neurodiagnostic Technology program.	LAB 1.0 3.0 3.0
NDT202	Introduction to Nerve Conductions and Evoked Potentials	Introduction to theoretical aspects of Nerve Conduction Studies (NCS) and Evoked Potential (EP) testing.	Prerequisites: A grade of C or better in EEG202 and PSG202 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: NDT202LL.	LEC 3.0 3.0 3.0
NDT202LL	Introduction to Nerve Conductions and Evoked Potentials Laboratory	Introduction to the practical application of Nerve Conduction Studies (NCS) and Evoked Potentials (EP) testing.	Prerequisites: A grade of C or better in EEG202 and PSG202 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: NDT202.	LAB 1.0 3.0 3.0
NDT282	Volunteerism for Neurodiagnostic Technology	Service learning field experience within private/public agencies, educational institutions, or citizen volunteer groups.	Prerequisites: Acceptance into the Clinical Neurodiagnostic Technology program and permission of Instructor.	LEC 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NLT100	Nail Technology I	Introduction to basic nail services, general sciences, safety, and infection control practices in the nail care industry.	Prerequisites: None.	200
NLT105	Nail Technology II	Apply advanced techniques and continue to build on previous concepts learned in nail services, general sciences, safety, and infection control in the nail industry.	Prerequisites: None.	200
NLT110	Nail Technology III	This course is designed to prepare Nail Technology students for the written and practical examinations for Arizona State Board of Cosmetology licensure. Students will master and apply previous concepts learned in nail services, general sciences, and business skills in the nail care industry.	Prerequisites: None.	200
NMS120	Media in Cyberspace	Using on-line material, investigates how the new information technologies affect the more traditional media. The effect on consumers and society.	Prerequisites: None.	LEC 3.0 3.0 3.0
NMS160	Sports Media Careers	Introduction to the professions, organizations, and media occupations within sports management. Examines professional and not-for-profit organizations, career opportunities in collegiate and community sports organizations, and career opportunities in the traditional and non-traditional media arenas. Includes resume writing, cover letters, career choices, interviews, and job searching strategies for sports management organizations.	Prerequisites: None.	LEC 3.0 3.0 3.0
NMS215	Electronic Newsroom	Creating, writing, designing, managing, promoting, and publishing the online student publication through team effort. Emphasis on style, consistency, and news/information judgment combined with community involvement.	Prerequisites: A grade of C or better in JRN210 or NMS120 or JRN213 or permission of Instructor.	L+L 3.0 5.0 5.0
NUC100	Introduction to Nuclear Medicine Technology	Role of the nuclear medicine technologist job duties, responsibilities, working conditions and work environments. Certification and licensing requirements for the nuclear medicine technologist, shadowing experience specific to the nuclear medicine department.	Prerequisites: None.	LEC 1.0 1.0 1.0
NUC101	Essentials of Nuclear Medicine Technology	Introduction to the essential information for the Nuclear Medicine Technology program.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 1.0 1.0 1.0
NUC103	Nuclear Medicine Image Evaluation I	Faculty-led case presentation with reinforcement of processing parameters.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 1.0 3.0 3.0
NUC110	Introduction to Radiation Physics and Biology for Nuclear Medicine	Atomic structure, types of radiation, radiation biology, and radiation protection.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUC112	Nuclear Medicine Quality Control Laboratory	Introduction to the nuclear medicine laboratory rules, equipment operation, and quality control (QC).	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 1.0 3.0 3.0
NUC113	Nuclear Medicine Clinical Applications Laboratory	Establishing competencies by demonstration of nuclear medicine imaging and non-imaging procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 1.0 3.0 3.0
NUC114	Nuclear Medicine Instrumentation	Principles of safe operation for nuclear medicine imaging and non-imaging equipment, including quality control.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC116	Nuclear Medicine Procedures I	Skeletal, respiratory, gastrointestinal (GI) anatomy, physiology, pathology, and related clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC120	Radiopharmaceutical/Pharmaceutical Administration for the Nuclear Medicine Technologist	Techniques for the administration of radiopharmaceuticals and pharmaceuticals used by the nuclear medicine technologist.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 1.5 1.5 1.5
NUC122	Nuclear Medicine Imaging I Lab	Protocols for opening/operating in a nuclear medicine department. Quality control, radiation safety, performance of bone scans, lung scans, and genitourinary procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 1.0 3.0 3.0
NUC124AA	Nuclear Medicine Theory I: Part A	Non-imaging instrumentation to include gas-filled detector systems, scintillation detection systems, statistics, nuclear counting statistics, and laboratory equipment. Imaging instrumentation to include planar scintillation cameras, multicrystal scintillation cameras, solid-state detector systems, single photon emission computed tomography (SPECT).	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 1.5 1.5 1.5
NUC124AB	Nuclear Medicine Theory I: Part B	Imaging instrumentation to include quality control of imaging systems and maintenance of image archiving systems. Computers in instrumentation, types of computers, number systems, general structure of computer hardware, software, communications, data management, internet, nuclear medicine computer systems and quality control of these systems.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 1.5 1.5 1.5
NUC126	Nuclear Medicine Procedures II	Endocrine and genitourinary anatomy, physiology, pathology, and clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC130	Professionalism and Patient Care	Communication and interaction skills, patient assessment, procedures involving transport, medical records, infection control, emergency, safety and venous access.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUC170AA	Nuclear Medicine Cardiac Imaging I	Cardiovascular anatomy, physiology and pathology as it relates to cardiac system imaging. Cardiac stress and rest testing, myocardial perfusion and viability, equilibrium radionuclide angiograph (ERNA or MUGA or RVG). First pass angiography, infarct imaging, major vessels flow studies and detection of deep vein thrombosis.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 1.5 1.5 1.5
NUC170AB	Nuclear Medicine Cardiac Imaging II	Cardiovascular imaging instrumentation, procedures, and processing. Radiopharmaceuticals and interventional drugs used in cardiovascular imaging. Non-pharmacologic stress testing. Patient care for the cardiac patient including procedures and pharmaceuticals.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 1.5 1.5 1.5
NUC180	Nuclear Medicine Physics and Instrumentation	Principles of safe operation for nuclear medicine imaging and non-imaging equipment, including positron emission tomography (PET) systems and quality control.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by the American Registry of Radiologic Technologists (ARRT) [R.T. (N)] or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine.	LEC 4.0 4.0 4.0
NUC202	Nuclear Medicine Clinical Practicum I	Supervised clinical application of current nuclear medicine practice reinforcing didactic and laboratory concepts. Focus on developing competency in introductory nuclear medicine procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 3.0 15.0 0.0
NUC203	Nuclear Medicine Image Evaluation II	Student led/instructor coached evaluation of images related to clinical situations and procedures. Demonstration of technical skills.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 1.0 3.0 3.0
NUC212	Clinical Practicum I	Orientation to facility policies and departmental organization. Under direct supervision, clinical application of current nuclear medicine practice of patient care and clinical experiences with an emphasis on quality control (QC) procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 1.5 9.0 0.0
NUC214	Fundamentals of Nuclear Medicine II	Principles and applications of statistics as they relate to Nuclear Medicine. Configuration, function, and application of computers and networks in nuclear medicine.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 1.5 1.5 1.5
NUC216	Nuclear Medicine Procedures II	Endocrine and genitourinary anatomy, physiology, pathology, and clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC220	Sectional Anatomy for Nuclear Medicine	Sectional human anatomy in the transverse, sagittal and coronal planes. Emphasis on the brain, neck, thorax, abdomenopelvic cavity and extremities.	Prerequisites: Admission to the Nuclear Medicine Technology Program or permission of Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUC222	Clinical Practicum II	Supervised clinical application of current nuclear medicine practice reinforcing didactic and laboratory concepts. Demonstrate developing competency in introductory nuclear medicine procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 3.0 15.0 0.0
NUC223	Nuclear Medicine Image Evaluation II	Student led/instructor coached evaluation of images related to clinical situations and procedures. Demonstration of technical skills.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 1.0 3.0 3.0
NUC224	Fundamentals of Nuclear Medicine III	Policy and regulations of delivery systems health policy and ethics regarding the access of health care. Medical informatics implementation of clinical system data entry, patient data, administration, and medical quality assurance mandatory patient centered documentation for federal, state, regulatory, and credentialing agencies professional medical ethics, legal issues and patient rights.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 1.5 1.5 1.5
NUC232	Clinical Practicum III	Under the supervision of licensed technologists, enhance skills and knowledge of current nuclear medicine practice with a focus on broadening procedure competencies.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 3.0 15.0 0.0
NUC233	Nuclear Medicine Image Evaluation III	Advanced student-led serial evaluation of images related to clinical situations and procedures. Demonstration of technical skills.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 1.0 3.0 3.0
NUC234	Nuclear Medicine Department Administration	Practical methods of leadership, ethics, advocacy, department management, continuous quality improvement, coding and reimbursement, and accreditation.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC236	Nuclear Medicine Procedures III	Central nervous system (CNS), tumor, hematopoietic and infection clinical procedures and techniques to demonstrate anatomy, physiology, and pathology.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC240	Clinical Pathology for Diagnostic Imaging	Causes of disease etiology and impact on the human body. Common physiologic effects of disease on body systems. Correlations of disease, physical findings, clinical laboratory values and diagnostic imaging. Role of Diagnostic Medical Imaging (DMI) modalities in the diagnosis and treatment of selected disease processes as part of the health care team. Cultural implications in the prevention and treatment of disease.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC242	Clinical Practicum IV	Independently function under limited supervision of licensed technologists. Advancement of skills to include all required competencies. Practice diverse and appropriate methods of performing procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 3.0 15.0 0.0
NUC243	Nuclear Medicine Image Evaluation IV	Evaluation of images related to clinical situations and procedures. Demonstration of technical skills. Peer-reviewed literature.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUC244	Nuclear Medicine Radiopharmacy	Radiopharmacy and adjunctive pharmaceutical preparation, calculation, administration, and quality control.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 3.0 4.0 4.0
NUC246	Nuclear Medicine Procedures IV	Radiopharmaceutical therapy and theranostics clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of Program Director.	LEC 3.0 3.0 3.0
NUC250	Fundamentals of Computed Tomography and Elements of Magnetic Resonance Imaging	Introduction to principles and operation of computed tomography (CT) scanner and magnetic resonance imaging (MRI).	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.	LEC 3.0 3.0 3.0
NUC251	Computed Tomography and Hybrid Imaging Case Analysis	Anatomy, physiology, pathology, and techniques related to the performance of clinical computed tomography (CT) and hybrid imaging.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of Program Director.	LEC 3.0 3.0 3.0
NUC252	Clinical Practicum V	Orientation to facility policies and procedures and departmental organization. Reinforcement and broadening of knowledge base related to patient care and the roles and responsibilities of the nuclear medicine technologist at the advanced level. Focus on progression to independent level of function in the areas of patient care, radiation protection, instrumentation imaging, non-imaging and computers, radiopharmacy, diagnostic and therapeutic procedures. Ethical and professional behaviors, Health Insurance Portability and Accountability Act (HIPAA) requirements.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 3.0 15.0 0.0
NUC253	Nuclear Medicine Image Evaluation V	Emphasis on positron emission tomography (PET) therapy imaging and other studies new to the nuclear medicine imaging field. Evaluation of images related to clinical situations and procedures including patient history, patient preparation, name and energy of radiopharmaceutical, method of localization, dosimetry, and method of clearance. Normal and abnormal distribution. Need for additional views and/or procedures. Technical limitations, protocol and equipment parameters and procedure results. Examination of professional journal articles.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 1.0 3.0 3.0
NUC259	Fundamentals of Research in Nuclear Medicine	Fundamental components to nuclear medicine research.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUC260	Research Methods and Design	Exploration of knowledge and effective analysis of resources to promote best practice in imaging professions. Introduction to research design, statistical reasoning, and interpretation of the medical literature. Provide a basis for understanding and interpreting the literature for use in evidence-based practice.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC261	Emerging Technologies	Exploration of new and emerging technologies that will become tomorrow's standard of practice. Introduction to these new ideologies. Development and presentation of research findings.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 2.0 2.0 2.0
NUC262	Capstone Practicum	Culminating course to integrate the educational process to facilitate role transition from student to graduate nuclear medicine technologist.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.	LAB 1.5 9.0 0.0
NUC263	Nuclear Medicine Research Presentation and Publication	Presentation of research project at local, regional, or national meeting or submission of research project to scientific journal for publication. Critical evaluation of research projects.	Prerequisites: A grade of C or better in NUC259 and NUC260.	LEC 3.0 3.0 3.0
NUC270	Nuclear Medicine Scientific Method	Scientific research in the field of nuclear medicine. Abstract writing to include research study results, objectives, methods, observational and analytical techniques, and conclusion.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 1.0 1.0 1.0
NUC272	Cardiac Practicum	Comprehensive, advanced-level practical experience at a designated cardiac clinical site.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by the American Registry of Radiologic Technologists (ARRT) in Nuclear Medicine [R.T. (N)] or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine.	LAB 1.5 9.0 0.0
NUC276	Nuclear Cardiology	Cardiovascular anatomy, physiology, and pathophysiology as it relates to cardiac imaging including cardiac blood flow, electrophysiology, and function. Pharmacologic and exertional stress testing methods used in conjunction with imaging. Cardiac imaging instrumentation, acquisition and processing procedures, artifacts, and quality control.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by ARRT [R.T. (N)] or the Nuclear Medicine Technology Certification Board (NMTCB) in	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUC280	Nuclear Medicine PET Physics and Instrumentation	Principles of safe operation for positron emission tomography (PET) systems and required quality control.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by the American Registry of Radiologic Technologists (ARRT) [R.T. (N)] or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine.	LEC 3.0 3.0 3.0
NUC283	PET/CT Practicum	Comprehensive, advanced-level practical experience at a Positron Emission Tomography/Computed Tomography (PET/CT) clinical site.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.	LAB 1.5 9.0 0.0
NUC290	Nuclear Medicine Seminar	Review of content areas addressed on the American Registry of Radiologic Technologists (ARRT), Nuclear Medicine Technology Certification Board (NMTCB), and Arizona state licensure examinations. Study and test-taking strategies.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC291	Computed Tomography Registry and Board Exam Preparation	Discussion of concepts outlined in the American Registry of Radiologic Technologists (ARRT) published content specifications for their post-primary certification exam in computed tomography (CT).	Prerequisites: Permission of the Program Director or Instructor.	LEC 1.0 1.0 1.0
NUC292	Radiopharmacy Practicum	Comprehensive, high level practical experience at a Radiopharmacy clinical site. Cooperative work with direct and indirect supervisory personnel in a Radiopharmacy setting. Emphasis on technical components of Radiopharmacy procedures and radiation safety.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 1.0 3.0 0.0
NUC303	Nuclear Medicine Image Evaluation III	Advanced student-led serial evaluation of images related to clinical situations and procedures. Demonstration of technical skills.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 1.0 3.0 3.0
NUC316	Nuclear Medicine Procedures III	Central nervous system (CNS), tumor, hematopoietic and infection clinical procedures and techniques to demonstrate anatomy, physiology, and pathology.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC322	Nuclear Medicine Clinical Practicum II	Under the supervision of licensed technologists, enhance skills and knowledge of current nuclear medicine practice with a focus on broadening procedure competencies.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 3.0 15.0 0.0
NUC350	Fundamentals of Computed Tomography and Elements of Magnetic Resonance Imaging	Introduction to principles and operation of computed tomography (CT) scanner and magnetic resonance imaging (MRI).	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUC359	Research Methods and Design	Exploration of knowledge and effective analysis of resources to promote best practice in imaging professions. Introduction to research design, statistical reasoning, and interpretation of the medical literature. Provide a basis for understanding and interpreting the literature for use in evidence-based practice.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC372	Cardiac Practicum	Comprehensive, advanced-level practical experience at a designated cardiac clinical site.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by the American Registry of Radiologic Technologists (ARRT) in Nuclear Medicine [R.T. (N)] or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine.	LAB 1.5 9.0 0.0
NUC382	PET/CT Practicum	Comprehensive, advanced-level practical experience at a positron emission tomography/computed tomography (PET/CT) clinical site.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.	LAB 1.5 9.0 0.0
NUC392	Computed Tomography Clinical Practicum I	Use of correct computed tomography instrumentation, protocol implementation and positioning techniques. Application of patient safety measures and follow As Low As Reasonably Achievable (ALARA) practices to reduce radiation dose as established by the institution. Practice within established ethical and legal guidelines. Use of effective communication skills.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 3.0 15.0 0.0
NUC402	Computed Tomography Clinical Practicum II	Reinforcement of clinical skills in a practical setting within established ethical and legal guidelines. Focus on use of correct tomography instrumentation, protocol implementation, and positioning techniques and application of patient safety measures and As Low As Reasonably Achievable (ALARA) practices to reduce radiation dose as established by the institution. Also includes use of effective communication skills.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 3.0 15.0 0.0
NUC403	Nuclear Medicine Image Evaluation IV	Evaluation of images related to clinical situations and procedures. Demonstration of technical skills. Peer-reviewed literature.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 1.0 3.0 3.0
NUC416	Nuclear Medicine Procedures IV	Radiopharmaceutical therapy and theranostics clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUC422	Nuclear Medicine Clinical Practicum III	Independently function under limited supervision of licensed technologists. Advancement of skills to include all required competencies. Practice diverse and appropriate methods of performing procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.	LAB 3.0 15.0 0.0
NUC432	Capstone Practicum	Culminating course to integrate the educational process to facilitate role transition from student to graduate nuclear medicine technologist.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.	LAB 3.0 9.0 0.0
NUC434	Nuclear Medicine Department Administration	Practical methods of leadership, ethics, advocacy, department management, continuous quality improvement, coding and reimbursement, and accreditation.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUC444	Nuclear Medicine Radiopharmacy	Radiopharmacy and adjunctive pharmaceutical preparation, calculation, administration, and quality control.	Prerequisites: Admission to Nuclear Medicine Technology program.	L+L 3.0 4.0 4.0
NUC450	Computed Tomography and Hybrid Imaging Case Analysis	Anatomy, physiology, pathology, and techniques related to the performance of clinical computed tomography (CT) and hybrid imaging.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of Program Director.	LEC 3.0 3.0 3.0
NUC459	Nuclear Medicine Research Presentation and Publication	Presentation of research project at local, regional, or national meeting or submission of research project to scientific journal for publication. Critical evaluation of research projects.	Prerequisites: A grade of C or better in NUC259 and NUC359.	LEC 3.0 3.0 3.0
NUC490	Nuclear Medicine Seminar	Review of content areas addressed on the American Registry of Radiologic Technologists (ARRT), Nuclear Medicine Technology Certification Board (NMTCB), and Arizona state licensure examinations. Study and test-taking strategies.	Prerequisites: Admission to Nuclear Medicine Technology program.	LEC 3.0 3.0 3.0
NUR101	Student Success in Nursing	Individual self-awareness and self management strategies for success with nursing study, clinical reasoning and testing success. Emphasis on the development of prioritizing and delegation skills for the nursing student.	Prerequisites: Permission of Instructor.	LEC 1.0 1.0 1.0
NUR102	Nursing Process Transition	Transitions paramedics to scope and practice of nursing. Focuses on nursing concepts and theories to meet basic human needs across the lifespan throughout the wellness/illness continuum. Theoretical concepts focus on clients of all ages with selected physiological and psychological alterations. Emphasis on expanding the paramedic's skills and experience to transition to the role of the nurse utilizing nursing process and critical thinking in acute care and community settings.	Prerequisites: Arizona or National Paramedic Registry Certificate, and application and admission to Maricopa Nursing advanced placement. One year current healthcare work experience required or permission of Nursing Department Chairperson.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUR103	Nursing Science Transition	Application of nursing concepts and theories of health promotion to nursing care to meet basic human needs. Provides opportunity for the paramedic to develop clinical competency in selected nursing skills and care of clients across the lifespan experiencing altered physiologic functioning. Includes clinical experience with individuals, families, and small groups of clients in acute, long-term, and community settings to develop care plans, teaching plans, and discharge plans.	Prerequisites: Arizona or National Paramedic Registry Certificate, and application and admission to Maricopa Nursing with advanced placement. Minimum of one year current healthcare work experience required or permission of Nursing Department Chairperson. Corequisites: NUR102.	LAB 4.0 12.0 12.0
NUR104AA	Structured Nursing Review	Structured nursing tutorial assistance and nursing study skills to help students achieve success in their respective block of nursing courses. Nursing process and critical thinking application skills emphasized.	Prerequisites: None. Corequisites: Enrollment in the Nursing program or permission of Department Chair.	LEC 0.5 0.5 0.5
NUR104AB	Structured Nursing Review	Structured nursing tutorial assistance and nursing study skills to help students achieve success in their respective block of nursing courses. Nursing process and critical thinking application skills emphasized.	Prerequisites: None. Corequisites: Concurrent enrollment in the Nursing program or permission of Department Chair.	LEC 1.0 1.0 1.0
NUR106	Nursing Theory and Science Transition (Paramedic Bridge)	Introduction and utilization of Nurse of the Future competencies to develop knowledge, skills, and attitudes to provide safe, quality patient care across the wellness-illness continuum in selected medical-surgical and mental health patients. Basic care concepts and nursing process are utilized to meet the needs of adult and older adult patients.	Prerequisites: (Arizona or National Paramedic Registry Certificate), acceptance into the Maricopa Nursing advanced placement, a grade of C or better in NUR187, and (one year current work experience utilizing Paramedic scope of practice or permission of Nursing Department Chairperson).	LEC 9.0 5.5 5.5 LAB 0.0 157.5 10.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUR150	Practical Nurse Bridge Course	Designed to bridge previously gained healthcare knowledge, skills, and abilities of the military Veteran student and/or Licensed Practical Nurse (LPN) seeking to refresh knowledge in the role of the practical nurse. Course includes didactic, laboratory, and clinical experiences for practical nursing including concepts and theories related to care of geriatric, adult, pediatric, and childbearing clients. Areas of didactic and clinical focus include: role of the practical nurse collaborating with other members of the healthcare team; concepts of health promotion and disease/illness prevention; therapeutic communication techniques; nutritional concepts; medication administration to include pharmacokinetics and pharmacodynamics of medications, nursing considerations in medication administration, and dosage calculation; documentation and concepts related to information technology. Emphasis in clinical practicum is on nursing care of pediatric and child-bearing families, and older adult residents of long term care facilities with selected alterations in health; concepts of delegation, prioritization and management of care for the practical nurse is integrated.	Prerequisites: A military Veteran with a health care designation (medic/corpsman) or a licensed practical nurse (LPN) who requires a refresher program. Approval of the Nursing Chair or designee and application packet completion is required.	LEC 12.0 9.0 9.0 LAB 0.0 180.0 12.0
NUR151	Nursing Theory and Science I	Introduction to fundamentals of nursing theory and practice utilizing critical thinking based on the nursing process and principles of evidence based practice. Focus on meeting basic human needs within the wellness/illness continuum. Theoretical concepts related to holistic care of well, geriatric, and adult clients. Provides safe nursing care to clients with selected alterations in health. Introduction to professional nursing practice. Applies concepts of health promotion, disease/illness prevention. Provides care based upon integration of pathophysiology, nutrition, communication and physical, biological, and psycho-social sciences. Uses information technology in performing and evaluating client care	Prerequisites: Admission into the Nursing Program.	LEC 10.0 5.0 5.0 LAB 0.0 15.0 15.0
NUR152	Nursing Theory and Science I	Introduction of Nurse of the Future competencies as a foundational framework for development of the professional nurse. Basic care concepts, the nursing process, and clinical reasoning are utilized to meet the needs of adult and older adult patients.	Prerequisites: Admission into the Nursing program.	LEC 9.0 4.0 4.0 LAB 0.0 16.88 15.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUR158	Nurse Assisting	Introduction to the role of the nursing assistant for clients across the wellness/illness continuum within the nurse assisting scope of practice. Includes basic problem solving processes specific to meeting the basic and holistic needs of clients, therapeutic communication skills, interventions to ensure the needs and safety of the client, specific types of diseases, conditions and alterations in behavior of the client. Focus is on the special needs of the older adult client in the acute and long-term care settings, and basic care skills and procedures. Provides opportunity for the development of clinical competency in the performance of selected nurse assisting skills and procedures through participation in the care of clients.	Prerequisites: Reading and math assessment as well as completion of all required Health and Safety documents.	LEC 4.5 2.5 2.5 LAB 0.0 6.0 6.0
NUR160PN	Practical Nursing Theory and Science I	Core values of the practical nursing program, nursing history, standards, and scope of practice of the practical nurse. Safe nursing care of clients with selected alterations in health; fundamental concepts of health promotion, disease/illness prevention. Nursing care based upon integration of pathophysiology, nutrition, communication and physical, biological, and psycho-social sciences. Uses information technology in performing and documenting client care.	Prerequisites: Admission into the Fast Track Practical Nursing Program.	LEC 11.0 6.0 6.0 LAB 0.0 225.0 15.0
NUR171	Nursing Theory and Science II	Application of nursing theory and practice utilizing critical thinking based on the nursing process and evidence based practice. Holistic nursing concepts of health promotion, disease/illness prevention, and health restoration for adult and geriatric clients. Role development as the professional nurse member of the health care team. Participation in client teaching and discharge planning. Application of previous knowledge of physical, biologic, psycho-social sciences, and the cultural and spiritual aspects of nursing care. Application of nursing concepts in the development of plan of care to include pathophysiology, nutrition, pharmacology, and skills in communication. Uses information technology in planning, documenting, and evaluating client care	Prerequisites: A grade of C or better in NUR151 or permission of Nursing Department Chairperson.	LEC 8.0 4.0 4.0 LAB 0.0 12.0 12.0
NUR172	Nursing Theory and Science II	Utilization of Nurse of the Future competencies and clinical judgment measures to develop knowledge, skills, and attitudes to provide safe, quality patient care across the wellness-illness continuum in selected medical-surgical and mental health patients.	Prerequisites: A grade of C or better in (BIO202 and NUR152) or permission of Nursing Department Chair.	LEC 9.0 5.5 5.5 LAB 0.0 11.81 10.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUR180PN	Practical Nursing Theory and Science II	Holistic practical nursing concepts and theories related to care of childbearing, pediatric, adult, and geriatric clients. Role of the practical nurse collaborating with other members of the healthcare team. Concepts of health promotion and disease/illness prevention. Nursing care based upon integration of pathophysiology, nutrition, communication and physical, biological and psycho-social sciences. Information technology in performing and documenting client care. Emphasis on nursing care related to pediatric, child-bearing families, and adult clients with selected alterations in health; concepts of delegation, prioritization and management of care for the practical nurse based on the core values of the nursing program.	Prerequisites: A grade of C or better in NUR160PN.	LEC 11.0 6.0 6.0 LAB 0.0 225.0 15.0
NUR187	Pharmacology and Medication Administration	Overview of selected drug classifications and categories. Emphasis on principles of drug metabolism and effects, interactions and adverse reactions, medication administration, and nursing implications for safe practice with a focus on adult and older adult patients. Requires application of previous knowledge of physical, biological, and social sciences.	Prerequisites: Permission of Nursing Department/Division Chair.	LEC 1.5 1.5 1.5
NUR191	Practical Nursing Transition	Overview of the role of the practical nurse in the care of patients. Includes nursing standards and scope of practice of the practical nurse. Emphasis on nursing care related to pediatric and care of the well childbearing patient and childbearing family. Focus on the role of practical nurse in providing care through interventions consistent with established nursing care plans.	Prerequisites: A grade of C or better in NUR171, or NUR172, or permission of Nursing Department Chair.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
NUR251	Nursing Theory and Science III	Application of critical thinking strategies related to holistic care of the newborn, pediatric, and childbearing clients. Integration of concepts related to holistic care of adults and geriatric clients with selected acute and chronic alterations in health. Integration of professional nursing standards in role development. Utilization of previous knowledge of physical, biologic, psycho-social sciences, and the cultural, spiritual aspects of nursing care. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care.	Prerequisites: A grade of C or better in (BIO202, BIO205 and NUR171) or permission of Nursing Department Chairperson.	LEC 8.0 4.0 4.0 LAB 0.0 12.0 12.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUR252	Nursing Theory and Science III	Application of critical thinking strategies and clinical judgment measures related to holistic care of the newborn and childbearing patients. Integration of concepts related to holistic care of adults and older adult patients with selected acute and chronic alterations in health. Integration of professional nursing standards in role development. Utilization of previous knowledge of physical, biologic, psycho-social sciences, and the cultural, spiritual aspects of nursing care. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care.	Prerequisites: A grade of C or better in [(CRE101 or appropriate district placement) and NUR172 and PSY101] or permission of Nursing Department Chair.	LEC 9.0 5.5 5.5 LAB 0.0 11.81 10.5
NUR271	Nursing Theory and Science IV	Integration of critical thinking strategies for complex holistic needs of high-risk clients with multi- system health alterations. Application of strategies related to holistic care of the client with psychiatric/ mental health disorders. Introduction to community based care. Assimilation of professional role into practice. Evaluation of care based on the knowledge of physical, biologic, psycho-social sciences, and the cultural and spiritual beliefs of clients. Development of nurse leadership and management roles. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care	Prerequisites: A grade of C or better in NUR251 or permission of Nursing Department Chairperson.	LEC 7.0 4.0 4.0 LAB 0.0 9.0 9.0
NUR283	Nursing Theory and Science IV	Applies Nurse of the Future competencies and clinical judgment measures to practice and manage care for the child/family unit and adults requiring complex care throughout the wellness/illness continuum, and prepare for transition from student to professional nurse.	Prerequisites: A grade of C or better in (BIO205 and NUR252) or permission of Nursing Department Chair.	LEC 9.0 5.5 5.5 LAB 0.0 11.81 10.5
NUR291	Nursing Clinical Capstone	Synthesis of the nursing process to facilitate role transition from student to graduate nurse within a preceptorship experience. Development of nurse leadership and management roles.	Prerequisites: A grade of C or better in NUR271 or permission of Nursing Department	LAB 2.0 6.0 6.0
NUR292	Overview of Current Nursing Principles and Practice across the Lifespan	Update of current principles and practice guidelines for returning nurses in pediatric, obstetrical and geriatric clients. Overview of nursing concepts, therapeutic interventions, and evidence-based practice for clients across the lifespan.	Prerequisites: Permission of Instructor.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUR295	Registered Nurse Refresher	Update of current principles of nursing theory and practice for registered nurses. Didactic instruction meets all Arizona State Board of Nursing requirements: nursing process and patient centered care; pharmacology, medication calculation, and medication administration; communication; critical thinking, clinical decision making and evidence-based practice; delegation, management, and leadership; working with interdisciplinary teams; meeting psychological and physiological needs of adult clients with medical-surgical conditions; ethics; documentation including electronic health records; informatics; and quality improvement. Concentrated preceptorship experience under the supervision of a registered nurse with faculty guidance. Individualized teaching and learning opportunities to build confidence, competence and an increased level of independent functioning.	Prerequisites: Permission of Instructor.	LEC 10.0 6.0 6.0 LAB 0.0 180.0 12.0
NUR296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
NUR296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUR296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
NUR296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
NUR298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
NUR298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUR298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
NUR301	Role of the Professional Nurse	Introduction to the transition from Registered Nurse to the role and scope of the professional baccalaureate nurse. Review of nursing philosophies, theories, and conceptual models. Focus on concepts and attributes of the baccalaureate nurse.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.	LEC 3.0 3.0 3.0
NUR302	Health Assessment and Promotion	Overview of the health assessment process, including methods of taking health history, physical examination skills, documentation, and health promotion strategies. Emphasis on health promotion across the lifespan among diverse populations, health equity, and community resources.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
NUR303	Nursing Research and Evidence-Based Practice	Use of evidence-based research findings for improving clinical practice and person-centered care outcomes. Exploration of quantitative and qualitative research methodologies. Emphasis on the critical review of research studies and their applications to clinical practice.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.	LEC 3.0 3.0 3.0
NUR304	Public and Community Health Nursing	Exploration of population health as a system of diverse cultures, values, and subgroups with varying socioeconomic circumstances and levels of vulnerability. Emphasis on factors affecting community settings using epidemiological data and functional health pattern assessments to plan, organize, and deliver services in community settings, including health education and promotion, illness prevention, and disaster preparedness. Includes project and simulation-based field experiences.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
NUR305	Legal and Ethical Topics in Nursing	Overview of health policy, legislative and regulatory guidelines, the Nurse Practice Act, and legal and ethical concepts that influence the practice of professional nursing. Focus on ethical decision-making models.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.	LEC 3.0 3.0 3.0
NUR401	Systems-Based Thinking in Nursing	Overview of systems-based thinking in nursing and its role in improving the quality and safety of patient care. Focus on coordination of healthcare systems components to address complex issues and deliver optimal care.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
NUR402	Healthcare Technology and Informatics	Exploration of various modalities and integration of healthcare technology and informatics to manage and communicate data, advance health information literacy, and improve patient outcomes. Focus on components, applications, problem solving, and data management strategies.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.	LEC 3.0 3.0 3.0
NUR403	Nursing Leadership and Management	Overview of leadership qualities, abilities, and personal style including strengths and challenges. Focus on understanding the differences between management and leadership. Emphasis on communication and transparency in management and leadership.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.	LEC 3.0 3.0 3.0
NUR404	Advanced Nursing Capstone	Capstone project that provides the baccalaureate nursing student with the opportunity to assess, identify, propose, and present an evidence-based project that addresses an issue significant to nursing practice. The project will synthesize knowledge from coursework and experience. The capstone project will be under the guidance and in collaboration with program faculty and a preceptor from the facility or entity.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0
NVH245	Navajo Culture and Heritage	Survey of the Navajo people, including their history, culture/aesthetics, education, spirituality, and language	Prerequisites: None.	LEC 3.0 3.0 3.0
OAS101	Computer Typing I: Keyboarding and Formatting	Keyboard mastery; letters, tables, and reports; office production; and manuscripts	Prerequisites: None.	L+L 3.0 5.0 5.0
OAS101AA	Computer Typing I: Keyboard Mastery	Incorporates correct touch typing principles	Prerequisites: None.	L+L 1.0 1.7 1.7
OAS101AB	Computer Typing I: Letters, Tables and Reports	Letter, table, and report formatting	Prerequisites: A grade of C or better in OAS101AA or permission of Department or Division.	L+L 1.0 1.7 1.7
OAS101AC	Computer Typing I: Production and Manuscript	Simple office projects and manuscripts	Prerequisites: A grade of C or better in OAS101AB or permission of Department or Division.	L+L 1.0 1.7 1.7
OAS102	Computer Typing II: Document Production	Arrangement of letters, memos, manuscripts, and tabulation; speed/accuracy improvement	Prerequisites: A grade of C or better in OAS101 or permission of Department or Division.	L+L 3.0 5.0 5.0
OAS103AA	Computer Typing: Skill Building I	Individual progression on speed/accuracy drills.	Prerequisites: Ability to touch type at 25 words per minute or permission of Department or Division.	L+L 1.0 1.7 1.7
OAS107	Professional Telephone Techniques	Proper telephone techniques and professional business manners	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
OAS108	Business English	Comprehensive coverage of correct use of English grammar including spelling, punctuation, capitalization, and number style mechanics in a business context	Prerequisites: None.	LEC 3.0 3.0 3.0
OAS111AA	Computer Keyboarding I	Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols	Prerequisites: None.	L+L 1.0 1.7 1.7
OAS118	10-Key By Touch	Touch system of numeric keys on ten-key pads	Prerequisites: None.	L+L 1.0 1.7 1.7
OAS120	Financial Record Keeping	Computerized application of concepts and procedures of office record keeping; includes finance and personnel records, inventory systems, banking procedures and cash control; decision-making process for solving financial problems	Prerequisites: None.	LEC 3.0 3.0 3.0
OAS125	Introduction to the Professional Office	Expectations of the professional in the electronic office of today. Realistic and practical coverage of roles, responsibilities, and environment	Prerequisites: None.	LEC 3.0 3.0 3.0
OAS181	Medical Office: Vocabulary	Basic medical vocabulary with emphasis on pronunciation, spelling, and definition	Prerequisites: None.	LEC 3.0 3.0 3.0
OAS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
OPT105	Introduction to Precision Optics	A historical overview of precision optics and scientific development. Covers optics application and the manufacturing process including machinery, tools, and systems. Examines fundamental principles, characteristics and design of optical components including geometrical optics, wave optics, metrology, fiber optics, photonics, aberration theory, optical phenomena, and optical illusions. Professional career paths in the optics industry also explored.	Prerequisites: None.	LEC 3.0 3.0 3.0
OPT107	Precision Optics and Mathematical Concepts	Precision optics and mathematical concepts. Covers basic algebraic operations, problem solving involving metric measurement, gears, pulleys, simple mechanism problems. Areas and volume calculations of geometric figures. Essentials of trigonometry for solving right and oblique triangles. Addresses geometrical optics (reflection, diffraction, imaging, thin lens formula, lens maker's equation), wave optics (interference, diffraction, polarization), and the basic principles and practical applications of lasers. Covers optical handling and positioning, light sources, laser classifications and safety.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
OPT112	Optical Elements and Ray Optics	Overview of terminology and techniques in the use of analytical and laboratory methods for planning, executing, and evaluating arrangements using components such as mirrors, prisms, thin and thick lenses, diffusers, stops, reticles, and various types of light sources. Reflection, refraction, dispersion, image formation, and aberrations studied, with emphasis on the ray concept of light.	Prerequisites: None.	L+L 3.0 4.0 4.0
OPT115	Optical Fabrication and Metrology	A study of optical materials, processes, and measurement techniques employed in the manufacture of modern optical components. Covers steps in planning, tooling, fabricating, finishing, testing, coating, and assembly of precision optical elements.	Prerequisites: None.	L+L 3.0 4.0 4.0
OPT215	Advanced Optical Fabrication and Metrology	Study of advanced processes, tools, and Computerized Numerical Control (CNC) technology shaping the methodology in manufacturing precision optical components. Emphasis in CNC grinding and polishing, tolerancing, and metrology of precision optical lenses.	Prerequisites: A grade of C or better in OPT115.	L+L 3.0 4.0 4.0
OPT225	Optical Systems	Application of optical fabrication techniques covering assembly of multiple optical elements into cemented and mechanically mounted lens systems, in addition to training in precision cleaning and inspection of optical surfaces. Also covers advanced metrology skills such as interferometry of transmitted beams and measurement of the optical transfer function.	Prerequisites: None.	L+L 3.0 4.0 4.0
OSH101	Introduction to Occupational Safety, Health, and Environmental Technology	Overview of occupational safety, health, and environmental regulations and technology. Overview of the regulatory framework related to safety and environmental program management. Career opportunities and their relationship to business management.	Prerequisites: None.	LEC 3.0 3.0 3.0
OSH102	Introduction to Industrial Hygiene	Overview of environmental hazardous materials technology. History of pollution leading to current legislation. Environmental effects of pollution. Overview of the regulatory framework. Career opportunities in handling and management of hazardous substances	Prerequisites: None.	LEC 3.0 3.0 3.0
OSH105	Construction Safety	Occupational Safety and Health Act. Common causes for accidents and fatalities in construction. Abatement techniques for construction specific hazards. Use of personal protection and lifesaving equipment. Specific types of health hazards related to the construction industry. Proper methods for handling hazardous materials	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
OSH105AA	Construction Safety	Occupational Safety and Health Act. Common causes for accidents and fatalities in construction. Abatement techniques for construction specific hazards. Use of personal protection and lifesaving equipment. Specific types of health hazards related to the construction industry. Proper methods for handling hazardous materials.	Prerequisites: None.	LEC 3.0 3.0 3.0
OSH106	Industrial Safety	Safety, health management, and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, management responsibilities, and OSHA 10 certification.	Prerequisites: None.	LEC 2.0 2.0 2.0
OSH106AC	Industrial Safety	Safety, health management and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, emergency preparedness, safety signs and color codes, recognition of safety and health hazards accident prevention, and management's responsibilities.	Prerequisites: None.	LEC 3.0 3.0 3.0
OSH107	Occupational Safety Principles and Practice	Application of safety and health regulations and best practices. Hazard identification and accident investigation techniques. Major construction hazards and controls. Application of fire protection standards.	Prerequisites: A grade of C or better in OSH106AC or permission of Instructor.	LEC 3.0 3.0 3.0
OSH189	Professional Leadership Development for Occupational Safety and Health	Personal and professional leadership development related to Occupational Health and Safety (OSH) through active participation in peer-to-peer and professional mentoring. Exposure to industry technical meetings, technical tours, seminars, college discipline specific campus club, scholarship awareness, career fairs, and other similar events. Supplemented by readings, and pre-and post-activity discussion and critique. Varied content due to variety of personal and professional development available.	Prerequisites: A grade of C or better in OSH101 and GTC/MIT/OSH106 and a student member of the American Society of Safety Engineers. Xref: GTC106 MIT106	LEC 1.0 1.0 1.0
OSH189AA	Professional Leadership Development for Occupational Safety and Health I	Personal and professional leadership development related to Occupational Safety and Health (OSH) through active participation in professional mentoring. Exposure to industry technical meetings, technical tours, college discipline specific campus club, scholarship awareness, and other similar events. Supplemented by readings, and pre- and post-activity discussion and critique. Varied content due to variety of personal and professional development available.	Prerequisites: A grade of C or better in OSH106AC.	L+L 1.0 2.0 1.70

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
OSH203	Health and Safety Program Management	Introduction to safety program theory and principles needed to develop, manage, implement and evaluate a safety and health program. Systems safety and applied psychology theories that enhance safety program management. Hazard identification methods and controls, and application of these principles to case studies.	Prerequisites: A grade of C or better in OSH106AC or permission of Instructor.	LEC 3.0 3.0 3.0
OSH204	Health and Safety Program Management II	Current and emerging topics in safety and health program management. Exploration of current topics through emerging regulatory and/or consensus standards organizations. Case study investigation and analysis with applications to safety and health management. Introduction to new and evolving online training courses, seminars, video and documents. Adult leaning and instructional theory.	Prerequisites: A grade of C or better in OSH107 and OSH203, or permission of Instructor.	LEC 3.0 3.0 3.0
OSH206	Risk Management and Loss Control	Statistical and cost analysis, report writing, and injury prevention related to loss control. Prevention programs designed to minimize or eliminate property and personnel loss or injury	Prerequisites: None.	LEC 3.0 3.0 3.0
OSH211	Industrial Safety Management Systems and Performance Indicators	Establishment of a safety management system meeting safety management system standards, concentrating on reactive and proactive approaches for safety department functions. Specific content includes development of safety duties, establishment of performance metrics, investigational accuracy and self-assessment.	Prerequisites: A grade of C or better in OSH203.	LEC 3.0 3.0 3.0
OSH218	Ergonomics	Analysis and evaluation of ergonomics risk factors for occupational tasks. Application of theories, methods, and techniques used in work design and systems. Methodological problems in human information processing, human control functions, human-machine interface, work design and process evaluation.	Prerequisites: A grade of C or better in OSH107 or permission of Instructor.	LEC 3.0 3.0 3.0
OSH220	Safety and Emergency Management	Assessment of emergency management systems for occupational safety program development. Planning and implementation of the four phases of emergency management: mitigation, preparedness, response, and recovery. Analysis of all hazards preparedness and response in emergency situations resulting from natural and technological hazards. Planning and budgeting for resources and staffing.	Prerequisites: A grade of C or better in OSH105AA or OSH106AC.	LEC 3.0 3.0 3.0
OSH240	Fire Protection Systems	Building occupant safety requirements including industry standards, regulations, building codes, fire codes and life safety codes. Fundamentals of fire protection system operation, inspection and maintenance. Principles of life safety systems including fire door and walls, smoke control systems, and exit components.	Prerequisites: A grade of C or better in OSH106AC.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
OSH270AA	Occupational Safety and Health Internship	Occupational Safety and Health (OSH) work experience in business, industry or government. Eighty (80) hours of designated work experience.	Prerequisites: A grade of C or better in OSH101 and OSH106AC or permission of Instructor.	LAB 1.0 6.0 0.0
OSH270AB	Occupational Safety and Health Internship	Occupational Safety and Health (OSH) work experience in business, industry or government. One hundred and sixty (160) hours of designated work experience.	Prerequisites: A grade of C or better in OSH101 and OSH106AC.	LAB 2.0 12.0 0.0
OSH270AC	Occupational Safety and Health Internship	Occupational Safety and Health (OSH) work experience in business, industry or government. Two hundred and forty (240) hours of designated work experience.	Prerequisites: A grade of C or better in OSH101 and OSH106AC.	LAB 3.0 18.0 0.0
OSH290AC	Case Study and Research Project	Completion of a selected safety project in policy and procedure development or training program curriculum design in actual or simulated work setting. Combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 3.0
OSH298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
OSH298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
OSH298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
OTA100	Introduction to Occupational Therapy Assistant Profession	History, theory and philosophy of occupational therapy and occupational therapy assistant (OTA) professions. Topics include practice contexts, ethics, and scope of practice. Emphasis on developing professional behavior skills expected of an entry-level occupational therapy assistant.	Prerequisites: None.	LEC 2.0 2.0 2.0
OTA102	Psychosocial Health and Occupation	Analysis of impact of psychosocial health on occupation throughout the lifespan. Focus on occupational therapy (OT) assessments and screening procedures for process skills, social interaction skills, and performance patterns. Theoretical models for group occupational therapy assistant (OTA) interventions and development of therapeutic client relationships.	Prerequisites: Admission to the Occupational Therapy Assistant program, and a grade of C or better in (OTA100 and PSY101). Corequisites: PSY266.	LEC 3.0 3.0 3.0
OTA105	Fieldwork Level I: Psychosocial	Introductory-level clinical fieldwork experience for the occupational therapy assistant (OTA). Emphasis on observational skills and basic interactional skill in a mental health clinical setting with a culturally diverse client population. Focus on developing professional behavior, professional communication, and clinical reasoning in psychosocial context. Opportunities to apply group theory and therapeutic use of self.	Prerequisites: Admission to Occupational Therapy Assistant program. Corequisites: OTA102.	LAB 0.5 3.0 0.0
OTA107	Fundamentals of Occupational Therapy	Discussion of Occupational Therapy Practice Framework (OTPF), analysis of occupational performance and analysis of activities. Role of occupational therapy assistant (OTA) from referral to discharge. OTA interventions, documentation requirements, and terminology. Emphasis placed on therapeutic use of self and development of clinical reasoning skills.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA100.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
OTA117	Physical Health and Occupations	Impact of physical health on occupation throughout the lifespan. Focus on observing, identifying, measuring, and assessing motor and sensory client factors.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in BIO202.	LEC 3.0 1.0 1.0 LAB 0.0 6.0 6.0
OTA157	Occupational Therapy Assistant in Physical Rehabilitation	Theories and practice models for occupational therapy for clients with physical disabilities. Topics include pathology and therapeutic interventions. Emphasis on clinical reasoning, locating resources, daily treatment planning, task and environmental modifications, activity grading, client education and documentation.	Prerequisites: Admission to the Occupational Therapy Assistant program.	LEC 3.0 1.0 1.0 LAB 0.0 6.0 6.0
OTA201	Assistive Technology	Specialized assistive technology items: car modifications, power wheel chair options, adaptive toys and switches, seating systems, orthotics and prosthetics, and apps for therapeutic use. Emphasis on identifying need, referral process, and funding sources.	Prerequisites: A grade of C or better in OTA157.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
OTA205	Fieldwork Level I: Adult	Introductory level clinical fieldwork experience with a geriatric population. Application of learning with focus on exhibiting professional behavior, professional communication, clinical observation skills, and implementation of selected geriatric treatment strategies and modifications.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA157. Corequisites: OTA207.	LAB 0.5 2.5 0.0
OTA207	Occupational Therapy Assistant in Geriatrics	Impact of aging on occupational performance. Physical, sensory, and cognitive changes associated with aging. Social, psychological, and cultural impact on aging. Common and emerging contexts of service provision. Focus on synthesizing learning and implementing treatment techniques with aging population.	Prerequisites: A grade of C or better in OTA157.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
OTA215	Fieldwork Level I: Pediatrics	Introductory-level fieldwork experience in a pediatric context. Emphasis on demonstrating professional behavior, professional communication, clinical observation skills, selecting age-appropriate therapeutic activities, and applying therapeutic use of self with a culturally diverse pediatric client population.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA157. Corequisites: OTA217.	LAB 0.5 2.5 0.0
OTA216	Occupational Therapy Assisting Pediatrics I	Distinguishes between typical and atypical pediatric development. Common pediatric health conditions of infants, children, and adolescents. Occupational therapy practice models, theories, and delivery contexts found in pediatrics.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA102 and OTA117.	LEC 2.0 2.0 2.0
OTA217	Occupational Therapy Assisting Pediatrics II	Distinguishes between typical and atypical pediatric development. Common pediatric health conditions of infants, children, and adolescents. Occupational therapy practice models, theories, and delivery contexts found in pediatrics. Focus on synthesizing prior learning and specific pediatric treatment activities to develop pediatric treatment plans.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA102, OTA117, and OTA216.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
OTA234	Occupational Therapy Assistant Professional Standards	Preparation for transition into level 2 fieldwork. Focus on supervisory structures, professional ethics, legislative issues, licensure requirements, evidence based practice, and reimbursement systems. Topics include program planning, marketing, quality assurance. Assessment of personal and professional competencies during resume and portfolio development.	Prerequisites: A grade of C or better in OTA157.	LEC 2.0 2.0 2.0
OTA255	Fieldwork Level II: Adult	Clinical experience under the direct supervision of experienced occupational therapists (OTs) or occupational therapy assistants (OTAs) in a context primarily serving adult clients. Emphasis is placed on clinical preparation for entry-level practice as an OTA.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in (OTA207, OTA217, and OTA234). Corequisites:	LAB 4.0 21.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
OTA256	Clinical Practicum Seminar II: Adult	Advanced therapeutic skills and professional reasoning in adult settings. Emphasis on journaling, discussion board interactions, in-service and case presentations, documentation of patient care interventions, and remediation plan development.	Prerequisites: Admission into the Occupational Therapy Assistant program. Corequisites: OTA255.	LEC 1.0 1.0 1.0
OTA265	Fieldwork Level II: Pediatrics	Secondary clinical experience under the direct supervision of experienced occupational therapists (OTs) or occupational therapy assistants (OTAs) in a context primarily serving pediatric clients. Emphasis is placed on clinical preparation for entry-level practice as an OTA.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in (OTA207, OTA217, and OTA234).	LAB 4.0 21.0 0.0
OTA266	Clinical Practicum Seminar II: Pediatrics	Advanced therapeutic skills and professional reasoning in pediatric settings. Emphasis on journaling, discussion board interactions, in-service and case presentations, documentation of patient care interventions, and remediation plan development.	Prerequisites: Admission into the Occupational Therapy Assistant program. Corequisites: OTA265.	LEC 1.0 1.0 1.0
OTA284	Occupational Therapy Assistant Professional Transition	Integration of clinical experiences during level 2 fieldwork with theoretical models and didactic learning. Preparation for licensure and National Board for Certification in Occupational Therapy (NBCOT) examination. Focus on self- assessment, study skills, comprehensive content review, and fieldwork review.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in (OTA207, OTA217, and OTA234).	LEC 2.0 2.0 2.0
PAD100	21st Century Public Policy and Service	Introduction to topics pertaining to public policy and public service in the 21st century. Includes formation, implementation, and evaluation procedures for public policy, as well as roles and agendas of policy makers and public administrators. Also covers careers in public service/administration and an evaluation of essential skills necessary for a career in public service.	Prerequisites: None.	LEC 3.0 3.0 3.0
PAD107	Public Finance Administration	Basic overview of public finance system for state and local government. Includes budgeting processes, revenue and funding sources involving taxes and revenue forecasting. Also covers capital planning, debt management, performance measurement, financial statements, and auditing.	Prerequisites: A grade of C or better in CIS114DE.	LEC 3.0 3.0 3.0
PAD122	Public Sector Human Resources Management	Overview of human resources management in the public sector. Covers planning, staffing, training, compensating, and appraising employees in labor management relationships.	Prerequisites: A grade of C or better in CIS114DE.	LEC 3.0 3.0 3.0
PAD170	Public Sector Organizational Behavior	Basic principles of public-sector management from an organizational behavior perspective. Levels of organizational behavior: the individual, the group and the organization system emphasized	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PAD200	Public Affairs Economics	Introduction to the use of macroeconomic and microeconomic principles concerning public affairs and social issues. Includes the role of economics in societal development and public policies in addition to the effects of unemployment and inflation. Also covers measurement of, causes for and societal responses to poverty.	Prerequisites: A grade of C or better in PAD100 or permission of Instructor.	LEC 3.0 3.0 3.0
PAD210	Fundamentals of Real Property Appraisal	Procedures and techniques for estimating market value of vacant and improved properties. Includes appraisal theory, assessment procedures, and appraisal/assessment techniques in addition to land description and land valuation. Also covers definitions and structure of cost and various types of cost estimates as well as procedures for determining depreciation	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0
PAD212	Valuation Concepts and Cost Appraisal Methods	Functions of the assessor and appraiser. Covers the nature and principles of value, assessment, as well as appraisal processes. Emphasis on property owner rights and limitations including an overview of the Arizona Property Tax System. Also covers use of a construction cost system.	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0
PAD214	Land Valuation	Analysis of land valuation procedures. Covers maps, land value factors, and ownership as well as systems of land identification. Includes site data units of comparison and market influences in addition to Arizona statutes and precedents related to special land valuation.	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0
PAD216	Basic Ad Valorem Appraisal Concepts	Basic assessment and valuation practices for mixed-use properties, partially complete structures, and salvage properties. Also covers the construction cost system, cost components, and market adjustments as well as methods for measuring depreciation. Also includes market value and ratio studies.	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0
PAD218	Personal Property Valuation	Overview of personal property valuation in the state of Arizona. Includes procedures and forms for the valuation process, as well as mobile home classification and affixture requirement. Also covers year/life tables and depreciation calculations.	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
PAD220	Income Approach to Valuation	Principles for the income approach to valuation. Includes an overview of real estate investment and finance as well as development of net operating income estimates. Also covers contemporary and historical capitalization methods and procedures for developing capitalization rates	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0
PAD222	Intermediate Ad Valorem Appraisal Concepts	Procedures for Ad Valorem Appraisal. Covers sales ratio studies, appraisal level, and uniformity as well as mixed-use assessment ratios. Also includes Centrally Valued Properties, Direct Sales Comparison, and Income Value calculations.	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PAD224	Hearing Procedures	Preparation for hearing procedures. Emphasis on presentation techniques, documentation, and organization of Assessor's records as well as property classification and confirmation. Also covers analysis of and response to appellant arguments and completion of the administrative appeal process.	Prerequisites: Permission of Department or Division.	L+L 2.0 3.0 3.0
PAR101	Introduction to the Paralegal Profession	Comprehensive introduction into the legal profession with a focus on the paralegal's role. Introduction into legal terminology, basic legal principles, and the parties involved in the legal system.	Prerequisites: None.	LEC 3.0 3.0 3.0
PAR102	Paralegal Research, Analysis, and Writing I	Introduction into legal research, analysis and writing. Covers legal research binding, persuasive authority, and use of legal citation. Includes components and use of case law and briefs in addition to use of secondary sources and digests. Also covers electronic legal research and research plans.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (BPC110 or CIS105) and (CRE101 or equivalent as indicated by assessment), or permission of Program Director.	LEC 3.0 3.0 3.0
PAR103	Paralegal Research, Analysis, and Writing II	Advanced legal writing and research. Analysis and application of the writing process to produce well-written documents commonly used in the practice of law. Covers various types of legal writing, including memorandum of law, persuasive writing, and legal correspondence. The use of proper grammar, punctuation, and spelling in the construction of sentences and the development of paragraphs.	Prerequisites: A grade of C or better in PAR102, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR104	Ethics for the Paralegal	Paralegal rules of professional responsibility and ethical requirements. Includes regulation of the profession as well as unauthorized practice of law and confidentiality. Also covers conflict of interest, competence, and negligence.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (BPC110 or CIS105) and (CRE101 or equivalent as indicated by assessment) and PAR102, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR106	Legal Foundations for Paralegals	Legal principles of tort, contract, and criminal law. Includes roles and responsibilities of court systems, the legal community, and the paralegal. Also covers procedures for preparing cases for trial, adjudication, and post-trial.	Prerequisites: A grade of C or better in PAR102, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR112	Civil Litigation I	Responsibilities of the paralegal in the civil litigation process. Includes review of the American court system and techniques for case investigation. Also covers case management and evidence procedures as well as settlements and pleadings.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (BPC110 or CIS105) and (CRE101 or equivalent as indicated by assessment), or permission of Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PAR114	Civil Litigation II	Civil litigation responsibilities of the paralegal in the areas of discovery, depositions, pretrial, and post-trial procedures. Includes preparation of clients, witnesses, and exhibits for the courtroom. Also covers responsibilities of the paralegal in the evidentiary phase of trial, post-trial, and the appeals process in addition to collection and enforcement of judgments.	Prerequisites: A grade of C or better in PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR206	Paralegal Business Law	Overview of business law for the paralegal. Includes a review of basic contract formation and enforcement, fundamental law concepts, ethics, and social responsibility. Also includes topics such as white collar and corporate crime, consumer protection, employment laws, international commerce, and intellectual property.	Prerequisites: A grade of C or better in PAR103 and PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR208	Introduction to Tort Law	Introduction to tort law and the responsibilities of the paralegal. Includes elements of types of various types of torts, negligence, and defenses in addition to classification of and legal issues pertaining to damages. Also covers insurance and its application to tort law as well as procedures for records evaluation and calculation of net settlements.	Prerequisites: A grade of C or better in PAR103 and PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR224	Law Office Technology for the Paralegal	Technology resources and procedures for the law office. Includes types of hardware and software in addition to office security. Also covers paperless office and electronic research procedures as well as use of trial presentation software.	Prerequisites: A grade of C or better in PAR104 or Corequisites: PAR104.	LEC 3.0 3.0 3.0
PAR230	Family Law for the Paralegal	Paralegal responsibilities in the area of family law. Includes procedures for the initial client interview as well as drafting of applicable documents in dissolution, post-decree, and custody proceedings. Also covers discovery tools and procedures in addition to methods for valuation and division of assets	Prerequisites: A grade of C or better in PAR103 and PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR232	Bankruptcy Law for the Paralegal	Paralegal responsibilities in the area of bankruptcy law. Emphasis on chapters 7, 11, and 13 of the bankruptcy code of Title 11 of the United States Code. Also covers bankruptcy documentation, automatic stay, dischargeable and non-dischargeable debts, and bankruptcy case dismissals, conversions, and transfers.	Prerequisites: A grade of C or better in PAR103 and PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR233	Real Estate Law for the Paralegal	Paralegal responsibilities in the area of real estate law. Covers real estate transactions and agreements of sale as well as title and deed procedures. Also includes procedures for completing title abstractions and legal documentation pertinent to arbitration and foreclosure. The role of the paralegal in completing real estate client interviews also covered.	Prerequisites: A grade of C or better in PAR103 and PAR114, or permission of Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PAR234	Administrative Law for the Paralegal	Paralegal responsibilities in the area of administrative law. Overview of types and sources of administrative law. Includes accountability, agency discretion and due process in addition to delegation and rule-making. Also covers agency investigations and adjudication procedures.	Prerequisites: A grade of C or better in PAR103 and PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR236	Estate and Elder Law for the Paralegal	Paralegal responsibilities in the area of estate law and elder law. Includes estate planning and administration. Covers procedures for preparing wills and trusts in addition to handling probate issues and elder long-term care.	Prerequisites: A grade of C or better in PAR103 and PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR237	Paralegals and Environmental Law	Overview of role and key responsibilities of a paralegal supporting environmental law concerns. Covers the essentials of environmental law, including types of organizations and agencies. Also covered, process of environmental laws and rulemaking with an emphasis on major environmental acts.	Prerequisites: A grade of C or better in PAR103 and PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR238	Immigration Law for the Paralegal	Overview of role and key responsibilities of a paralegal working with immigration law cases. Includes immigration laws and essentials of federal regulations. Covers process and procedures for citizenship and naturalization including, establishing temporary and permanent legal citizenship and types of visas. Also includes process for application and appeals.	Prerequisites: A grade of C or better in PAR103 and PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR239	Legal Investigation for the Paralegal	Overview of role and key responsibilities of a legal investigator. Covers the process for conducting an interview including discovery methods and research techniques. Also covers procedures for documenting and writing accurate statements and preparing legal evidence and exhibits for trial.	Prerequisites: A grade of C or better in PAR103 and PAR112, or permission of Program Director.	LEC 3.0 3.0 3.0
PAR240	Introduction to eDiscovery for the Paralegal	Overview of electronic discovery and the impact of electronic data on the legal field. Includes a review of the development of technology assisted review (TAR), preservation procedures, and collection methods for electronical stored information (ESI). Also covers changes in civil rules of procedure and ethical duties for legal professionals.	Prerequisites: A grade of C or better in PAR114.	LEC 3.0 3.0 3.0
PAR260	Legal Career Preparation	Overview of the essential skills necessary for the paralegal student in the internship environment. Covers essential skills, self-evaluation and resources available to the paralegal.	Prerequisites: A grade of C or better in PAR114.	LEC 1.0 1.0 1.0
PAR290AA	Internship for the Paralegal	Paralegal work experience in industry. Eighty (80) hours of designated work per credit	Prerequisites: Permission of Department or Division.	L+L 1.0 1.0 0.0
PAR290AB	Internship for the Paralegal	Paralegal work experience in industry. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division. Corequisites: PAR260.	L+L 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED101	Physical Activities: Basic	Individual, dual, or team sports activities at the basic level.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101AD	Aerobic Dance	A cardiovascular workout through dance.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101AK	Aikido	Covers the fundamentals of Aikido including rules, moves, and traditional discipline of the sport.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101AP	Adapted PE	Fitness for persons with disabilities.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101AQ	Aquatic Fitness	This aquatic fitness class offers knowledge and skills to keep fit for life. It teaches safe performance of movement and exercise in a progressive approach and offers an opportunity to improve and/or maintain a high level of fitness through application of aerobic training principles in an aquatic environment. Swimming skills are not required. This class is designed for all fitness levels. Students are encouraged to understand their own limitations and work within their bounds.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101BA	Baseball	Basic skills and game strategy of baseball. Class emphasis on competition and drills.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101BB	Basketball	Basic skills and game strategy of basketball. Class emphasis on competition and drills.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101BC	Boot Camp	Vigorous physical and mental conditioning incorporating cardiovascular, core fitness, strength training, and flexibility. Emphasis will be placed on proper body mechanics and safety.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101BD	Ballroom Dancing	Basic level instruction on ballroom dancing footwork, timing, techniques, and style. Partners rotate.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101BE	Belly Dance	Practice and demonstration of basic belly dance skills and movements. Basic posture and muscularity, primary upper and lower body isolations, footwork, simple combination movements. Rhythms broken down, and at least one prop demonstrated. Basic routine, improvisation, and current styles and trends in belly dance. Belly dance etiquette and attire.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101BL	Ballet	Basics of ballet incorporating steps, poses, and graceful movements including leaps and spins.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101BP	Backpacking	Covers basic skills and techniques of backpacking and the application of these to wilderness travel.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101BS	Body Sculpting	Stretch and strengthen. Emphasizes increasing fitness, muscle tone, and body flexibility. Great for reducing stress.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101CP	Camping	Learn the skills of camping in an outdoor setting. Length of overnight stay varies.	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED101CY	Cycling - Indoor	Basic skills for bike set up and proper body mechanics. Increase leg strength, lung capacity, and metabolism.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101DF	Self Defense	Basic self-defense skills, ground-fighting skills, and stand-up fighting capabilities. Modified for all skill levels. Practice is based on real-life experiences and endurance enhanced drills. Develops self confidence.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101FB	Football	Basic skills and game strategy of football. Class emphasis on competition and drills.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101FE	Fencing	Introduction to the sport of fencing. Instruction and practice in proper body mechanics with the use of a foil, saber, and epee.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101FL	Fitness for Life	Learn the basics of designing and implementing a personalized fitness program to meet your needs in the areas of Cardiovascular Fitness, Weight Control, Muscular Strength and Flexibility.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101FW	Fitness Walking	Development of safe and effective walking skills through proper exercises and use of equipment to enhance a walking program.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101GF	Group Fitness/Aerobics	Group exercise incorporating a variety of equipment to increase respiration, heart rates, strength, and flexibility.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101GO	Golf	Instruction and practice for all skill levels, beginning through advanced. Assistance on shot making, club selection and etiquette on the course.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101HH	Hip Hop	Basic skills of hip hop with instruction, practice, and performance including proper body mechanics, choreography, and behavioral competencies.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101HK	Hiking	Develop safe and effective hiking skills. Essentials and requirements for safe hiking; proper hiking clothing and attire; impact of hiking on the environment.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101JR	Jogging/Running	Introduction to jogging/running. Learn proper technique to decrease injury and increase training distance. All skill levels welcome.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101JS	Japanese Swordmanship	Vigorous martial arts swordmanship training program utilizing historical principles that promotes the development of fitness, coordination, agility, balance, mindfulness/focus, and knowledge of strategy.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101JU	Judo	Japanese martial art in which opponents use balance and body weight to throw, pin and lock.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101KA	Karate	Training emphasizes fundamentals, traditional form, and applied sparring that follows the theory of Karate.	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED101KB	Kickboxing	Techniques to increase muscular endurance and strength, enhance flexibility and increase body awareness and self-confidence. Jabs, kicks, and blocks will be used in this martial arts based workout.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101KF	Kung Fu	Techniques of one of the most comprehensive martial arts in China.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101KY	Kayaking	For leisure or competition, basic skills and techniques of kayaking.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101LD	Latin Dancing	Spicy, energetic style of dance. Cha Cha, Merengue, Salsa, Rumba, and Bolero. Partners rotate.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101LT	Lifeguard Training	Designed to provide the knowledge and skills for preventing, recognizing, and responding to aquatic emergencies. Practical skills in water rescue, CPR, and first aid.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101MD	Modern Dance	Learn the skills and techniques to express yourself through dance. Practice and drills included.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101PB	Pickleball	Basic skills and game strategy of pickleball. Class emphasis on competition and drills.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101PC	Physical Conditioning	Exercise program with access to free weights, strength machines and cardio equipment.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101PS	Pilates	Mat-based exercise system focused on improving flexibility and strength for the total body. Teaches core control and stabilization while improving postural alignment.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101QG	Qi Gong	Ancient Chinese Qi Gong breathing exercises for healing and opening channels of energy. Includes Power of Positive thought along with relaxation and meditation techniques.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101RC	Rock Climbing	Beginning climbing skills including equipment, knots, anchoring, belaying, and climbing techniques in an indoor climbing gym. No previous experience needed. Develop strength and confidence.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101RQ	Racquetball	Basic skills and game strategy of racquetball. Class emphasis on competition and drills.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101RT	Resistance Training for Improved Sports Performance	Introduction to sport-specific resistance training programs to enhance athletic performance. Includes focus on advanced assessment and sport-related resistance training, including Olympic lifting with a qualified instructor.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101SA	Salsa	Basic moves for the popular, hot Latin dance Salsa. Partners rotate.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101SB	Softball	Basic skills and game strategy of softball. Class emphasis on competition and drills.	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED101SM	Swimming	Designed to improve cardiovascular fitness, flexibility and muscular endurance in an aquatic environment. Includes instruction in, practice with and individualized coaching on the basic swim strokes, breathing techniques and strategies to improve efficiency of movement in the water.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101SO	Soccer	Basic skills and game strategy of soccer. Class emphasis on competition and drills.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101SR	Stretch and Relaxation	A mat-based stretching class with guided meditation. Stretching increases flexibility and relieves stress, promoting an overall sense of well being.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101ST	Strength Training	Introduction to techniques of basic weight training, concentrating on incorporating an exercise regimen for increased strength.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101SU	SCUBA Diving	Introduction to the theory and practice of SCUBA diving. Course includes lectures, pool dives, open water dives, and SCUBA Certification.	Prerequisites: None.	L+L 1.5 2.5 2.5
PED101SW	Swing Dancing	Popular Swing dance moves and rhythms, including basic Lindy. All students will rotate.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101TA	Tango	Beginning, basic footwork and body mechanics for Tango. Partners rotate.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101TC	Tai Chi	Fundamentals of Tai Chi including moves, breathing and meditation.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101TE	Tennis	Basic skills and game strategy of tennis. Class emphasis on competition and drills.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101TF	Track and Field	Instruction and practice in track and field events, running, throwing and jumping.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101TK	Taekwondo	Fundamentals of Taekwondo including the moves, rules, and traditional discipline of the sport.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101TT	Triathlon Training	Train for triathlons. Beginners to elite. Learn training techniques for triathlon competition: Swim, Bike, Run.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101TX	Suspension Training	Suspension training using TRX or similar equipment. Designed to develop strength, balance, flexibility and core stability. Incorporates a variety of exercises using adjustable positions, stability levels and intensities. Suitable for all skill levels.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101VB	Volleyball	Basic skills and game strategy of volleyball. Class emphasis on competition and drills.	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED101WW	Weight Training for Women	Designed to introduce students of all fitness levels to the fundamentals of resistance training in a safe and supportive environment. Includes hands-on demonstrations of and practice using equipment such as machine weights, free weights, and/or Olympic lifts. Individual workout programs developed under instructor supervision and strategies to integrate resistance training into lifestyle considered.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101YG	Gentle Yoga	Focuses on the use of such props as blankets, blocks, and chairs to modify traditional Yoga poses, enabling participation with moderate effort and without strain; suitable for all levels but especially for students needing a slower pace.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101YH	Hatha Yoga	Combination of traditional and flow style yoga that utilizes breathing, yoga poses, relaxation and meditation to create balance and inner peace. COMMON COMPETENCY COURSE	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101YI	Iyengar Yoga	Form of Hatha Yoga using various props such as belts, blocks, and straps used to focus on precise body alignment.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101YK	Kundalini Yoga	Energetically guided Yoga focusing on psycho-spiritual growth with special consideration of the spine and endocrine system.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101YO	Yoga	Promotion of overall health by strengthening muscles and stimulating glands and organs. Basic postures, breathing and relaxation techniques.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101YP	Power Yoga	Yoga postures performed in a dynamic series designed to gain strength, add flexibility, release toxins, This is a vigorous, athletic form of yoga.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101YR	Restorative Yoga	Gentle form of Yoga poses utilizing props to create fully supported postures; focuses on relaxation and involves non-rigorous physical activity, providing rest and recovery and promoting the restoration of tranquility; suitable for all levels.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED101ZU	Zumba Fitness	Uses easy to follow dance movements and high energy music to enhance cardiovascular fitness and to promote self-esteem and confidence in physical movement. Provides an accepting and encouraging atmosphere for students of all levels to participate in a group fitness class.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED102	Physical Activities: Intermediate	Individual, dual, or team sports activities at the intermediate level.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102BA	Baseball - Intermediate	To improve upon basic skills and game strategy of baseball at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102BB	Basketball - Intermediate	To improve upon basic skills and game strategy of basketball at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED102BC	Boot Camp - Intermediate	Vigorous training at an intermediate level incorporating cardiovascular, core fitness, strength training, and flexibility. Emphasis will be placed on proper body mechanics and safety.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102BD	Ballroom Dancing - Intermediate	Intermediate level instruction on ballroom dancing footwork, timing, techniques, and style. Partners rotate.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102BE	Belly Dance - Intermediate	Practice and demonstration of basic belly dance skills and movements at the intermediate level. Posture and muscularity, primary upper and lower body isolations, footwork, intermediate level combination movements. Rhythms broken down, and at least two props demonstrated. Routine, improvisation, and current styles and trends in belly dance. Belly dance etiquette and attire.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102BL	Ballet - Intermediate	Ballet steps, poses and graceful movements including leaps and spins at the intermediate level.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102CH	Cheerleaders - Intermediate	Intermediate skills of cheerleading with instruction, practice, and performance including proper body mechanics, choreography, and behavioral competencies.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102DF	Self Defense - Intermediate	Intermediate self-defense skills, ground-fighting skills, and stand-up fighting capabilities. Practice is based on real-life experiences and endurance enhanced drills. Develops self confidence. Not recommended for beginners.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102FB	Football - Intermediate	Improve upon basic skills and game strategy of football at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102FE	Fencing - Intermediate	Build upon the basic skills in the sport of fencing. Intermediate level instruction in the use of a foil, saber, and epee. Emphasis on skill practice and competition.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102FL	Fitness for Life - Intermediate	Intermediate level design and implementation of a personalized fitness program to increase your fitness level in the areas of Cardiovascular Fitness, Weight Control, Muscular Strength and Flexibility.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102GO	Golf - Intermediate	Improving techniques of putting, chipping, the full swing, rules and scoring will be covered in this class.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102HH	Hip Hop - Intermediate	Intermediate level dance instruction and practice in the skills of hip hop. Emphasis on performance including proper body mechanics, choreography, and behavioral competencies.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102HK	Hiking - Intermediate	Improve your hiking skills on more challenging terrain. Includes Physical training.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102JR	Jogging/Running - Intermediate	Intermediate training for jogging/running. Learn proper technique to decrease injury and increase training distance. Not recommended for beginners.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED102JS	Japanese Swordmanship - Intermediate	Intermediate level of vigorous martial arts swordmanship training program utilizing historical principles that promotes the development of fitness, coordination, agility, balance, mindfulness/focus, and knowledge of strategy.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED102KA	Karate - Intermediate	Applied technique and theory of Karate at the intermediate level.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102KB	Kickboxing - Intermediate	Intermediate level kickboxing techniques to increase muscular endurance and strength, enhance flexibility and increase body awareness and self- confidence. Not recommended for the beginner.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102LD	Latin Dancing - Intermediate	Incorporate intermediate dance moves while performing Latin Dance.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102PB	Pickleball - Intermediate	Intermediate skills and game strategy of pickleball. Class emphasis on competition and drills.	Prerequisites: None. Prior experience suggested but not required.	L+L 1.0 2.0 2.0
PED102PC	Physical Conditioning - Intermediate	Intermediate level exercise program with access to free weights, strength machines and cardio equipment. Not recommended for the beginner.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102PS	Pilates - Intermediate	Intermediate level Mat-based exercise system focused on improving flexibility and strength for the total body. Teaches core control and stabilization while improving postural alignment.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102RC	Rock Climbing - Intermediate	Improve upon basic skills of climbing including, knots, anchoring, belaying, and climbing techniques in an indoor climbing gym. Develop strength and confidence.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102RT	Resistance Training for Improved Sports Performance - Intermediate	Intermediate level of sport specific programs designed to enhance athletic performance. Includes a focus on advanced assessment and sport related resistance training including Olympic lifting and plyometrics with a qualified instructor.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102SA	Salsa - Intermediate	Learn the intermediate dance moves for Salsa. Not recommended for the beginning Salsa dancer.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102SB	Softball - Intermediate	Improve upon basic skills and game strategy of softball at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102SO	Soccer - Intermediate	To improve upon basic skills and game strategy of soccer at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102ST	Strength Training - Intermediate	Intermediate techniques of strength training, concentrating on incorporating an exercise regimen for increased strength and endurance. Not recommended for the beginning weight lifter.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102TC	Tai Chi - Intermediate	Intermediate level techniques of Tai Chi including moves, breathing and meditation.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED102TE	Tennis - Intermediate	Improve upon basic skills and game strategy of tennis at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102TF	Track and Field - Intermediate	To improve upon basic track and field event skills at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102TK	Taekwondo - Intermediate	Intermediate level training in Taekwondo.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102TT	Triathlon Training - Intermediate	Intermediate level training for triathletes. Improve your training techniques for triathlon competition: Swim, Bike, Run.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102VB	Volleyball - Intermediate	Improve upon basic skills and game strategy of volleyball at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102WW	Weight Training for Women - Intermediate	Designed to advance the resistance training routines of more experienced students in a progressive fashion. Includes principles of and practice with the safe use of free and machine weights and Olympic lifts as well as strategies for effective workouts. Customized training programs devised with instructor guidance. Consideration of resistance training as part of a comprehensive health, fitness and wellness program included.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102YO	Yoga - Intermediate	Yoga for the experienced practitioner.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED102YP	Power Yoga - Intermediate	Intermediate level Yoga postures performed in a dynamic series designed to gain strength, add flexibility, release toxins, This is a vigorous, athletic form of yoga.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED103	Physical Activities: Basic	Individual, dual, or team sports activities at the basic level.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103AQ	Aquatic Fitness	This aquatic fitness class offers knowledge and skills to keep fit for life. It teaches safe performance of movement and exercise in a progressive approach and offers an opportunity to improve and/or maintain a high level of fitness through application of aerobic training principles in an aquatic environment. Swimming skills are not required. This class is designed for all fitness levels. Students are encouraged to understand their own limitations and work within their bounds.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103BC	Boot Camp	Vigorous physical and mental conditioning incorporating cardiovascular, core fitness, strength training, and flexibility. Emphasis will be placed on proper body mechanics and safety.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103BD	Ballroom Dancing	Basic level instruction on ballroom dancing footwork, timing, techniques, and style. Partners rotate.	Prerequisites: None.	L+L 0.5 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED103BE	Belly Dance	Practice and demonstration of basic belly dance skills and movements. Basic posture and muscularity, primary upper and lower body isolations, footwork, simple combination movements. Rhythms broken down, and at least one prop demonstrated. Basic routine, improvisation, and current styles and trends in belly dance. Belly dance etiquette and attire.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103BS	Body Sculpting	Stretch and strengthen. Emphasizes increasing fitness, muscle tone, and body flexibility. Great for reducing stress.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103DF	Self Defense	Basic self-defense skills, ground-fighting skills, and stand-up fighting capabilities. Modified for all skill levels. Practice is based on real-life experiences and endurance enhanced drills. Develops self confidence.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103FL	Fitness for Life	Learn the basics of designing and implementing a personalized fitness program to meet your needs in the areas of Cardiovascular Fitness, Weight Control, Muscular Strength and Flexibility.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103GF	Group Fitness/Aerobics	Group exercise incorporating a variety of equipment to increase respiration, heart rates, strength, and flexibility.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103HK	Hiking	Develop safe and effective hiking skills. Essentials and requirements for safe hiking; proper hiking clothing and attire; impact of hiking on the environment.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103KB	Kickboxing	Techniques to increase muscular endurance and strength, enhance flexibility and increase body awareness and self-confidence. Jabs, kicks, and blocks will be used in this martial arts based workout.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103KF	Kung Fu	Techniques of one of the most comprehensive martial arts in China.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103LD	Latin Dancing	Spicy, energetic style of dance. Cha Cha, Merengue, Salsa, Rumba, and Bolero. Partners rotate.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103PC	Physical Conditioning	Exercise program with access to free weights, strength machines and cardio equipment.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103PS	Pilates	Mat-based exercise system focused on improving flexibility and strength for the total body. Teaches core control and stabilization while improving postural alignment.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103QG	Qi Gong	Ancient Chinese Qi Gong breathing exercises for healing and opening channels of energy. Includes Power of Positive thought along with relaxation and meditation techniques.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103SA	Salsa	Basic moves for the popular, hot Latin dance Salsa. Partners rotate.	Prerequisites: None.	L+L 0.5 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED103SM	Swimming	Designed to improve cardiovascular fitness, flexibility and muscular endurance in an aquatic environment. Includes instruction and coaching in basic swim strokes and breathing techniques as well as tips for improving efficiency of movement in the water.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103SR	Stretch and Relaxation	A mat-based stretching class with guided meditation. Stretching increases flexibility and relieves stress, promoting an overall sense of well being.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103TC	Tai Chi	Fundamentals of Tai Chi including moves, breathing and meditation.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103TX	Suspension Training	Suspension training using TRX or similar equipment. Designed to develop strength, balance, flexibility and core stability. Incorporates a variety of exercises using adjustable positions, stability levels and intensities. Suitable for all skill levels.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103VB	Volleyball	Basic skills and game strategy of volleyball. Class emphasis on competition and drills.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103YG	Gentle Yoga	Focuses on the use of such props as blankets, blocks, and chairs to modify traditional Yoga poses, enabling participation with moderate effort and without strain; suitable for all levels but especially for students needing a slower pace.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103YH	Hatha Yoga	Combination of traditional and flow style yoga that utilizes breathing, yoga poses, relaxation and meditation to create balance and inner peace.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103YO	Yoga	Promotion of overall health by strengthening muscles and stimulating glands and organs. Basic postures, breathing and relaxation techniques.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103YR	Restorative Yoga	Gentle form of Yoga poses utilizing props to create fully supported postures; focuses on relaxation and involves non-rigorous physical activity, providing rest and recovery and promoting the restoration of tranquility; suitable for all levels.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED103ZU	Zumba Fitness	Zumba dynamic fitness program. Features high energy, easy to follow rhythmic moves set to energizing Latin and international beats. Provides an enjoyable way to increase fitness level.	Prerequisites: None.	L+L 0.5 1.0 1.0
PED105	Army Master Fitness	Introduces the student to the Army Master Fitness Program. Designed to enhance the student's level of individual fitness and wellness.	Prerequisites: None.	L+L 1.0 3.0 0.0
PED114	Fitness	Fitness activity and wellness study to help develop a lifetime of regular exercise, stress management, and proper nutrition. Workout includes warm-up/stretch, aerobic exercise, selected strength exercises, and cool down/stretch.	Prerequisites: None.	L+L 1.5 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED115	Lifetime Fitness	Increase personal fitness, strength, and vitality. Current principles of cardiovascular exercise, weight training, flexibility, and balance exercises applicable to lifetime fitness goals. Personalized fitness plans developed and implemented with support of highly trained fitness professionals. Techniques to make sessions more effective and enjoyable.	Prerequisites: None.	L+L 2.0 4.0 4.0
PED116	Cardiovascular Fitness	Blends an effective warm-up, challenging cardiovascular and strength/endurance training strategies and a relaxing cool-down. Tailored by certified fitness professionals to personal goals.	Prerequisites: None.	L+L 2.0 4.0 4.0
PED117	Weight Training for Wellness	Strength training and muscular fitness activity to help develop a lifetime of regular exercise and muscular strength maintenance. Development of full body strength and stability of the body's core musculature, translating to increased power, balance, and functional movement ability including assessment of current strength and goal-specific program design to increase strength and muscular fitness.	Prerequisites: None.	L+L 2.0 4.0 4.0
PED118	Exercise is Medicine(r)	Group exercise that is individualized by highly trained fitness professionals to help meet personal health enhancement goals. Designed to follow the national initiative, "Exercise is Medicine(r)", coordinated by the American College of Sports Medicine (ACSM) and the American Medical Association (AMA) to help improve overall health and well-being. Designed for individuals over age 55.	Prerequisites: None.	L+L 1.5 3.0 3.0
PED120AF	Special Emphasis Activities: Weight Training	Intensive experience in weight training.	Prerequisites: None.	L+L 2.0 4.0 4.0
PED124	Strength and Conditioning for Sport Performance: Basic	Introduction to the principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on beginning instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity.	Prerequisites: None.	L+L 2.0 4.0 4.0
PED125	Strength and Conditioning for Sport Performance: Intermediate	Principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity.	Prerequisites: A grade of C or better in PED124.	L+L 2.0 4.0 4.0
PED133	Olympic Style Weight Lifting	Advanced study of the science, strategy, and techniques of Olympic Style Weightlifting. For the fitness professional who is interested in competing, or is seeking to incorporate advanced strength and conditioning modalities. Addresses current topics, theories and techniques	Prerequisites: None.	L+L 2.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED158	Tradition and Practice of Yoga III	A deep exploration of the yogic path as it relates to the self, to teaching yoga, and to society as a whole. Emphasis on the early and modern intellectual foundations of yoga.	Prerequisites: A grade of C or better in YOG150 and YOG250.	LEC 2.0 2.0 2.0
PED191	Corrective Exercise for Athletes: Basic	Evaluation of functional movement ability and corrective activity to improve specific functional movements. Optimize functional movement abilities by designing corrective activity to improve weaknesses, correct imbalances and asymmetries in order to contribute to athletic and fitness performance.	Prerequisites: None.	L+L 1.0 2.0 2.0
PED192	Corrective Exercise for Athletes: Intermediate	Evaluation of functional movement ability and corrective activity to improve functional movement at the intermediate level. Optimize functional movement abilities and dynamic sport movement by designing corrective activity at the intermediate level to improve weaknesses, correct imbalances and asymmetries in order to contribute to athletic and fitness performance.	Prerequisites: A grade of C or better in PED191 or permission of Instructor.	L+L 1.0 2.0 2.0
PED201BA	Baseball - Advanced	To improve upon intermediate skills and game strategy of baseball at the advanced level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201BB	Basketball - Advanced	To improve upon intermediate skills and game strategy of basketball at the advanced level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201BD	Ballroom Dancing - Advanced	Advanced level instruction on ballroom dancing footwork, timing, techniques, and style. Partners rotate.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201CH	Cheerleaders - Advanced	Advanced skills of cheerleading with instruction, practice, and performance including proper body mechanics, choreography, and behavioral competencies.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201GO	Golf - Advanced	Experienced golfers gain helpful hints and practice to improve their game.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201PC	Physical Conditioning - Advanced	Advanced level training program with access to free weights, strength machines and cardio equipment.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201SA	Salsa - Advanced	Learn the advanced dance moves for Salsa.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201SB	Softball - Advanced	Improve upon intermediate skills and game strategy of softball at the advanced level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED201SO	Soccer - Advanced	To improve upon intermediate skills and game strategy of soccer at the advanced level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201ST	Strength Training - Advanced	Advanced techniques of strength training, concentrating on incorporating a vigorous exercise regimen for increasing muscle strength and endurance.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201SU	Scuba Diving: Advanced	Additional training in SCUBA techniques. Pool sessions and weekend open water dives will provide training in: Underwater Navigation, Underwater Naturalist, Deep Dive, and other specialties.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201TC	Tai Chi - Advanced	Advanced level techniques of Tai Chi including moves, breathing and meditation.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201TF	Track and Field - Advanced	Advanced level training in track and field events. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201VB	Volleyball - Advanced	Improve upon intermediate skills and game strategy of volleyball at the advanced level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201WT	Weight Training - Advanced	Advanced level training with a qualified instructor on the use of Olympic and Free Weights.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED201YO	Yoga - Advanced	Advanced yoga postures.	Prerequisites: None. Prior experience recommended.	L+L 1.0 2.0 2.0
PED202	Physical Activities: Elite	Individual, dual, or team sports activities at the elite level.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED202BA	Baseball - Elite	Improve upon advanced skills and game strategy of baseball at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED202BB	Basketball - Elite	Improve upon advanced skills and game strategy of basketball at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED202SB	Softball - Elite	Improve upon advanced skills and game strategy of softball at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED202SO	Soccer - Elite	Improve upon advanced skills and game strategy of soccer at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED202TF	Track and Field - Elite	Improve upon advanced skills and game strategy of track and field at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED202VB	Volleyball - Elite	Improve upon advanced skills and game strategy of volleyball at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	L+L 1.0 2.0 2.0
PED224	Strength and Conditioning for Sport Performance: Advanced	Principles and training techniques of strength and conditioning for sport performance. Emphasis placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity; and injury prevention.	Prerequisites: A grade of C or better in PED124 and PED125.	L+L 2.0 4.0 4.0
PED225	Strength and Conditioning for Sport Performance: Elite	Principles and training techniques of strength and conditioning for sport performance. Emphasis placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity; injury prevention; and assessment techniques.	Prerequisites: A grade of C or better in PED124, PED125 and PED224.	L+L 2.0 4.0 4.0
PED280	Introduction to Yoga Therapy	Introduction to the therapeutic use of yoga. Includes basic concepts of yoga therapy, identification of common therapeutic problems and application of yoga asana as a modality of healing. Demonstration and practice of therapeutic techniques and sequences to improve movement and promote health and well-being.	Prerequisites: A grade of C or better in YOG170 or permission of Instructor.	L+L 2.0 2.0 2.0
PED281	Yoga Therapy - Upper Body Principles	Basic concepts of yoga therapy, review of therapeutic interventions, identification of common therapeutic problems, and application of yoga asana as a modality of healing. Demonstration and practice of therapeutic techniques and sequences to improve movement capability and promote health and well-being of the upper body. Emphasis on the study of chronic problem areas and therapeutic issues with shoulders and upper body.	Prerequisites: A grade of C or better in PED280 or permission of Instructor.	L+L 2.0 2.0 2.0
PED282AA	Service-Learning Experience in Physical Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
PED282AB	Service-Learning Experience in Physical Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
PED282AC	Service-Learning Experience in Physical Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED283	Yoga Therapy - Low Back Principles	Basic concepts of yoga therapy, review of therapeutic interventions, identification of common therapeutic problems, and application of yoga asana as a modality of healing. Demonstration and practice of therapeutic techniques and sequences to improve movement capability and promote health and well-being. Emphasis on the study of chronic problem areas and therapeutic issues associated with the lower back.	Prerequisites: A grade of C or better in PED280 or permission of Instructor.	L+L 2.0 2.0 2.0
PED284	Yoga Therapy - Knee Principles	Basic concepts of yoga therapy, review of therapeutic interventions, identification of common therapeutic problems of the knee, and application of yoga asana as a modality of healing. Demonstration and practice of therapeutic techniques and sequences to improve movement capability and promote health and well-being. Emphasis on the study of chronic problem areas and therapeutic issues.	Prerequisites: A grade of C or better in PED280 or permission of Instructor.	L+L 2.0 2.0 2.0
PED288	Yoga Therapy Practicum	Focus on immersion in the area of Yoga Therapy. Yoga Therapy application onsite at the community college with a current instructor of Yoga. Requires minimum of 150 contact hours.	Prerequisites: A grade of C or better in (PED280, PED281, PED283, and PED284) or permission of Program Director.	LAB 2.0 10.0 0.0
PED291	Corrective Exercise for Athletes: Advanced	Evaluation of functional movement ability and corrective activity to improve functional movement at an advanced level. Optimize functional movement abilities by designing advanced corrective activity to improve weaknesses, correct imbalances and asymmetries in order to contribute to athletic and fitness performance. Self-assessment at an advanced level of imbalances and selection of appropriate corrective exercises.	Prerequisites: A grade of C or better in PED192 or permission of Instructor.	L+L 1.0 2.0 2.0
PED296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
PED296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
PED296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PED298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
PED298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
PED298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
PHC101	Pharmacology for Pharmacy Technicians	Overall history of pharmacy from ancient times to today; pharmacy technician job ethics and responsibilities; state and national drug laws and regulations; pharmacy information reference material; pharmaceutical abbreviations and introduction to prescription sig codes.	Prerequisites: 1. Successful completion of RDG100 or higher or appropriate reading placement into CRE101. 2. Successful completion of MAT090, MAT091, MAT092 or higher, or appropriate math	60

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHC120	Pharmacology and Pharmacy Technology	This course is designed to offer incumbent pharmacy technician trainees foundational knowledge in pharmacy history, evolving roles and responsibilities of the pharmacy technician, ethics, and state and national drug laws and regulations in order to prepare for the national certification examination. Students will focus on learning the top 200 prescribed medications, pharmaceutical abbreviations, and prescription sig codes. Additionally, students will practice prescription dispensing, adjudication with insurance companies, and medication distribution in retail and hospital pharmacy settings. Students will practice computer skills, bulk compounding, packaging, inventory control, medication storage, and drug delivery systems. Students will practice pharmaceutical math to calculate drug dosing, as well as the principles of household, metric, and apothecary measurements to safely compound sterile and non-sterile medications.	Prerequisites: Successful completion of RDG100 or higher or appropriate reading placement into CRE101. Successful completion of MAT090, MAT091, MAT092 or higher, or appropriate math placement into MAT103.	230
PHC122	Pharmacy Technician Certification Review	This course is designed to prepare Pharmacy Technician trainees, incumbent workers, or Pharmacy Technician certificate students for the NHA Exam for the Certification of Pharmacy Technicians (ExCPT) and the PTSB Pharmacy Technician Certification Exam (PTCE), both recognized by the Arizona State Board of Pharmacy.	Prerequisites: A grade of C or better PHC155 or Pharmacy Technician Training License or permission of Department or Division.	30
PHC150	Introduction to Pharmacy Practice	This course provides a basic overview of the pharmacy industry to prepare students for an entry level pharmacy technician role. Students will be introduced to the knowledge and skills required for a pharmacy technician including roles and responsibilities, anatomy, physiology and health science, as well as pharmacology, scope of practice and federal laws and regulations.	Prerequisites: 1. Successful completion of RDG100 or higher or appropriate reading placement into CRE101. 2. Successful completion of MAT090, MAT091, MAT092 or higher, or appropriate math	90
PHC153	Basic Pharmacy Practice	Technical aspects of prescription dispensing and drug distribution in the retail and hospital setting utilizing the computer. Bulk compounding, packaging, inventory control, drug storage and a variety of drug delivery systems. Laws that relate to specific technical tasks.	Prerequisites: A grade of C or better in PHC150.	132
PHC155	Advanced Pharmacy Practice	Responsibilities of a pharmacy technician specific to working in a hospital and community setting; common drugs and their uses; drug routes of administration; basic biopharmaceutics; billing and reimbursement; sterile and non-sterile compounding; pharmacy career development; introduction to resume building, job search training.	Prerequisites: A grade of C or better in PHC153.	150

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHC253	Pharmacy Technician Practicum	Consists of 160 hours at a clinical site, under the supervision of a pharmacist or senior pharmacy technician. Includes hands-on experience with patients, staff, and other healthcare professionals while applying the knowledge and skills obtained in the pharmacy technician program. Preparation for work experience in a pharmacy setting.	Prerequisites: A grade of C or better in PHC155.	160
PHC253DC	Pharmacy Technician Practicum	Consists of 200 hours at a clinical site, under the supervision of a pharmacist or senior pharmacy technician. Includes hands-on experience with patients, staff, and other healthcare professionals while applying the knowledge and skills obtained in the pharmacy technician program. Preparation for work experience in a pharmacy setting.	Prerequisites: A grade of C or better in PHC155.	200
PHI101	Introduction to Philosophy	General consideration of human nature and the nature of the universe. Knowledge, perception, freedom and determinism, and the existence of God	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI103	Introduction to Logic	Comprehensive introduction to logical reasoning. Exploration of informal logic, including common logical fallacies, delving into symbolic logic to analyze and construct valid arguments using formal methods such as truth tables, truth trees, or proofs. Emphasis on developing critical thinking skills essential for evaluating arguments in a variety of contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
PHI104	World Philosophy	Examination of questions such as the meaning of life and death, social justice, appearance and reality, human nature, the identity of the self freedom and destiny, the ethical life, and the relationship of science and religion. Comparative analysis of diverse Eastern and Western viewpoints.	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI105	Introduction to Ethics	A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories.	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI201	History of Ancient Philosophy	Historical survey of the intellectual history of the Greco-Roman world, focusing on the philosophical tradition and social/historical context.	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI212	Contemporary Moral Issues	Philosophical consideration of such moral issues as abortion, free speech, physician-assisted suicide, the death penalty, drug legalization, environmental issues, and Artificial Intelligence (AI).	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI213	Medical and Bio-Ethics	A philosophical consideration of moral problems that arise in relation to medicine and biology, e.g., death, patient's rights and biological experimentation	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHI214	Business Ethics	Philosophical consideration of moral problems arising in business, including the purpose of corporations, corporate responsibility, acceptable consumer and occupational risk, employee and employer rights and obligations, marketing and disclosure, hiring and firing, environmental responsibility of business, and international business ethical issues.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
PHI216	Environmental Ethics	Philosophical consideration of diverse theories and perspectives on the environment, and application of these theories to global moral issues such as animal rights, preservation of wilderness and species, population, world hunger and poverty, and air and water pollution.	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI218	Philosophy of Sexuality	Philosophical examination of sexuality in human life. Historical and critical survey of philosophical and theological views from Greeks, Christianity, and Kant. Includes examinations of gender identity, sexual orientation, monogamy, polyamory, autoeroticism, (bondage and discipline, dominance and submission, sadism and masochism) (BDSM), and sex and technology.	Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor.	LEC 3.0 3.0 3.0
PHI224	Political Philosophy	Predominant figures and theories in Euroamerican political philosophy from Plato to contemporary social/political philosophers.	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.	LEC 3.0 3.0 3.0
PHI234	Plato	Philosophy of Plato in depth and Socrates' influence on Plato's thought.	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI244	Philosophy of Religion	Philosophical investigation of the relation of faith and reason, religious language, the existence and nature of God, the problem of evil, and alternatives to the monotheistic position.	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI245	Introduction to Eastern Philosophy	Fundamental theories of Indian and Chinese metaphysics, epistemology, and ethics.	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI251	Philosophy of Sport	General consideration of sport in its philosophical dimensions. Possible topics include the Zen of sport, strategy and competition, sport, practice, and play, and cheating versus fair play	Prerequisites: None.	LEC 3.0 3.0 3.0
PHI298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. COMMON COMPETENCY COURSE	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHI298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. COMMON COMPETENCY COURSE	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
PHI298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
PHS110	Fundamentals of Physical Science	Survey of the principles of physics and chemistry.	Prerequisites: A grade of C or better in MAT090 or higher level mathematics course or eligibility for MAT120 or higher as indicated by appropriate placement.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PHS115	The Science of Musical Instruments	A science class set in a musical context where students learn about music, musical instruments, and about the underlying scientific and mathematical principles of sound.	Prerequisites: A grade of C or better in MAT090, or higher level mathematics course, or eligibility for MAT120 or higher as indicated by appropriate placement.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PHS120	Introduction to Physical Science: Astronomy, Meteorology, Geology and Oceanography	Designed primarily for students with limited background in physical science and mathematics and for nonscience majors. Topics from astronomy, meteorology, geology and oceanography. A laboratory course designed to help the students learn the basic laws and facts of the physical sciences which provide the starting points for scientific thought and speculations.	Prerequisites: None.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PHT104	Pharmacology for Pharmacy Technicians	Overview of pharmacology for pharmacy technicians. Includes drug conversion factors and dosage calculations as well as disease states and biopharmaceutics	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
PHT109	Drug Actions and Effects	Drug names, dosage forms, indications, routes of administration and side effects of drugs. Basic anatomy and functions of body systems relevant to most commonly prescribed drugs	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHT120	Pharmacy Technician Responsibilities	Responsibilities and skills of pharmacy technicians. Emphasis on federal and state laws, prescription entry and fulfillment, drug regulations, and drug calculations, as well as pharmaceutical products, abbreviations, and terminology. Includes inventory management, administration routes, financial issues, and pharmacy environments	Prerequisites: None.	LEC 3.0 3.0 3.0
PHT150	Introduction to Pharmacy Practice	This course provides a basic overview of the pharmacy industry to prepare students for an entry level pharmacy technician role. Students will be introduced to the knowledge and skills required for a pharmacy technician including roles and responsibilities, anatomy, physiology and health science, as well as pharmacology, scope of practice and federal laws and regulations.	Prerequisites: Acceptance into the Pharmacy Technician program.	L+L 3.0 4.0 4.0
PHT153	Basic Pharmacy Practice	Technical aspects of prescription dispensing and drug distribution in the retail and hospital setting utilizing the computer. Bulk compounding, packaging, inventory control, drug storage and a variety of drug delivery systems. Laws that relate to specific technical tasks.	Prerequisites: A grade of C or better in PHT150.	L+L 5.0 8.0 8.0
PHT155	Advanced Pharmacy Practice	Responsibilities of a pharmacy technician specific to working in a hospital and community setting; common drugs and their uses; drug routes of administration; basic biopharmaceutics; billing and reimbursement; sterile and non-sterile compounding; pharmacy career development; introduction to resume building, job search training.	Prerequisites: A grade of C or better in PHT153.	L+L 5.0 8.0 8.0
PHT225	Accelerated Pharmacy Technology	Overview of the pharmacy industry and entry-level pharmacy technician roles and responsibilities. Covers anatomy, physiology and health science, as well as pharmacology, scope of practice, and federal laws and regulations. Includes technical aspects of prescription dispensing and drug distribution in the retail and hospital setting. Also provides coverage of computer use, bulk compounding, packaging, inventory control, drug storage and a variety of drug delivery systems.	Prerequisites: Acceptance into the Accelerated Pharmacy Technology program.	L+L 7.0 9.0 9.0
PHT250	Pharmacy Technician Certification Review	This course is designed to prepare Pharmacy Technician trainees, incumbent workers, or Pharmacy Technician certificate students for the NHA Exam for the Certification of Pharmacy Technicians (ExCPT) and the PTSB Pharmacy Technician Certification Exam (PTCE), both recognized by the Arizona State Board of Pharmacy.	Prerequisites: A grade of C or better PHT155, or Pharmacy Technician Training License, or permission of Department or Division.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHT253	Pharmacy Technician Externship	Consists of 200 hours at a clinical site, under the supervision of a pharmacist or senior pharmacy technician. Includes hands-on experience with patients, staff, and other healthcare professionals while applying the knowledge and skills obtained in the pharmacy technician program. Preparation for work experience in a pharmacy setting.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: PHT155 or PHT225.	LAB 2.0 15.0 0.0
PHT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
PHT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
PHT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
PHT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
PHT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
PHY101	Introduction to Physics	A survey of physics emphasizing applications of physics to modern life.	Prerequisites: A grade of C or better in MAT090 or higher level mathematics course or eligibility for MAT120 or higher as indicated by appropriate placement.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PHY111	General Physics I	Includes motion, energy, and properties of matter.	Prerequisites: A grade of C or better in MAT182 or MAT187 or MAT188 or MAT220 or MAT221 or eligibility for MAT220 as indicated by appropriate placement or one year high school Trigonometry with a grade of C or better or permission of Department or	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PHY112	General Physics II	Includes electricity, electromagnetism, and modern physics.	Prerequisites: A grade of C or better in PHY111.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PHY121	University Physics I: Mechanics	Kinematics, Newton's laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound.	Prerequisites: A grade of C or better in MAT220, or MAT221, or permission of Department or Division. One year of high school physics suggested but not required.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PHY131	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves.	Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department or Division and PHY121. Corequisites: MAT241 or permission of Department or Division.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHY241	University Physics III: Thermodynamics, Optics, and Wave Phenomena	Heat, entropy, and laws of thermodynamics; wave propagation; geometrical and physical optics; introduction to special relativity.	Prerequisites: A grade of C or better in PHY131 or permission of Instructor.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PHY282AA	Service-Learning Experience in Physical Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
PHY282AB	Service-Learning Experience in Physical Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
PHY282AC	Service-Learning Experience in Physical Science	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
PHY285	Introduction to Astrodynamics	Introduction to celestial mechanics and the dynamics of spacecraft navigation. Introduction to rocket propulsion and spacecraft design. Orbital and interplanetary celestial mechanics and maneuvers. Astrophysics and characteristics of the space environment. Lab is project-based, utilizing a real-time spacecraft simulation environment.	Prerequisites: A grade of C or better in ENG101 and PHY121.	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PHY294	Special Topics in Physics	Conceptual, experimental, and computational aspects of a special topic in physics.	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
PHY294AA	Special Topics in Physics	Conceptual, experimental, and computational aspects of a special topic in physics.	Prerequisites: Permission of Department or Division.	LEC 2.0 2.0 2.0
PHY294AB	Special Topics in Physics	Conceptual, experimental, and computational aspects of a special topic in physics.	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
PHY298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
PHY298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PHY298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
PIM115	Beginning Pima Conversation I	Conversational Pima. Basic sentence structure, pronunciation, and vocabulary necessary to develop speaking ability in Pima. Designed to develop speaking and listening abilities, with little emphasis on grammar	Prerequisites: None.	LEC 3.0 3.0 3.0
PIM116	Beginning Pima Conversation II	Reviews basic Pima vocabulary, pronunciation, and sentence structure. Designed to develop speaking, listening, and writing skills in O'Odham for effective communication in Pima.	Prerequisites: A grade of C or better in NAV201 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
PLB109	Phlebotomy: Basic Skills	Theory and practice of basic phlebotomy including laboratory test codes, equipment, and procedures.	Prerequisites: (Acceptance into the Laboratory Assisting or Phlebotomy program or permission of Instructor) and permission of Program Director.	L+L 2.0 4.0 4.0
PLB110	Practicum: Fundamental Phlebotomy Skills	Application of fundamental phlebotomy techniques in a clinical laboratory setting or health care environment.	Prerequisites: A grade of C or better in PLB109 and submit to a drug screening and demonstrate negative results and acceptance into the Medical Assisting or Phlebotomy program or permission of Program	LAB 0.5 3.0 0.0
PLB110AA	Practicum: Basic Phlebotomy: Training for Law Enforcement Officers	Application of basic phlebotomy techniques in a clinical laboratory setting or health care environment for law enforcement purposes.	Prerequisites: Certified Law Enforcement Officer or permission of Program Director. Corequisites: PLB109.	LAB 2.0 6.0 0.0
PLB111	Specimen Processing and Advanced Techniques in Phlebotomy Procedures	Theory and practice of advanced techniques in phlebotomy and specimen processing including laboratory test codes, equipment, and procedures.	Prerequisites: A grade of C or better in PLB109 and permission of Program Director.	L+L 2.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PLB112	Practicum: Specialized Phlebotomy Techniques	Application of specialized phlebotomy techniques in a clinical laboratory setting or health-care environment.	Prerequisites: A grade of C or better in PLB109 and PLB110. Corequisites: PLB111 and PLB121, or permission of Program Director.	LAB 0.5 3.0 0.0
PLB114	Refresher Course for Phlebotomists	Review of phlebotomy theory and practices including equipment, procedures, and special considerations. Reinforces and updates basic skills and competencies of phlebotomy techniques for individuals who have not worked in the field for between 6 months and 24 months and for those who have completed a formal structured phlebotomy training program but have not worked in the field.	Prerequisites: (Must provide proof of 2 years employment as a phlebotomist within the last 4 years or completion of a formal structured phlebotomy training program within the last 2 years with proof of a minimum of 100 successful venipunctures) and permission of Program Director.	L+L 1.0 1.0 1.0
PLB115	Developmental Skills for Law Enforcement Phlebotomy	Provides an update for specific law enforcement phlebotomy. Includes phlebotomy theory and practices including equipment, procedures, and special considerations of phlebotomy techniques.	Prerequisites: Permission of Program Director.	L+L 1.0 1.0 1.0
PLB121	Practicum: Basic Specimen Processing	Application of specimen processing techniques in a clinical laboratory setting or health care environment.	Prerequisites: A grade of C or better in PLB109 and PLB110. Corequisites: PLB111 and PLB112 or permission of Program Director.	LAB 2.0 8.0 0.0
PLB122	Practicum: Phlebotomy and Specimen Processing	Application of phlebotomy and specimen processing techniques in a clinical laboratory setting or health care environment.	Prerequisites: A grade of C or better in PLB109 or permission of Program Director. Prerequisites: A grade of C or better in PLB111 or Corequisites: PLB111 or	LAB 3.0 12.0 0.0
PLB250	Phlebotomy Program Review	Provides review of phlebotomy theory fundamental knowledge, and advanced concepts required for phlebotomy national certification examinations. Topics include anatomy and physiology, specimen collection, specimen processing and handling, non-blood specimens, and laboratory operations related to phlebotomy.	Prerequisites: (A grade of C or better in PLB122 or current employment with a minimum of one (1) year experience as a phlebotomist) and permission of Program Director.	LEC 1.0 1.0 1.0
PLB280	Quality Assurance for Phlebotomy	Components, tests, and procedures for evaluation of phlebotomy to assure consistency in the collection, processing, and analysis process.	Prerequisites: Current employment in a law enforcement agency with a minimum of one (1) year of experience as a law enforcement phlebotomist or	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PLC109	Phlebotomy Basic Skills	Theory and practice of basic phlebotomy including laboratory test codes, equipment, and procedures.	Prerequisites: Admission into the Phlebotomy program. Successful completion of RDG100 or higher or appropriate reading placement into CRE101.	90
PLC111	Specimen Processing and Advanced Techniques in Phlebotomy	Theory and practice of advanced techniques in phlebotomy and specimen processing including laboratory test codes, equipment, and procedures.	Prerequisites: PLC109 or with Program Manager approval.	90
PLC122	Phlebotomy Practicum	Application of phlebotomy and specimen processing techniques in a clinical laboratory setting or health care environment.	Prerequisites: 1. A grade of C or better in PLC111 or with Program Manager approval. 2. Background check requirements in compliance with the Maricopa County Community College District Supplemental Background Check policy. 3. Students also must provide a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Students must maintain current fingerprint clearance throughout the externship(s). 4. Complete and submit the Allied Health Student Health and Safety Documentation Checklist, with included documentation. 5. Students are responsible to meet the requirements of the background check, fingerprint clearance card, and health and safety documentation.	120

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PLC211	Advanced Phlebotomy Skills	This phlebotomy training course is tailored to healthcare clinicians with training in another field. This course is designed to further develop the knowledge and skill necessary to perform the art of obtaining blood samples for laboratory analysis in a medical laboratory environment. The learning experience includes 40 hours of class and lab instruction. The course is also designed to prepare you to take the National HealthCareer Certification exam to become a Certified Phlebotomy Technician.	Prerequisites: None.	40
PLG124	Plumbing: Pipes and Fittings	This course introduces the various types of plumbing materials, pipe schedules and material properties, and applications of piping. Trainees will learn how to determine the appropriate types of fittings, valves, hangers, and supports needed for piping jobs. Trainees will learn to properly measure, cut, prep, and join piping.	Prerequisites: None.	81
PLG125	Plumbing: Fixtures	This course introduces commonly used fixtures in plumbing systems. Students will select and operate each type of fixture for a variety of installations. The course provides an overview of plumbing system installation, maintenance and water heating systems.	Prerequisites: None.	61
PLG126	Plumbing: Drain, Waste, and Vent	This course addresses drainage, waste movement and ventilation for construction application. Course provides instruction in locating, installing, connecting, and testing a complete drain, waste, and vent (DWV) system.	Prerequisites: None.	81
PLG127	Plumbing: Water Distribution Systems	This course discusses the processes through which potable water is distributed. Students will learn to identify the components and functions of a water distribution system and explain the relationships among the components. The course also includes installation and testing of water distribution systems.	Prerequisites: None.	61
PLG224	Plumbing: Pipe Systems and Controls	This course covers applied calculations to determine size, types and service of pipe systems. Course also includes the application of drawings, codes, and specifications for assembly and installation of gas, air, and water systems.	Prerequisites: None.	81
PLG225	Plumbing: Water Disposal Systems	Course covers water disposal and drainage systems, to include the types, components, functions, codes, safety, design, installation and repair.	Prerequisites: None.	102
PLG226	Plumbing: Fixtures and Appliances	Course covers the safety, codes, installation, maintenance, and repair of appliances, fixtures, and gas piping.	Prerequisites: None.	81
PLG227	Plumbing: Water Resource Solutions	Course introduces water supply disinfection, filtration systems, and sustainable water practices.	Prerequisites: None.	40

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PME160	Emergency Medical Services Professionals: Anatomy and Physiology	Designed to provide emergency medical response personnel with the knowledge of the human systems required to perform life saving measures in the practice of emergency care services.	Prerequisites: None.	LEC 3.0 3.0 3.0
PME190	Introduction to ECG Rhythm Analysis and Interpretation for EMS Professionals	Designed to provide an overview of the anatomy and physiology of the cardiovascular system and electrophysiology of the cardiac conduction system for Emergency Medical Service (EMS) professionals. Basic electrocardiograph (ECG) multi-lead acquisition, analysis, and interpretation of various dysrhythmias and cardiovascular conditions.	Prerequisites: None.	LEC 3.0 3.0 3.0
PME191	Introduction to Pharmacology for EMS Professionals	Designed to provide an overview of the principles of pharmacology and pharmacologic agents utilized in patient management plans. Includes pharmacokinetics, pharmacodynamics, physiology of pharmacology, calculating drug dosages, and drug profiles.	Prerequisites: None.	LEC 3.0 3.0 3.0
PME201	Advanced Cardiac Life Support (ACLS) Initial Provider in Paramedicine	Designed to provide the knowledge and skills needed to recognize and manage cardiopulmonary arrest, acute dysrhythmia, stroke, and acute coronary syndromes according to current emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in advanced cardiac life support.	Prerequisites: Admission into the Paramedic Education Program.	L+L 1.0 2.0 2.0
PME202	Pediatric Advanced Life Support (PALS) Initial Provider in Paramedicine	Designed to provide the knowledge and skills needed to recognize and manage an infant, child or adolescent in respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current Pediatric Advanced Life Support (PALS) and emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in pediatric emergencies.	Prerequisites: Admission into the Paramedic Education Program.	L+L 1.0 1.5 1.5
PME203	Pediatric Emergencies for Prehospital Professionals (PEPP) Initial Provider in Paramedicine	Designed to provide the knowledge and skills needed to recognize and manage an infant, child or adolescent in respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current Pediatric Emergencies for Prehospital Professionals (PEPP) and emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in pediatric emergencies.	Prerequisites: Admission into the Paramedic Education Program.	L+L 1.0 1.5 1.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PME204	Neonatal Resuscitation Provider (NRP) in Paramedicine	Designed to provide the knowledge and skills needed to recognize and manage a neonate with respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current American Academy of Pediatrics (AAP) and emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in neonatal resuscitation.	Prerequisites: Admission into the Paramedic Education Program.	L+L 0.5 1.5 1.5
PME205	Advanced Medical Life Support (AMLS) Initial Provider in Paramedicine	Designed to provide the knowledge and skills needed to recognize and manage various medical conditions according to the National Association of EMTs (NAEMT) Advanced Medical Life Support (AMLS) guidelines. Skills are sequenced and synthesized into simulations.	Prerequisites: Admission into the Paramedic Education Program.	L+L 1.0 1.5 1.5
PME206	International Trauma Life Support (ITLS) Provider/Pre-Hospital Trauma Life Support (PHTLS)	Designed to provide the knowledge and skills needed to recognize and manage various trauma conditions and environmental injuries according to the International Trauma Life Support (ITLS) or Provider/ Pre-Hospital Trauma Life Support (PHTLS) guidelines. Skills are sequenced and synthesized into simulations.	Prerequisites: Admission into the Paramedic Education Program.	L+L 1.0 1.5 1.5
PME211	Advanced Cardiac Life Support (ACLS) Refresher	Designed to meet Advanced Cardiac Life Support (ACLS) refresher requirements for the healthcare provider who initiates, directs, or participates in the management of cardiopulmonary arrest and other cardiovascular emergencies according to current cardiopulmonary resuscitation and emergency cardiovascular care guidelines. Provides the healthcare provider with the knowledge and skills needed to recognize and manage cardiopulmonary arrest, acute dysrhythmia, stroke, and acute coronary syndromes according to current emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in advanced cardiac life support.	Prerequisites: None.	L+L 0.5 1.0 1.0
PME212	Pediatric Advanced Life Support (PALS) Refresher	Designed to meet Pediatric Advanced Life Support (PALS) refresher requirements for the healthcare provider who initiates, directs, or participates in the management of an infant, child or adolescent in respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in pediatric emergencies.	Prerequisites: None.	L+L 0.5 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PME213	Pediatric Emergencies for Prehospital Professionals (PEPP) Refresher	Designed to meet Pediatric Emergencies for Prehospital Professions (PEPP) refresher requirements for the healthcare provider who initiates, directs, or participates in the management of an infant, child or adolescent in respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current PEPP and emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in pediatric emergencies.	Prerequisites: None.	L+L 0.5 1.0 1.0
PME215	Advanced Medical Life Support (AMLS) Refresher	Designed to meet the National Association of EMTs (NAEMT) Advanced Medical Life Support (AMLS) refresher requirements for the healthcare provider who performs assessment and management of the most common medical crises in patients. Skills are sequenced and synthesized into simulations.	Prerequisites: None.	L+L 0.5 1.0 1.0
PME216	International Trauma Life Support (ITLS)/Pre-Hospital Trauma Life Support (PHTLS) Refresher	Designed to meet International Trauma Life Support (ITLS) or Pre-Hospital Trauma Life Support (PHTLS) refresher requirements for the healthcare provider who performs assessment and management of various trauma conditions and environmental injuries. Skills are sequenced and synthesized into simulations.	Prerequisites: None.	L+L 0.5 1.0 1.0
PME221	Basic Level and Advanced Level Skills Course for the EMS Instructor and Examiner	Designed to provide an overview of the roles and responsibilities of basic level and advanced level instructors and examiners. Includes instructional strategies and methodologies, methods of evaluation, documentation of skill competency, and management strategies of emergency medical services (EMS) programmatic, state, and national scope of practice basic level and advanced level skills stations.	Prerequisites: None.	LEC 2.0 2.0 2.0
PME222	Advanced Cardiac Life Support (ACLS) Instructor Preparation	Designed to prepare Advanced Cardiac Life Support (ACLS) instructor candidates to deliver American Heart Association (AHA) instructor-led and blended learning courses. Provides an overview of the roles and responsibilities of the ACLS instructor. Includes instructional considerations, methods of evaluation, documentation of ACLS student skill competency, and ACLS Course management according to AHA guidelines.	Prerequisites: None.	LEC 2.0 2.0 2.0
PME223	Pediatric Advanced Life Support (PALS) Instructor Preparation	Designed to prepare Pediatric Advanced Life Support (PALS) instructor candidates to deliver American Heart Association (AHA) instructor-led and blended learning courses. Provides an overview of the roles and responsibilities of the PALS instructor. Includes instructional considerations, methods of evaluation, documentation of PALS student skill competency, and PALS Course management according to AHA guidelines.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PME240	Pharmacology in Paramedicine	Designed to provide an overview of the pathophysiologic principles of pharmacology, pharmacologic agents in the Paramedic scope of practice, and the practice of medication administration. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to integrate comprehensive knowledge of the pathophysiologic principles of pharmacology and pharmacologic agents to formulate a differential diagnosis and to implement a management plan for medical emergencies and trauma.	Prerequisites: Admission into the Paramedic Education Program.	L+L 3.0 5.0 5.0
PME245	Airway and Ventilatory Management in Paramedicine	Designed to prepare students to integrate knowledge of the respiratory system, comprehensive assessment practices, and pharmacologic agents to formulate a differential diagnosis and implement airway and ventilatory management plans for medical emergencies and trauma. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to perform comprehensive assessment and techniques in the paramedic scope of practice for assuring airway patency, adequate mechanical ventilation, and respiration for all age groups.	Prerequisites: Admission into the Paramedic Education Program.	L+L 3.0 4.0 4.0
PME250	Comprehensive Patient Assessment in Paramedicine	Designed to provide an overview of comprehensive patient assessment. Develops psychomotor skills in the paramedic scope of practice. Integrates the pathophysiological significance of comprehensive assessment findings to formulate a differential diagnosis and implement a management plan for medical emergencies and trauma.	Prerequisites: Admission into the Paramedic Education Program.	L+L 1.0 3.0 3.0
PME251	Medical Emergencies in Paramedicine I	Designed to provide an overview of pathophysiologic principles, epidemiology, comprehensive assessment, differential diagnosis, and pharmacology for respiratory and cardiovascular emergencies. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to implement a management plan in the Paramedic scope of practice for respiratory and cardiovascular emergencies.	Prerequisites: Admission into the Paramedic Education Program.	L+L 4.0 8.0 8.0
PME252	Medical Emergencies in Paramedicine II	Designed to provide an overview of pathophysiologic principles, epidemiology, comprehensive assessment, differential diagnosis, and pharmacology for various medical emergencies. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to implement a management plan in the Paramedic scope of practice for various medical emergencies.	Prerequisites: Admission into the Paramedic Education Program.	L+L 4.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PME253	Medical Emergencies in Paramedicine III	Designed to provide an overview of pathophysiologic principles, epidemiology, comprehensive assessment, differential diagnosis, and pharmacology for various medical conditions. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to implement a management plan in the Paramedic scope of practice for gynecologic, obstetric, pediatric, and geriatric emergencies, neonatal care, and patients with special challenges.	Prerequisites: Admission into the Paramedic Education Program.	L+L 4.0 4.0 4.0
PME254	Technical Operations in Paramedicine	Designed to provide an overview of transport operations, incident management, multi-casualty incidents, extrication, special rescue, hazardous materials incidents, terrorism incidents, and disaster response. Examines the Paramedic's operational roles and responsibilities.	Prerequisites: Admission into the Paramedic Education Program.	L+L 2.5 3.0 3.0
PME260	Trauma Patient Management in Paramedicine	Designed to provide an overview of pathophysiologic principles, epidemiology, comprehensive assessment, differential diagnosis, and pharmacology for various trauma conditions. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to implement a management plan in the Paramedic scope of practice for hemorrhage, soft tissue trauma, burns, face and neck trauma, head and spine trauma, chest trauma, abdominal and genitourinary trauma, orthopedic trauma, and environmental emergencies.	Prerequisites: Admission into the Paramedic Education Program.	L+L 2.0 2.0 2.0
PME270	Immersive Total Patient Management Experience (ITPME)	Designed to provide immersive-simulated live patient interactive out-of-hospital scenarios. This course creates an environment which facilitates incident stress inoculation and interdisciplinary collaboration.	Prerequisites: Admission into the Paramedic Education Program.	L+L 2.0 2.0 2.0
PME280	Preparation for Paramedicine Practicum	Designed to provide an overview of Emergency Medical Service (EMS) systems, safety and wellness, resiliency, health, medical/legal and ethical issues, EMS communications, documentation, and crime scene awareness. Examines the Paramedic's roles and responsibilities to assure personal, patient, and public health and safety in the provision of professional emergency care.	Prerequisites: Admission into the Paramedic Education Program.	LEC 1.0 1.0 1.0
PME281	Paramedicine Clinical Practicum: Comprehensive	Designed as the precepted Paramedicine clinical practicum in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical emergencies and trauma in a clinical setting.	Prerequisites: Admission into the Paramedic Education Program.	L+L 2.0 15.0 15.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PME281AA	Paramedicine Clinical Practicum: Phase I	Designed as the precepted Paramedicine clinical practicum in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical emergencies and trauma in a clinical setting.	Prerequisites: Admission into the Paramedic Education Program.	L+L 1.0 7.5 7.5
PME281AB	Paramedicine Clinical Practicum: Phase II	Designed as the precepted Paramedicine clinical practicum in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical emergencies and trauma in a clinical setting.	Prerequisites: Admission into the Paramedic Education Program.	L+L 1.0 7.5 7.5
PME288	Paramedicine Comprehensive Field Internship Practicum	Designed as the precepted Paramedicine field internship in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behavior, critical thinking, decision-making, and patient management of medical emergencies and trauma in the out-of-hospital setting.	Prerequisites: Admission into the Paramedic Education Program.	L+L 5.0 34.0 34.0
PME289	Preparation for Paramedic National Credentialing	Designed to provide preparation for the national cognitive and psychomotor examinations, and other credentials required for national and state Paramedic certification/licensure.	Prerequisites: Admission into the Paramedic Education Program.	L+L 2.0 3.0 3.0
PME290	Advanced Life Support (ALS) Refresher	Designed to provide a refresher of Advanced Life Support (ALS) to meet national and Arizona Department of Health Services Bureau of Emergency Services and Trauma System (AzDHS/BEMSTS) requirements for Paramedicine recertification.	Prerequisites: None.	L+L 1.0 1.0 1.0
PME291	Community Health Paramedicine	Designed as the capstone Community Health Paramedicine experience in which the student synthesizes standard of care and expanded scope of practice with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, to practice patient-centered evidence-based paramedicine in the community setting.	Prerequisites: None.	L+L 8.0 11.0 11.0
PME292	Critical Care Paramedicine	Designed as the capstone Critical Care Paramedicine experience in which the student synthesizes standard of care and expanded scope of practice with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, to practice patient-centered evidence based paramedicine in the clinical, out-of-hospital, and inter-facility transport settings.	Prerequisites: None.	L+L 8.0 11.0 11.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PME293	Tactical Emergency Casualty Care (TECC)	Designed to provide strategies, skills, and simulations to decrease preventable death in the prehospital unstable environment according to National Association of EMTs (NAEMT) and Tactical Emergency Casualty Care (TECC) guidelines. Strategies include integration of rapid patient assessment with trauma patient management in tactical and hazardous environments. Promotes a common approach for the transition of rescue to patient care while limiting the risk of further casualties. Examines the impact of tactical and environmental factors on trauma patient management.	Prerequisites: None.	L+L 2.5 2.5 2.5
PME298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
PME298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
PME298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
PMP120	Massage Therapy Basics	A massage basics course covering: sanitation, hygiene, safety, contraindications, ethics, healthy therapeutic relationships, professional communication, overview of the human body (integumentary, muscular, and skeletal systems), healthcare terminology, muscle theory, client care, self-care, and Swedish massage.	Prerequisites: Admission into the Massage Therapy program.	175

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PMP121	Massage Therapy Advanced	Advanced anatomy and massage, focusing in greater detail on the skeletal and muscular components and manipulations of the body. Students are taught all the bones and muscles of the body and introduced to the kinesiology that develops from their interactions. Deep tissue, Thai massage, and reflexology are introduced. Recently learned skills will be practiced on the public during clinic with coaching.	Prerequisites: PMP120 or Program Manager's permission.	175
PMP220	Massage Therapy Mastery I	An advanced anatomy and massage course focusing in detail on the skeletal and muscular components and manipulations of the upper body. Students will review the bones and muscles of the upper body and the kinesiology that develops from their interactions. Corresponding deep-tissue massage for the upper body is taught in conjunction with the advanced anatomy to ensure its practical application. Integration of deep tissue, Thai massage, myofascial, and structural massage are emphasized. Subjective, Objective, Assessment, Plan (S.O.A.P.) notes are introduced. The course concludes with two weeks of supervised clinic with coaching.	Prerequisites: PMP121 or Program Manager's permission.	175
PMP221	Massage Therapy Mastery II	An advanced anatomy and massage course focusing in detail on the skeletal and muscular components and manipulations of the lower body. Students will review all of the bones and muscles of the lower body and the kinesiology that develops from their interactions. Corresponding deep-tissue massage for the lower body is taught in conjunction with the advanced anatomy to ensure its practical application. Students combine all of their program skills, integrating anatomy, kinesiology, concepts, theories, and techniques to properly assess clients and apply critical thinking in tailoring treatments to individuals with documentation. Clients with unique needs are covered such as athletes, expecting mothers, infants, older adults, obese individuals, people with disabilities, and end of life care. Persons with common injuries and conditions are also covered, teaching specific strategies and protocols to address them. Entrepreneurial skills conducive to the industry of massage therapy will continue to be reinforced while an exit plan is created for the student's entrance into the industry. The course concludes with two weeks of supervised clinic with coaching to gain practical experience working on the general public and applying the assessment/treatment approaches focused on in the course.	Prerequisites: PMP220 or Program Manager's permission.	175

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PNT101	Introduction to Painting-Decorating Trade	Orientation to the trade, apprentice responsibilities and professionalism, communication skills and workplace behavior. Tools and equipment used in the trade. Preparation and application procedures of various types of surfaces, utilizing various types of materials used in the trade.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 4.0 4.0 4.0
PNT102	Surface Preparation and Cleaning	Overview of surface preparation and cleaning, emphasis on materials, coating applications, various surface finishes, and safety procedures. Causes of paint failures and remedies. Also preparation procedures of plaster drywall, masonry and metal. Residential and commercial applications.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 4.0 4.0 4.0
PNT104	Wood and Decorative Finishes	Wood and decorative finishing techniques including glazing, antiquing, wood graining and marbelizing. Sanding techniques of hardwoods and softwoods including fillers, sealers, stains and finishes.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
PNT105	Painting and Drywalling Orientation	Overview of the painting and drywalling labor history, workplace performance, green construction, work place issues and sexual harassment.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
PNT106	Health and Safety for Drywall Finishers	Purpose and limitation of Material Safety Data Sheet (MSDS). Occupational Safety and Health Administration (OSHA). Common safety and fall hazards. Requirements for erecting and dismantling scaffolds.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
PNT107	Introduction to the Drywall Trade	Basic terminology and tools used in the drywall trade. Exhibiting professionalism in the trade in appearance, dealing with difficult customers, following workplace protocol and procedure.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 2.0 2.0 2.0
PNT108	Materials of the Drywall Trade	Characteristics of drywall panels, types of fillers and proper lighting requirements. Surface preparation, ventilation and materials handling.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 2.0 2.0 2.0
PNT109	Tools of the Drywall Trade	Selection, use, maintenance and safety procedures for common tools of the drywall trade.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 2.0 2.0 2.0
PNT118	OSHA Standards and Regulations	Provisions of and implementation of Occupational Safety and Health Administration (OSHA) Act in the work place. Rights and responsibilities under the OSHA Act. Appeals process, record keeping, and voluntary protection programs. OSHA's construction and general industry standards. Overview of the requirements of the more frequently referenced standards.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 1.5 1.5 1.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PNT120	Basic Calculations for Construction	Addition, subtraction, multiplication and division of whole, decimal, fraction and metric numbers. Percentage and fraction conversions. Metric units of length, weight, volume and temperature. Metric system as it relates to the construction trade. Basic algebra and geometry operations and equations. Area and volume calculations of shapes.	Prerequisites: None.	L+L 1.5 1.5 1.5
PNT121	Introduction to Hand and Power Tools	Overview of the use, maintenance and safety procedures for common hand and power tools.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
PNT123	Introduction to Blueprints	Basic concepts of blueprints, including terms and symbols, grid line systems and blueprint production techniques. Dimensions and blueprint reading	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
PNT150	Construction Foreman	Examine the basic supervisory and leadership concepts and skills needed to manage a construction project. Includes basic theories of motivation, role of communications in construction project management,decision making process, planning and organizing, strategies, developing production schedules to control production, discussing accident prevention and loss control	Prerequisites: None.	LEC 2.0 2.0 2.0
PNT201	Coverings and Blasting	Application, installation, and estimating procedures for wallcoverings including abrasive and wet blasting guidelines and systems.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 2.0 2.0 2.0
PNT202	Spray Painting	Operating and maintenance procedures for spray painting equipment and materials. Use of specialized painting systems and equipment. Application procedures for special coatings and parking lots.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
PNT203	Non-Spray Application of Coatings	Best practices in the application of stain, clear coat, and wood finish application on wood substrates.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 3.0 3.0 3.0
PNT205	Paints, Coatings and Materials	Coating products and solvent type and compatibility following Product Data Sheet and Material Safety Data Sheet for products. Including common failures, causes and corrections, weatherization, properties and functions of paints or coatings.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
PNT208	Filling, Taping and Sanding Applications	Characteristics of fillers, filling compounds, drying times. Taping techniques including taping and wiping procedures, tools and equipment. Functions and operations of boxes and fasteners as well as sanding application and bead and trim installation.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 4.0 4.0 4.0
PNT209	Automatic Taping Tools of the Drywall Trade	Inspection and maintenance procedures for keeping automatic taping tools in proper working condition.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	L+L 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PNT210	Advanced Drywall Applications and Systems	Methods for making repairs, mixing procedures, and recognizing common defects in drywall finishing and wallboards. General texture spraying techniques and basics of Exterior Insulated and Finish Systems (EIFS) and Expanded Polystyrene (EPS).	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 3.0 3.0
PNT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
PNT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
PNT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PNT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
PNT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
PNT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
PNT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
PON105	Surgical Technology for the Operating Room Nurse	Direct observation of principles and culture of operating room. Traffic patterns, aseptic techniques, roles, professional surgical team work, case management, perioperative record, instrument handling, safety precautions with regard to exposure, surgical attire, surgical regimen and chain of command.	Prerequisites: Acceptance into the Surgical Technology for the Operating Room Nurse Program or permission of Department or Division.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PON210	PeriOperative Principles I	Role and responsibilities of the professional nurse in the perioperative setting. Team concepts, patient care, nursing process and impact of quality assurance. Role of Association of Operating Room Nurse Standards of Practice.	Prerequisites: Acceptance into the Surgical Technology for the Operating Room Nurse program or permission of Department or Division. Corequisites: PON214.	LEC 3.0 3.0 3.0
PON212	PeriOperative Principles II	Common pathogenic organisms and methods of sanitation/sterilization. Instruments, procedures intervention measures related to the operating room. State and Federal regulating agencies. Moral and ethical issues.	Prerequisites: A grade of C or better in PON210 or permission of Department or Division. Corequisites: PON214.	LEC 3.0 3.0 3.0
PON214	PeriOperative Laboratory	Practical application of perioperative nursing. Aseptic technique. Scrubbing, gowning, gloving, instrumentation, and maintenance of a sterile field. Accountability emphasized.	Prerequisites: Acceptance into the Surgical Technology for Operating Room Nurse Program. Corequisites: PON210 and PON212.	LAB 4.0 9.5 9.5
PON218	PeriOperative Clinical Practice I	Application of the nursing process in care of surgical patients during the perioperative period. Statements of competency established by the Association of Operating Room Nurses.	Prerequisites: A grade of C or better in PON214.	LAB 3.0 15.0 0.0
PON220	PeriOperative Clinical Practice II	Application of the nursing process in care of surgical patients during the perioperative period. Statements of competency established by the Association of Operating Room Nurses.	Prerequisites: A grade of C or better in PON214 or permission of Department or Division.	LAB 3.0 15.0 0.0
PON230	Surgical Technology Materials Update	Current surgical technology materials. Surgical specialty modifications, introductions, technology. Specific uses, handling, application to surgical procedures.	Prerequisites: Currently enrolled in Surgical Technology or Surgical Technology for the Operating Room Nurse program, or Certified Surgical Technologist, or permission of	LEC 2.0 2.0 2.0 LAB 1.0 3.0 3.0
PON296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PON296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
PON296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
PON296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PON298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
PON298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
PON298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
POR101	Elementary Portuguese I	Basic grammar, pronunciation, and vocabulary of the Portuguese language. Includes study of Lusophone culture. Practice in listening, speaking, reading, and writing skills	Prerequisites: None.	L+L 5.0 6.0 6.0
POR102	Elementary Portuguese II	Continued study of basic grammar, pronunciation, and vocabulary of the Portuguese language. Includes study of Lusophone cultures and practice in listening, speaking, reading and writing skills	Prerequisites: A grade of C or better in POR101 or permission of Department or Division. Completion of prerequisites within the last three years is	L+L 5.0 6.0 6.0
POR201	Intermediate Portuguese I	Review of essential grammar of the Portuguese language and study of the Portuguese cultures. A continued practice and development of reading, writing, and speaking skills. Emphasis on both fluency and accuracy in the spoken language.	Prerequisites: A grade of C or better in POR102 or permission of the Department or Division. Completion of prerequisites within the last three years is	LEC 5.0 6.0 5.7
POS100	Introduction to Political Science	Introduction to the discipline of political science and its relation to other disciplines with emphasis on the major philosophies and institutions of government.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS101	Current Issues	Introduction to current issues in politics, economics, social relations, foreign affairs. Presentations by local, state and national civic and cultural leaders.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
POS110	American National Government	Study of the historical backgrounds, governing principles, and institutions of the national government of the United States.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS113	United States and Arizona Social Studies	Overview of government, history, and geography of the United States and Arizona. Includes the relationship of Arizona to the U.S. government as well as the influences and developments that have shaped U.S. and Arizona history. Also covers geographical systems, regions, and study techniques.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS114	World Social Studies	Introduction to the world from the integrated social science perspectives of history, geography, and government.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS115	Issues in American Politics	Examination of major issues in current affairs in the fields of politics, economics, social relations, foreign affairs, aesthetics, and others through the reading and viewing of secondary information sources	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
POS120	International Relations	Introduction to the principles and issues relating to the study of international relations. Evaluation of the political, economic, national, and transnational rationale for international interactions.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS125	Issues in World Politics	Contemporary issues and factors in international relations. Stress conditions in civil order, trade, and international institutions.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS130	State and Local Government	Survey of state and local government in the United States. Special attention on Arizona State government.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS140	Comparative Government	Overview and evaluation of the sub-field of comparative politics. Covers various national governments from around the world: their structure, system, method of governance. Examines methods of assessing these governments	Prerequisites: None.	LEC 3.0 3.0 3.0
POS180	United Nations Studies	Historical origins, structural makeup, political and operational characteristics, and legal activities of the United Nations. Analysis of the overall institution's ongoing utility, productivity and creativity.	Prerequisites: None.	L+L 3.0 3.0 3.0
POS210	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS220	U.S. and Arizona Constitution	Examination of the constitutions of the United States and the state of Arizona.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS221	Arizona Constitution	Examination of the Constitution of the State of Arizona.	Prerequisites: None.	LEC 1.0 1.0 1.0
POS222	U.S. Constitution	Examination of the United States Constitution.	Prerequisites: None.	LEC 2.0 2.0 2.0
POS223	Civil Rights and Liberties	The historic background and current status of major civil rights and civil liberties issues in the United States.	Prerequisites: None.	LEC 3.0 3.0 3.0
POS281AB	Public Policy/Service Internship	Field experience in community service, public policy or public service.	Prerequisites: Minimum of 15 credit hours at college granting internship with minimum GPA of 3.0 and permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
POS282AA	Volunteerism for Political Science: A Service Learning Experience	Service-learning field experience within government agencies, political organizations, citizen advocacy groups, and human service organizations/agency.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
POS282AC	Volunteerism for Political Science: A Service Learning Experience	Service-learning field experience within government agencies, political organizations, citizen advocacy groups, and human service organizations/agency.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
POS285	Political Issues and Public Policy	Introduction to public policy, how policy is made, and how public policy decisions are affected.	Prerequisites: None.	L+L 3.0 3.0 3.0
POS296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
POS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
POS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
PPT101	Hand and Power Tools	Identification and use of hand and hand-held power tools used in a power plant. Tool construction and purpose. Maintenance of hand and power tools	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PPT103	Print Reading and Plant Drawings	Introduction to print reading and plant drawings. Flow diagrams and symbols on drawings. Dimension, tolerance and clearance on drawings. Amendments to drawings. Specific types of drawings. Proper procedures when using plant drawings	Prerequisites: None.	LEC 1.0 1.0 1.0
PPT107	Lubrication	Principles, properties, and safe handling requirements of lubricants. Lubrication of bearings, lubrication systems, and system components. Oil settling systems. Construction, operation, and maintenance of oil purifiers	Prerequisites: None.	LEC 1.0 1.0 1.0
PPT108	Turbines	Operations, steam properties, energy transfer, parts, and types of turbines. Components and function. Turbine maintenance for oil and hydraulic systems, inspection of casings, nozzles and rotors. Turbine alignment and the tightening of joints using appropriate tools and equipment	Prerequisites: None.	LEC 1.0 1.0 1.0
PPT112	Principles of Machining	Safety practices, machining methods, and principles of material removal. Types of cutting tools, lathe, milling, drill, and bandsaw components. Principles of operation of specific machines found in the machine shop including turning, milling, drilling and cutting machines	Prerequisites: None.	LEC 3.0 3.0 3.0
PPT114	Drive and Gear Components	Terminology, identification and inspection of the component parts of a drive and gear system. Operation, maintenance and inspection of couplings, clutches, brakes, belt drives, chain drives, shafts and gears. Operation and configurations of variable speed drives	Prerequisites: None.	LEC 1.0 1.0 1.0
PPT115	Hydraulics and Pneumatics	Hydraulic and pneumatic safety, physical concepts, and fluid laws. Hydraulic and pneumatic system components and operation. Troubleshooting procedures of hydraulic and pneumatic systems	Prerequisites: None.	LEC 2.0 2.0 2.0
PPT117	Forklift Operations	Safe and proper operation of forklift. Parts and function of forklift, principles of operation, and safety precautions. Inspection procedures, proper care, and industry standards. On-hands operation of a forklift	Prerequisites: None.	LEC 1.0 1.0 1.0
PPT118	Conduct of Maintenance	Safety and management expectations. Defense in Depth strategy and Conduct of Verifications. Maintenance procedures. Work control process. Performance of work standards and documentation including pre-job preparation, pre-job notification, job review, job verification and job close out specific to nuclear power plant operations	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PPT119	Instrument Air Compressor Maintenance	Purpose, function, and identification of system drawings. Identification of major components. Instrument air compressor components and function. Air flow operations. Free air unloader components and function. Fluids and flow paths. Compressor cooling water and lubricating oil. Inspection and repair of parts. Troubleshooting	Prerequisites: None.	LEC 2.0 2.0 2.0
PPT124	Power Systems Components I	Principles, properties, and safe handling requirements of lubricants. Lubrication of bearings, lubrication systems, and system components. Oil settling systems. Construction, operation, and maintenance of oil purifiers. Terminology, identification and inspection of the component parts of a drive and gear system. Application, inspection, maintenance, and failure modes of plant bearings. Design and operation of sliding and anti-friction bearings and seals.	Prerequisites: None.	L+L 3.0 3.0 3.0
PPT126	Power Systems Components II	Functional components of turbines, including parts, steam properties and maintenance of oil and hydraulic systems. Heat exchanger theory, including types, operations, and maintenance of heat transfer systems. Operational principles of pneumatic and hydraulic valve actuators, including modulation control terminology and inspection testing.	Prerequisites: None.	L+L 3.0 3.0 3.0
PPT128	Power Systems Components III	Hydraulic and pneumatic safety, physical concepts, and fluid laws. Hydraulic and pneumatic system components and operation. Troubleshooting procedures of hydraulic and pneumatic systems. Mechanical component types and characteristics, common failure mechanisms, and operating principles of plant components.	Prerequisites: None.	L+L 3.0 3.0 3.0
PPT170	Instrumentation and Process Control	Principles and practices of instrumentation and process control systems used in industry. Topics cover the proper installation, troubleshooting, repair, and maintenance of various industrial process instrumentation (temperature, pressure, level, flow, etc.) and control circuits.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.	LEC 3.0 3.0 3.0
PPT202	Power Plant Systems I	Components and function of reactor coolant, volume control, safety injection, and nuclear sampling systems. Function and operation of main steam and turbine systems, main and auxiliary feedwater systems, pressurizer, control rod drive, and recirculation systems. Operation and function of steam and heater drain systems. Reactor plant safety concepts.	Prerequisites: A grade of C or better in PPT120 and PPT121, or permission of Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PPT203	Power Plant Systems II	Advanced plant systems. Water, electrical and cooling systems. Safe shutdown cooling water system. Waste drain system. Fuel handling and storage systems. Fuel pool cooling and cleanup. Purpose and operation of radioactive waste management. Service air and gas systems. Ventilation and fire protection systems. Containment, Containment Spray, Emergency Core Cooling, Emergency Power, Environmental Monitoring, Off-gas, Post-accident, Radiation Monitoring, Residual Heat Removal, and Suppression Pool systems.	Prerequisites: A grade of C or better in PPT120 and PPT121, or permission of Program Director.	LEC 3.0 3.0 3.0
PPT204	Measuring and Test Equipment	Administrative controls for precision measurement. Use of precision measuring equipment. Emphasis on proper use, accurate reading, and calculations using precision measuring devices	Prerequisites: None.	LEC 1.0 1.0 1.0
PPT205	Rigging	Safe and proper operation of lifting equipment. Weight calculations. Identification and proper location of rigging equipment. Hand signals and industry standards. Safe rigging practices. Inspection and maintenance procedures. Operation of pendant cranes	Prerequisites: None.	LEC 2.0 2.0 2.0
PPT206	Bearings	Application, inspection and maintenance of plant bearings. Design and operation of sliding and anti-friction bearings. Function, design and applications of bearing seals. Reasons for bearing failure and related preventative maintenance procedures	Prerequisites: None.	LEC 1.0 1.0 1.0
PPT207	Heat Exchangers	Heat exchanger theory including heat transfer and operating principles. Classification of heat exchangers including types, construction, and operation. Inspection of heat exchangers. Cleaning of exchanger tubes and shells. Cleaning of component parts. Troubleshooting tubes. Maintenance of exchangers	Prerequisites: None.	LEC 1.0 1.0 1.0
PPT209	Pipefitting Auxiliaries II	Purpose, terminology and system stress factors related to piping systems. Principles of fluid flow, and piping inspection procedures. Fabrication and installation of tubing materials, specific joints, and flanges. Basic piping system component maintenance, rework and installation procedures	Prerequisites: A grade of C or better in PPT109.	LEC 2.0 2.0 2.0
PPT211	Couplings	Types, functions, and specific applications of couplings. Coupling removal and inspection procedures. Coupling rework and installation	Prerequisites: None.	LEC 0.5 0.5 0.5
PPT212	Control Valves and Actuators	Modulating control terminology. Disassembly, inspection and assembly processes. Construction and operation of specific actuators. Maintenance of pneumatic and hydraulic valve actuators. Principles of operation, inspection and testing of control valves. Bench testing	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PPT214	Machine Alignment	Calculations and practical lab exercises using alignment principles. Determination of indicator sag and thermal growth. Obtaining readings for alignment or misalignment. Rim- face method of alignment stressed and practiced	Prerequisites: None.	L+L 3.0 5.0 5.0
PPT215	Relief and Safety Valves	Concepts of pressure and pressure measurement. Components and operation of rupture discs, relief valves, and safety valves. Maintenance procedures	Prerequisites: None.	LEC 1.0 1.0 1.0
PPT218	Lathe Operations	Safe and proper operation of the lathe. Component and accessories and their functions. Cutting tools and methods. Processes of machining including mounting, aligning, knurling, grooving, turning, thread cutting, drilling, reaming boring, and tapping. Machining techniques using a chuck	Prerequisites: None.	L+L 2.0 4.0 4.0
PPT219	Milling Machine Operations	Components of horizontal and vertical milling machines. Common milling machine accessories and cutters. Cutting speeds, feeds and depths for materials and cutters. Machine set up and operations. Common cutter failure. Operation of horizontal and vertical milling machines. Milling safety	Prerequisites: None.	LEC 2.0 2.0 2.0
PPT220	Heat Transfer and Fluid Flow	Course covers topics in heat transfer, fluid flow and thermodynamics. Topics include the properties of fluids, modes of heat transfer, and the energy relationships in fluid systems.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.	LEC 3.0 3.0 3.0
PPT221	Reactor Theory	Basic nuclear reactor theory to include atomic and nuclear physics, thermodynamics, and heat transfer and fluid flow.	Prerequisites: A grade of C or better in PPT120 and GTC108, or permission of Program	LEC 3.0 3.0 3.0
PPT222	Reactor Plant Chemistry and Materials	Basic nuclear reactor theory to include reactor chemistry, water chemistry, radiation detection and protection principles, and reactor plant materials.	Prerequisites: A grade of C or better in PPT120 or permission of Program Director.	LEC 3.0 3.0 3.0
PPT224EI	Components for Maintenance Technicians	Electrical component types and characteristics, such as circuit breakers and fuses, instrumentation schematics, protective relaying, and inverters.	Prerequisites: A grade of C or better in PPT202 or PPT203, or permission of Program Director.	LEC 1.0 1.0 1.0
PPT224EM	Electrical Components for Maintenance Technicians	In-depth reading and troubleshooting of electrical engineering and vendor prints. Operation and control of emergency power systems. Diesel Generators will also be covered.	Prerequisites: A grade of C or better in PPT202 or PPT203, or permission of Program Director.	LEC 1.0 1.0 1.0
PPT224MM	Mechanical Components for Maintenance Technicians	Mechanical component types and characteristics, common failure mechanisms, and operating principles of plant components.	Prerequisites: A grade of C or better in PPT202 or PPT203.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PPT225	Industrial Plant Chemistry and Materials	Fundamentals of industrial chemistry and materials to include chemistry principles, water chemistry control, cooling water chemistry, chemical hazards, and material science.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.	LEC 3.0 3.0 3.0
PPT230	Nuclear Plant Systems	Operation, components, instrumentation and controls, automatic features, and precautions and limitations of nuclear plant systems.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.	LEC 3.0 3.0 3.0
PPT235	Nuclear Physics	Course provides a foundation for understanding atomic and nuclear physics, neutron characteristics, reactor theory, reactor operation, and radiation fundamentals.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.	LEC 3.0 3.0 3.0
PPT242	Components for Maintenance Technicians	Electrical component types and characteristics, such as circuit breakers and fuses, instrumentation schematics, protective relaying, and inverters. In-depth reading and troubleshooting of electrical engineering and vendor prints. Operation and control of emergency power systems. Diesel Generators will also be covered.	Prerequisites: A grade of C or better in (ELC119 and ELC120) or permission of Program Director.	L+L 2.0 2.0 2.0
PPT250	Power Plant Position Preparation	Prepares students for the Power Plant Maintenance Positions Selection System (MASS) examination. Reading comprehension, mechanical concepts, spatial ability, and mathematical usage.	Prerequisites: None.	LEC 2.0 2.0 2.0
PPT255	Fossil Systems	Upon completion, the student will be able to explain how fossil plant systems operate in accordance with reference materials.	Prerequisites: None.	L+L 3.0 3.0 3.0
PPT270AA	Power Systems Technology Internship	Work experience in power plant industry and / or related field. Five (5) hours of work weekly. Approval, supervision and evaluation by an internship coordinator.	Prerequisites: Permission of Department or Division.	L+L 1.0 5.0 0.0
PPT270AB	Power Systems Technology Internship	Work experience in power plant industry and / or related field. Ten (10) hours of work weekly. Approval, supervision and evaluation by an internship coordinator.	Prerequisites: Permission of Department or Division.	L+L 2.0 10.0 0.0
PPT270AC	Power Systems Technology Internship	Work experience in power plant industry and / or related field. Fifteen (15) hours of work weekly. Approval, supervision and evaluation by an internship coordinator.	Prerequisites: Permission of Department or Division.	L+L 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PPT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
PPT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
PPT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
PSA301	Foundations of Public Safety Administration	Foundation in the principles and study of public safety administration including legal, political, and social factors. Overview of organizational theory and management, human capital management, resource management, leadership, and ethics that guide administration of diverse public safety organizations.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSA305	Communication Strategies for Public Safety Professionals	Overview of communication and public relations for public safety professionals. Topics include organization's internal and external environment and identifying and addressing public relations situations that emerge in these environments including the use of social media and other news media channels. Emphasis on developing, implementing, and evaluating public relations plans and strategies.	Prerequisites: A grade of C or better in [(COM100, or COM110, or COM230, or COM225) and (ENG102 or ENG108)] or permission of Program Director or Department/Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PSA310	Research Methods for Public Safety Administration	Overview of research methods and presentation of research results for public safety administration. Introduction to quantitative and qualitative methods including statistics for conducting and analyzing discipline-specific research within the fields of public safety.	Prerequisites: A grade of C or better in [(ENG102 or ENG108), and (MAT14+, or MAT15+, or equivalent), and [MAT206, or PSY230, or (PSY230 and PSY231), or PSY230WL, or SWU225]], or permission of Instructor or Program Director or Department/Division Chair.	L+L 4.0 6.0 6.0
PSA315	Public Policy and Public Safety Organizations	Overview of public policy as it relates to the administration and management of public safety organizations. Topics include the political environment, laws and regulations, and the interrelationship among law, regulations, budget and finance, and public policy. Focus on current issues surrounding public administration and bureaucracy, as well as how public constituencies can affect public policy decision-making.	Prerequisites: A grade of C or better in [PAD100 and (ENG102 or ENG108)], or permission of Instructor or Program Director or Department/Division Chair.	LEC 3.0 3.0 3.0
PSA320	Human Capital Management for Public Safety Organizations	Examination of the role and functions of human capital management in public safety organizations including recruitment, hiring, retention, and training. Focus on the impact and intersections of strategic planning, employee benefits and compensation, personnel issues, performance management, employment laws, labor relations, and responding to internal and external inquiries as it relates to the administration of public safety organizations.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSA398AA	Special Topics in the Public Safety Administration	Explores special topics including current issues within the field of public safety administration. Focuses on examination and investigation of existing and innovative program solving techniques also related to the field.	Prerequisites: None.	LEC 1.0 1.0 1.0
PSA398AB	Special Topics in the Public Safety Administration	Explores special topics including current issues within the field of public safety administration. Focuses on examination and investigation of existing and innovative program solving techniques also related to the field.	Prerequisites: None.	LEC 2.0 2.0 2.0
PSA398AC	Special Topics in the Public Safety Administration	Explores special topics including current issues within the field of public safety administration. Focuses on examination and investigation of existing and innovative program solving techniques also related to the field.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSA401	Public Safety Leadership	Examines the nature and roles of leadership in public safety, including concepts of organizational culture, leadership principles, and management strategies unique to public safety organizations.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PSA405	Public Safety Finance and Budget	Overview of the public finance system at all levels of government as it relates to the development of a budget for a public safety department. Topics include state and local budget process, revenue and funding sources involving taxes and revenue forecasting, as well as capital planning, projects, and budgets related to public safety. The course will consider alternative sources of public safety funding available to local government entities and stewardship of funds.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSA410	Program Planning and Evaluation for Public Safety Organizations	Focus on knowledge and skills required of public safety leaders in strategic planning for the design, development, implementation, and evaluation of social intervention initiatives related to public safety, health, and disaster management. Exploration of theories related to public services considered in the development of programs, the application of evaluation findings, and prioritization of community concerns and resources.	Prerequisites: A grade of C or better in PSA310 or permission of Instructor or Program Director or Department/Division Chair.	LEC 3.0 3.0 3.0
PSA439	Critical Incident Management for Public Safety Professionals	In-depth examination of the process of critical incident management for supervisors, encompassing a variety of events that impact public safety organizations. Focus on the four phases of emergency management in relation to critical incident management.	Prerequisites: A grade of C or better in (AJS/FSC147 and AJS/FSC148), or permission of Program Director or Department/Division Chair. Prerequisites or Corequisites: AJS/FSC149 or permission of Program Director or Department/Division Chair. Xref: AJS147 AJS148 AJS149	LEC 3.0 3.0 3.0
PSA449	Strategic Hazard Mitigation	In-depth examination of the process of strategic hazard mitigation for supervisors, encompassing a variety of events that impact Public Safety Organizations. Focus on mitigation planning to address community risks and vulnerabilities including the stakeholders involved and strategies employed to improve community resilience.	Prerequisites: A grade of C or better in PSA439 or permission of Program Director or Department/Division Chair.	LEC 3.0 3.0 3.0
PSA450	21st Century Public Safety Practices	Examination of emerging trends in public safety administration and organizational responsiveness through policy and practice. Topics include an overview of public safety administration, components of ethical leadership, sustainable and evolving practices, internal and external influences on policy, technology, effective data collection, and strategic planning to address societal and cultural changes in the community and workforce.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PSA460	Crime Scene Coordination for Public Safety Professionals	Overview of the crime scene logistics needed to effectively coordinate the work of law enforcement officers, police dispatch, forensic science services personnel, emergency medical personnel, and others present during crime scene investigations.	Prerequisites: A grade of C or better in AJS275, or LET225, or permission of Program Director or Department/Division Chair.	LEC 3.0 3.0 3.0
PSA470	Administrative Law for Public Safety Professionals	Introduction to the basic principles of administrative law for public safety professionals including the structure of federal, state, and local administrative institutions. Topics include the sources of law for administrative agencies, the basic procedures for administrative rulemaking, adjudication, and compliance, as well as judicial review of agency action.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSA490	Public Safety Administration Capstone	Completion of a professional project within the field of public safety administration applying concepts covered throughout the program. Students will demonstrate the steps for issue identification, related research, analysis, and presentation of information. Project topics will follow an instructor approval process.	Prerequisites: Permission of Program Director or Department/Division Chair.	L+L 3.0 4.0 4.0
PSG201	Fundamentals of Polysomnography	Introduction to the fundamental concepts of Polysomnography (PSG) and related clinical procedures.	Prerequisites: A grade of C or better in NDT101 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: NDT103LL.	LEC 3.0 3.0 3.0
PSG202	Sleep Therapeutics	Overview of sleep therapies and treatment of sleep disorders in adult and pediatric patients.	Prerequisites: A grade of C or better in PSG201 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: PSG202LL.	LEC 2.0 2.0 2.0
PSG202LL	Sleep Therapeutics Laboratory	Application of sleep therapies and treatments of sleep disorders in adult and pediatric patients.	Prerequisites: A grade of C or better in NDT103LL and admission into the Clinical Neurodiagnostic Technology program. Corequisites: PSG202.	LAB 0.5 1.5 1.5
PSG203	Record Scoring	Polysomnography (PSG) record scoring using American Academy of Sleep Medicine (AASM) standards.	Prerequisites: A grade of C or better in PSG202 and PSG202LL and admission into the Clinical Neurodiagnostic Technology program.	LEC 1.0 1.0 1.0
PSG215	Polysomnography (PSG) Clinical Rotation I	Introduction to the Neurodiagnostic Technology (NDT) facility for conducting Polysomnography (PSG). Emphasis on patient preparation, testing protocol, instrument calibration and operation, documentation, and patient interactions.	Prerequisites: A grade of C or better in NDT200LL and admission into the Clinical Neurodiagnostic Technology program. Corequisites: EEG215.	LEC 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PSG225	Polysomnography (PSG) Clinical Rotation II	Participation in clinical polysomnography testing. Emphasis on patient preparation, troubleshooting, therapeutics, documentation, record review, scoring, and report generation.	Prerequisites: A grade of C or better in PSG215 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: EEG225.	LEC 3.0 15.0 0.0
PSG235	Polysomnography (PSG) Clinical Rotation III	Advanced participation in clinical polysomnography testing with emphasis on independent function, decision making, time management, record review, scoring, and report preparation.	Prerequisites: A passing grade in PSG225 and admission into the Clinical Neurodiagnostic Technology program. Corequisites: EEG235.	LEC 3.0 15.0 0.0
PSG280	PSG Board Exam Review	Includes a review of all material covered in the Sleep Medicine Technology program. Taught during students' final semester of coursework to prepare them for their board examination.	Prerequisites: Admission into the Sleep Medicine Polysomnographic Technology program or permission of Program Director.	LEC 2.0 2.0 2.0
PSY101	Introduction to Psychology	Overview of the methods, concepts, and applications of psychological science. Includes an introduction to key domains of psychology: Biological, Cognitive, Developmental, Social and Personality, and Mental and Physical Health.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSY102	Introduction to Psychology Lab	Application of psychology as a science in areas such as: learning, memory, emotion, motivation, cognition, intelligence, development, personality, physical and mental health in a socially and culturally diverse world.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: PSY101 or permission of Instructor.	LAB 1.0 1.0 1.0
PSY123	Psychology of Parenting	The study of major psychological theories that pertain to parenting. Includes current research findings to foster effective relationships within modern families. Explores evidence-based practices for parenting individuals from birth through emerging adulthood.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSY132	Psychology and Culture	Examines how psychology is inherently shaped by cultural contexts. Explores how cultural influences relate to enculturated psychological processes, gaining insights into how individuals think, feel, and behave within their cultural environments.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSY143	Psychology of Sexual Orientation and Gender Identity	Introduction to the psychological study of sexual orientation and gender identity. Focus on psychological, developmental, social, biological, historical, and cultural aspects. Includes topics related to the recognition and development of sexual orientation and gender identity throughout the lifespan and lived experiences of LGBTQIA+ individuals and communities. Examines prejudice, discrimination, family dynamics, contributions, and current issues impacting LGBTQIA+ individuals, their allies, and communities.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PSY156	Understanding Death and Dying	Designed to give the student an understanding of the research and theories of death, dying, bereavement process, and aspects of end-of-life care and decision-making.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSY157	African/Black Psychology	Historical overview of the development of Black Psychology and the African-American "frame of reference." Includes topics such as family, psychological assessment, mental health, male/female relationships, personality and community development as well as educational, ethical and contemporary issues. Critical examination of psycho-cultural forces which have helped to shape and determine the unique thought, styles, behavior of African-Americans and to gain a greater appreciation of the theories, research, writings, and activities of Black Psychologists.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSY210	Educational Psychology	Scientific research and psychological principles as they apply to teaching and learning. The role of psychology in educational settings, human diversity, theories of learning, intelligence, memory, creativity, assessment, and factors influencing effective instruction and learning.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	LEC 3.0 3.0 3.0
PSY215	Sports Psychology	Application of the physiological, behavioral, social, cognitive, and humanistic perspectives in psychology to sport. Includes topics such as optimal performance, correlation, motivation, co-action effect, self-actualization, psycho-behavioral techniques, self-efficacy, and the general health benefits of sport participation.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSY218	Health Psychology	Behavioral and mental foundations of health, wellness, illness, and disease, and psychological dimensions of medical intervention.	Prerequisites: A grade of C or better in PSY101, or permission of Instructor.	LEC 3.0 3.0 3.0
PSY225	Psychology of Religion	Provides an introduction to the history, varieties and theories of the psychology of religion from an empirical, research-based perspective. Specific areas of study include the role of gender, age, socioeconomic status, and personality on religious experience, the effects of religion and prayer on mental and physical health, the development of religious thought and behavior over the lifespan, and the social psychology of new religious movements. In addition, the role of cultural differences on religious attitudes both within the USA and around the world is also addressed.	Prerequisites: A grade of C or better in PSY101 or Permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PSY230	Introduction to Statistics	An introduction to basic concepts in descriptive and inferential statistics, with emphasis upon application to psychology. Consideration given to the methods of data collection, sampling techniques, graphing of data, and the statistical evaluation of data collected through experimentation. Required of psychology majors.	Prerequisites: A grade of C or better in (PSY101 and eligibility for MAT14+ or higher as indicated by appropriate district mathematics placement) or permission of Instructor.	LEC 3.0 3.0 3.0
PSY230WL	Introduction to Statistics with Lab	An introduction to basic concepts in descriptive and inferential statistics, with emphasis upon application to psychology. Consideration given to the methods of data collection, sampling techniques, graphing of data, use of statistical software, and the statistical evaluation of data collected through experimentation. Required of psychology majors.	Prerequisites: A grade of C or better in (PSY101 and eligibility for MAT14+ or higher as indicated by appropriate district mathematics placement) or permission of Instructor.	L+L 4.0 5.0 5.0
PSY231	Laboratory for Statistics	Applications of inferential and descriptive statistics to statistical software in the field of psychology.	Prerequisites: None. Corequisites: PSY230.	LAB 1.0 2.0 2.0
PSY235	Psychology of Gender	To assess historical and psychological perspectives on women and men and to evaluate contemporary viewpoints regarding the psychology of women and men.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	LEC 3.0 3.0 3.0
PSY240	Developmental Psychology	Human development from conception through death. Includes biological, physical, cognitive, emotional, and sociocultural development across various ages.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	LEC 3.0 3.0 3.0
PSY241	Understanding and Changing Behavior	Theory and methods for observing, analyzing, and modifying behavior.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	LEC 3.0 3.0 3.0
PSY242	Understanding and Changing Behavior Lab	Advanced course designed to enable students to apply the principles of Applied Behavior Analysis (ABA) in a lab setting. Incorporates case studies and hands-on employment of best practices. Reviews current research in areas including, but not limited to, schedules of reinforcement, functional behavior assessment, stimulus discrimination and generalization.	Prerequisites: A grade of C or better in PSY241.	LAB 1.0 1.0 1.0
PSY243	The Psychology of Developmental Disabilities	The interrelationships among the physical, intellectual, social, and psychological aspects of developmental disabilities (DD). Various service approaches, policies, and programs designed to foster an adequate adjustment for individuals with DD and their families. Values and beliefs relating to persons with developmental disabilities.	Prerequisites: A grade of C or better in PSY101.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PSY244	Internship in Psychology	Experience in working in a wide variety of settings including but not limited to schools, non-profit agencies, advocacy agencies and other governmental agencies. 80 hours of designated volunteer or paid work.	Prerequisites: A grade of C or better required in all prerequisites. Prerequisites or Corequisites: Any two (2) 200-level PSY courses and permission of Instructor.	L+L 1.0 1.0 0.0
PSY248	Psychology of Adolescent Development	Explores the highly specialized developmental stage of adolescence. Includes biological, cognitive, psychosexual, and sociocultural factors as well as current theories and research.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	LEC 3.0 3.0 3.0
PSY250	Social Psychology	The scientific study of how people's thoughts, feelings, and behaviors are influenced by other people and situations. Includes how we think about ourselves and others, persuasion and influence, sexual and romantic attraction, friendship and helping others, aggression and prejudice.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	LEC 3.0 3.0 3.0
PSY260	Psychology of Personality	Introduction to theories of personality with emphasis upon application of specific theories towards the understanding of individuals.	Prerequisites: A grade of C or better in PSY101, or permission of Instructor.	LEC 3.0 3.0 3.0
PSY262	Positive Psychology: The Science of Well-Being	Overview and application of psychological principles based on strengths and resilience of human beings as opposed to dysfunction and symptoms of mental disorders. Topics include happiness, relationships, resilience, optimism, well-being, and brain research explaining positive emotions.	Prerequisites: None.	LEC 3.0 3.0 3.0
PSY266	Psychological Disorders	Distinguishes between healthy psychological functioning and psychological disorders. Includes topics in psychopathology such as problems with anxiety and depression, eating disorders, substance-use, schizophrenia, sexuality, and personality. Also covers causes and treatments of psychological disorders.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	LEC 3.0 3.0 3.0
PSY267	Introduction to Forensic Psychology	Overview of the practice of psychology in the law, by the law, and of the law. Focuses on the complementary functions and distinctions between psychology and the legal justice system. Topics include, but are not limited to, criminal investigations, risk and level of danger, competency, interrogations, confessions, assessment, eyewitness testimony, child custody, and domestic violence.	Prerequisites: A grade of C or better in PSY101.	LEC 3.0 3.0 3.0
PSY275	Biopsychology	Biological basis of behavior and mental functions. Biological foundations of sensation, perception, motivation, emotion, cognition, and psychopathology. Designed for students in the life and behavioral sciences.	Prerequisites: A grade of C or better in PSY101, or permission of Instructor.	L+L 4.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PSY277	Psychology of Human Sexuality	Survey of biopsychosocial aspects of human sexual behavior. Emphasis placed on the integration of the cognitive, emotional, and behavioral factors in sexuality.	Prerequisites: A grade of C or better in PSY101.	LEC 3.0 3.0 3.0
PSY280	Industrial/Organizational Psychology	The application of psychological principles to business and industry practices including organizational structure, leadership, personnel, employee stress and conflict, workplace conditions and job performance.	Prerequisites: A grade of C or better in PSY101, or permission of Instructor.	LEC 3.0 3.0 3.0
PSY282AA	Volunteerism Service Learning Experience in Psychology	Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in PSY101 and permission of Instructor.	LAB 1.0 1.0 0.0
PSY282AB	Volunteerism Service Learning Experience in Psychology	Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in PSY101 and permission of Instructor.	LAB 2.0 2.0 0.0
PSY282AC	Volunteerism Service Learning Experience in Psychology	Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in PSY101 and permission of Instructor.	LAB 3.0 3.0 0.0
PSY290AB	Research Methods	Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Critical review of literature and methods in representative areas of psychological research.	A grade of C or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 or PSY230WL or permission of	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0
PSY290AC	Research Methods	Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Critical review of literature and methods in representative areas of psychological research.	A grade of C or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 or PSY230WL or permission of	LEC 3.0 3.0 3.0 LAB 1.0 2.0 2.0
PSY295AA	Independent Research in Psychology	Original scientific investigation of psychology-related phenomenon.	Prerequisites: A grade of C or better in PSY290++ or Corequisites: PSY290++ or permission of Instructor.	LAB 1.0 1.0 0.0
PSY298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PSY298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
PSY298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
PTA101	Survey of Physical Therapy	History of physical therapy. Purpose, benefits, and goals of the Arizona Physical Therapy Association (AzPTA) and the American Physical Therapy Association (APTA). Roles and responsibilities of physical therapists (PTs) and physical therapist assistants (PTAs). Patient care, legal issues, principles of physical therapy treatment, education requirements, and functions of the APTA. Clinical practice settings used in the provision of physical therapy services. Common medical conditions and injuries treated by PTs and PTAs. Emerging opportunities in the practice of physical therapy.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.	LEC 1.5 1.5 1.5
PTA102	Structured Physical Therapist Assisting Review	Structured physical therapist assisting tutorial assistance and physical therapist assisting study skills related to physical therapist assisting courses. Physical therapist assisting process and critical thinking application skills emphasized.	Prerequisites: None. Corequisites: Enrollment in the Physical Therapist Assisting program or permission of Department Chair.	LEC 1.0 1.0 1.0
PTA103	Kinesiology	Physical principles of human motion. Emphasis on structure, movement, and stability of specific joints. Normal and abnormal human locomotion. Stabilizing and motion producing forces upon extremities and the spine including muscles, ligaments, and cartilage. Discussion of common joint deformities. Kinesiological analysis of functional movement of the human body.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PTA104	Musculo-Skeletal Assessment Techniques	Theory and principles of goniometry and manual muscle testing. Measure range of motion of joints and strength of muscles of the head, face, neck, trunk and extremities. Normal range of motion of the spine and extremities. Assess posture and common postural deviations. Palpate and identify pertinent bony and soft tissue structures. Document results of goniometric measurement, muscle testing, palpation and posture assessment. Perform data collection in a time efficient manner following the plan of care established by the supervising physical therapist. Communicate effectively with patients and the supervising physical therapist.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.	LAB 1.5 4.5 4.5
PTA152	Musculoskeletal Kinesiology and Assessment Techniques in Sonographic Imaging	Joint movements and planes of motion. Normal anatomy of the extremities. Tissue physiology. Pathological structures and their relationships. External palpation and relation to imaging.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.	L+L 4.0 6.0 6.0
PTA200	Patient Mobility Techniques	Theory, principles and practice of proper body mechanics. Principles and techniques of gait training, bed mobility and transfers, wheelchair mobility. Patient instruction, data collection, assistive devices and equipment used by the physical therapist assistants and their patients. Safety and first aid in physical therapy practice settings including contraindications for therapeutic interventions. Document physical therapy interventions. Perform physical therapy interventions in a time efficient manner following the plan of care established by the supervising physical therapist. Communicate effectively with patients and the supervising physical therapist.	Prerequisites: A grade of C or better in (PTA101, PTA103, and PTA104) or permission of the Program Director.	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0
PTA203	Clinical Pathology	Terminology and definitions used in discussion of human pathology. Disease processes frequently encountered in physical therapy practice. Functional anatomy, select medical tests for diagnoses, and medication and effects in providing physical therapy. Principles of disease prevention.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.	LEC 3.0 3.0 3.0
PTA204	Preclinical Practicum I	Supervised physical therapy clinical practice in the Healthcare United at GateWay (HUG) Clinic with moderate to maximal supervision with emphasis on performance of data collection and treatment interventions for a diverse patient population in an outpatient treatment setting.	Prerequisites: A grade of C or better in (PTA101, PTA103, and PTA104), or permission of the Program Director. Corequisites: PTA209.	LAB 0.5 1.5 1.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PTA205	Communication in Physical Therapy	Communication skills in the Physical Therapy setting. Self-image in communication. Active listening, responding to problems, body language, patient interview skills. Communicating with chronically ill and dying patients and their families. Communicating with persons with disabilities. Cultural differences in communication and views of Health Care.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of Department or Division.	LEC 1.5 1.5 1.5
PTA206	Clinical Practicum I	Clinical experience with advanced beginner or higher level of performance for physical therapist assisting students. Application of physical therapy skills and techniques in specific clinical settings including outpatient, hospital, rehabilitation and skilled nursing care.	Prerequisites: A grade of C or better in (PTA200, PTA204, PTA209, and PTA217) or permission of the Program Director. Corequisites: PTA207.	LAB 3.0 15.0 0.0
PTA207	Clinical Practicum Seminar I	Integration of non-clinical aspects of clinical practicums with clinical performance in Clinical Practicum I. Emphasis on clinical journaling, in-service and case presentations, and documentation of patient care interventions.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director. Corequisites: PTA206.	LEC 1.0 1.0 1.0
PTA208	Rehabilitation of Special Populations	Rehabilitation strategies for brain injured patients. Neurodevelopmental treatment emphasized. Theories and alternative physical therapy treatment for neurologically impaired patients. Clinical applications and treatment of patients. Proprioceptive neuromuscular facilitation (PNF), cardiopulmonary rehabilitation, spinal cord injury and amputee management, and prosthetics/orthotics. Motor development and changes across the lifespan including developmental motor milestones and normal reflexes and reactions. Emphasis on proficiency in hands-on techniques.	Prerequisites: A grade of C or better in (PTA200, PTA204, PTA209, and PTA217), or permission of the Program Director.	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0
PTA209	Orthopedics for the Physical Therapist Assistant	Response of human bone and soft tissue to injury. Orthopedic and medical management and physical therapy interventions for common injuries of the extremities and spine. Common orthopedic surgeries. Joint mobilization techniques. Body mechanics and therapeutic exercise programs. Documentation procedures. Perform physical therapy interventions including relevant data collection in a time efficient manner following the plan of care established by the supervising physical therapist. Communicate effectively with patients and the supervising physical therapist.	Prerequisites: A grade of C or better in (PTA101, PTA103, and PTA104) or permission of the Program Director.	LEC 5.0 3.0 3.0 Lab 0.0 6.0 6.0
PTA215	Wound Care for the Physical Therapist Assistant	Introduction to current concepts in wound care management techniques for the physical therapist assistant including skin anatomy and physiology, principles of healing, types of wounds, and therapeutic interventions.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of Department or Division.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PTA216	Biophysical Agents in Physical Therapy	Mastery of the use of biophysical agents under the physical therapist plan of care. Understanding tissue healing, pain theories, indications, contraindications, and safe patient positioning to guide effective physical therapy interventions. Data collection and communication to optimize patient care, emphasizing safety and evidence-based practice throughout.	Prerequisites: A grade of C or better in (PTA200, PTA209, and PTA217) or permission of the Program Director.	LEC 5.0 3.0 3.0 Lab 0.0 6.0 6.0
PTA217	Clinical Neurology	Anatomy and function of the brain, spinal cord and peripheral nervous system. Review of motor and sensory innervation and spinal tracts. Specific diseases of the central and peripheral nervous systems related to the physical therapy plan of care. Emphasis on clinical signs and symptoms of neurological disorders.	Prerequisites: A grade of C or better in (PTA101, PTA103, PTA104, and PTA203) or permission of the Program Director.	LEC 2.0 2.0 2.0
PTA230	Physical Therapy Seminar	Current practices and issues in physical therapy. Clinical problem solving, ethics, legal aspects, reimbursement, management, research. Resume preparation and job interviewing skills. Stress management techniques. Total quality management principles. Employment issues. Prevention of fraud and abuse. Career and professional development. Job descriptions, performance assessments, and wage and salary administration.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.	LEC 2.0 2.0 2.0
PTA240	Peripheral Joint Mobilization Techniques for the Physical Therapist Assistant	Peripheral joint mobilization techniques for the upper and lower extremity joints. Concepts, indications, and contraindications. Documentation. Statutes and policies regarding joint mobilizations.	Prerequisites: Certification or licensure as a Physical Therapist Assistant and six months clinical practice.	L+L 1.0 1.0 1.0
PTA279	Preclinical Practicum II	More advanced supervised physical therapy clinical practice in the Healthcare United at GateWay (HUG) Clinic with minimal supervision with emphasis on performance of data collection and treatment interventions for a diverse patient population in an outpatient treatment setting.	Prerequisites: A grade of C or better in PTA206, or permission of the Program Director. Corequisites: PTA216.	LAB 0.5 1.5 1.5
PTA280	Clinical Practicum II	Clinical experience requiring an intermediate or higher level of clinical performance by the physical therapist assisting students. Application of physical therapy skills and techniques in various clinical settings including outpatient, hospital, rehabilitation and skilled nursing.	Prerequisites: A grade of C or better in (PTA208, PTA216, and PTA279) or permission of Program Director. Corequisites: PTA281.	LAB 3.0 15.0 0.0
PTA281	Clinical Practicum Seminar II	Integration of non-clinical aspects of clinical practicums with clinical performance in Clinical Practicum II. Emphasis on clinical journaling, in-service and case presentations, and documentation of patient care interventions.	Prerequisites: Admission to the Physical Therapist Assisting program, or permission of Department or Division. Corequisites: PTA280.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
PTA290	Clinical Practicum III	Clinical experience with entry-level performance for physical therapist assisting students. Application of physical therapy skills and techniques in specific clinical settings including outpatient, hospital, rehabilitation and skilled nursing.	Prerequisites: A grade of C or better in (PTA280 and PTA281) or permission of Department or Division. Corequisites: PTA292.	LAB 3.0 15.0 0.0
PTA292	Clinical Practicum Seminar III	Integration of non-clinical aspects of clinical practicums with clinical performance in Clinical Practicum III. Emphasis on clinical journaling, in-service and case presentations, and documentation of patient care interventions.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Department or Division. Corequisites: PTA290.	LEC 1.0 1.0 1.0
PTA295	Physical Therapist Assistant Examination Review	Preparation for the physical therapist assistant examination administered by the Federation of State Boards of Physical Therapy. Topics include physical therapy management of patients with musculoskeletal, neurological, integumentary and cardiopulmonary system diseases and complications. Therapeutic modalities, therapeutic exercise, functional mobility activities, and data collection techniques. Documentation and ethical/legal considerations in practice of physical therapy.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.	LEC 2.0 2.0 2.0
QST200	Introduction to Queer Studies	Provides a general introduction to queer studies, including review of queer theory, intersectionality, social and political institutions, representation, and identity related to sex, gender, and sexual orientation.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
QST210	Queer Media Studies	Brings together media studies and queer studies to examine the history and ongoing development of media produced by queer and non-queer creators in national and global contexts. Interrogates the relationship between sex, gender, and sexuality as it is and has been represented in media. Offers an overview of popular media and queerness.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
RAD100	Introduction to Radiologic Science and Health Care	Provides an overview of the foundations of radiography and the practitioner's role in health care delivery. Principles, practices and policies of health care organizations will be examined and discussed in addition to the professional responsibilities of the radiographer.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 3.0 3.0 3.0
RAD101	Ethics and Law in the Radiologic Sciences	Foundation in ethics and law related to the practice of medical imaging. An introduction to terminology, concepts and principles will be presented.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 1.0 1.0 1.0
RAD102	Structured Diagnostic Medical Imaging Skills Enhancement I	Structured medical imaging cognitive and non-cognitive learning, study skills, and strategies to help students achieve success in their respective imaging courses. Medical imaging learning process and critical thinking application skills are emphasized.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RAD103	Radiation Biology and Health Physics I	Overview of the principles of radiation protection, including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated.	Prerequisites: Admission to the Radiologic Technology program.	LEC 2.0 2.0 2.0
RAD104	Image Production I	Comprehensive exploration of the fundamental principles and techniques governing radiographic exposure factors and their effect on creating radiographic images.	Prerequisites: Admission to the Radiologic Technology program.	LEC 2.5 2.0 2.0 LAB 0.0 1.5 1.5
RAD105	Radiation Physics and Instrumentation	Basic knowledge of atomic structure and terminology, the nature and characteristics of radiation, x-ray production, and the fundamentals of photon interactions with matter. Establishes a knowledge base in radiographic and mobile equipment, as well as exposure controls.	Prerequisites: Admission to the Radiologic Technology program.	LEC 2.0 2.0 2.0
RAD106	Patient Care in Radiologic Sciences I	Foundational concepts of optimal patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures are described, as well as infection control procedures using standard precautions. The role of the radiographer in patient education is identified.	Prerequisites: Admission to the Radiologic Technology program.	LEC 2.5 2.0 2.0 LAB 0.0 1.5 1.5
RAD107	Radiographic Procedures I	Content provides the knowledge base necessary to perform standard imaging procedures. Focus is on upper extremities, lower extremities, shoulder, and thorax. Consideration is given to the evaluation of optimal diagnostic images.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0
RAD109	Radiography Practicum I	Clinical practice experience to develop and apply concepts and theories in the performance of radiologic procedures. Concepts of team practice, patient-centered clinical practice, and professional development are discussed, examined and evaluated. Focus is on patient care and assessment and competent performance of radiologic imaging. Imaging procedures are performed under the appropriate supervision of a qualified radiographer.	Prerequisites: Admission to the Radiologic Technology Program.	LAB 3.5 19.0 0.0
RAD112	Structured Diagnostic Medical Imaging Skills Enhancement II	Focus is on the application of structured medical imaging cognitive and non-cognitive learning, study skills, and strategies to help students achieve success in their respective imaging courses and their first clinical experience. Medical imaging learning process and critical thinking application skills introduced in the Structured Diagnostic Medical Imaging Skills Enhancement I course are reinforced; and advanced concepts are introduced.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 1.0 1.0 1.0
RAD114	Image Production II	Components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving, and retrieval are discussed.	Prerequisites: Admission to the Radiologic Technology program.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RAD116	Patient Care in Radiologic Sciences II	Content provides advanced concepts of optimal patient care, including consideration for assessment of vital signs. Trauma and emergency patient care procedures are described, as well as surgical asepsis concepts. The role of the radiographer in surgical settings is also discussed.	Prerequisites: Admission to the Radiologic Technology program.	LEC 2.5 2.0 2.0 LAB 0.0 1.5 1.5
RAD117	Radiographic Procedures II	Content provides the knowledge base necessary to perform standard imaging procedures. Focus is on abdomen, pelvic girdle, vertebral column, and cranium. Contrast studies specific to the gastrointestinal system are also addressed. Consideration is given to the evaluation of optimal diagnostic images.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0
RAD119	Radiography Practicum II	Clinical practice experience to develop, apply, reinforce, and integrate concepts and theories in the performance of radiologic procedures. Concepts of team practice, patient-centered clinical practice, and professional development are practiced, examined, and evaluated. Focus is on patient care and assessment and competent performance of radiologic imaging. Imaging procedures are performed under the appropriate supervision of a qualified radiographer.	Prerequisites: Admission to the Radiologic Technology Program.	LAB 6.0 36.0 0.0
RAD203	Radiation Biology and Health Physics II	Provides an overview of the principles of the interaction of radiation with living systems. Radiation effects on molecules, cells, tissues and the body as a whole are presented. Factors affecting biological response are presented, including acute and chronic effects of radiation.	Prerequisites: Admission to the Radiologic Technology program.	LEC 2.0 2.0 2.0
RAD206	Pharmacology and Venipuncture	Content provides basic concepts of pharmacology, venipuncture and administration of diagnostic contrast agents and intravenous medications. The appropriate delivery of patient care during these procedures is emphasized.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 1.0 1.0 1.0 LAB 0.0 1.0 1.0
RAD207	Radiographic Procedures III	Content provides the knowledge base necessary to perform advanced imaging procedures. Focus is on special studies, trauma, and surgical procedures. Contrast studies specific to the urinary system are also addressed. Consideration is given to the evaluation of optimal diagnostic images.	Prerequisites: Admission to the Radiologic Technology program.	LEC 3.0 3.0 3.0 LAB 0.0 1.5 1.5
RAD208	Image Analysis I	Provides a basis for analyzing radiographic images. Included are the importance of optimal imaging standards, the use of problem-solving techniques for image evaluation, and the factors that can affect image quality. Focus on the analysis of images for the upper extremity, shoulder, lower extremity, bony thorax, upper airway, and chest.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RAD209	Radiography Practicum III	Continued clinical practice experience to further develop, apply, reinforce, and integrate concepts and theories in the performance of radiologic procedures. Concepts of team practice, patient-centered clinical practice, and professional development are practiced, examined, and evaluated. Focus remains on patient care and assessment and competent performance of radiologic imaging. New experiences in special procedural environments. Imaging procedures are performed under the appropriate supervision of a qualified radiographer.	Prerequisites: Admission to the Radiologic Technology Program.	LAB 5.0 29.0 0.0
RAD212	Structured Diagnostic Medical Imaging Skills Enhancement III	Use of skills and resources for preparing for the American Registry of Radiologic Technologists (ARRT) exam. Utilization of career and educational planning resources is emphasized.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 1.0 1.0 1.0
RAD214	Image Production III	Imparts knowledge on how to optimize image quality while managing radiation exposure during digital imaging exams and procedures. Emphasis is placed on quality management and continuous quality improvement. Fluoroscopic systems are discussed and quality control tests are performed.	Prerequisites: Admission to the Radiologic Technology program.	LEC 2.0 2.0 2.0 LAB 0.0 1.5 1.5
RAD217	Radiographic Pathology and Additional Modalities	Introduces concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease. Additional modalities are also discussed.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 2.0 2.0 2.0
RAD218	Image Analysis II	Provides a basis for analyzing radiographic images. Included are the importance of optimal imaging standards, the use of problem-solving techniques for image evaluation, and the factors that can affect image quality. Focus on analysis of images for the abdomen, pelvic girdle, vertebral column, cranium, and special studies.	Prerequisites: Admission to the Radiologic Technology Program.	LEC 1.0 1.0 1.0
RAD219	Radiography Practicum IV	Continued clinical practice experience to further develop, apply, reinforce, and integrate concepts and theories in the performance of radiologic procedures. Concepts of team practice, patient-centered clinical practice, and professional development are practiced, examined, and evaluated. Focus remains on patient care and assessment and competent performance of radiologic imaging. Continued experiences in special procedural environments. Imaging procedures are performed under the appropriate supervision of a qualified radiographer.	Prerequisites: Admission to the Radiologic Technology Program.	LAB 5.0 29.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RBT296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
RBT296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
RBT296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RBT296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
RBT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
RBT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
RBT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
RDG100	Successful College Reading	Emphasis on reading study strategies for any introductory class in any subject area. Introduction to Learning Management System (LMS), how to successfully read course textbooks and assessments, how to navigate information technology and development of academic vocabulary.	Prerequisites: A grade of C or better in ALT100 or ESL202 or appropriate reading placement or permission of Instructor. Corequisites: Any 100-level course in another content area or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RDG100AA	Successful College Reading - Organizing for Success	Includes goal setting, time management, college orientation, reading content materials. Emphasis on organizational skills and strategies for any introductory class in any subject area. Introduction to Learning Management System (LMS), how to organize and manage college reading assignments, and how to navigate information literacy using campus resources.	Prerequisites: None.	LEC 1.0 1.0 1.0
RDG100AB	Successful College Reading - Notetaking and Studying for Success	Emphasis on reading study and notetaking techniques applicable to any introductory class in any subject area. Includes effective use of textbooks, notetaking, and development of academic vocabulary.	Prerequisites: None.	LEC 1.0 1.0 1.0
RDG100AC	Successful College Reading - Taking College Exams with Success	Emphasis on successful lecture notetaking and synthesis of information, studying skills and strategies, types of exams, and exam taking strategies for success in any college introductory class.	Prerequisites: None.	LEC 1.0 1.0 1.0
RDG100LL	Disciplinary Literacy Lab	Supplemental instruction for college-level discipline courses. Focus on developing effective reading processes to address a range of literacy needs including reading, writing, digital, numerical, financial and informational literacies.	Prerequisites: None. Corequisites: Any 100-level course in another content area or permission of Instructor.	LAB 1.0 3.0 3.0
RDG111	Successful College Reading for Cultural or Social Sciences	Emphasis on reading study strategies for an introductory class in the Cultural and Social Sciences. Introduction to Learning Management System (LMS), how to successfully read course textbook and assessments and development of academic vocabulary.	Prerequisites: A grade of C or better in ALT100 or appropriate reading placement score or permission of Instructor. Corequisites: Any 100-level course in Cultural Science or Social Science area or permission of Instructor.	LEC 3.0 3.0 3.0
RDG112	Successful College Reading for Life Sciences, Mathematics, Physical Sciences or Technology	Emphasis on reading study strategies for an introductory class in the Life Science, Mathematics, Physical Sciences, or Technology. Introduction to Learning Management System (LMS), how to successfully read course textbook and assessments and development of academic vocabulary.	Prerequisites: A grade of C or better in ALT100 or appropriate reading placement or permission of Instructor. Corequisites: Any 100-level class in the Life Sciences or Mathematics or Physical Sciences or Technology or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RDG113	Successful College Reading for Communication, Humanities or Behavioral Science	Emphasis on reading study strategies for an introductory class in the Communication, Humanities, or Behavioral Science. Introduction to Learning Management System (LMS), how to successfully read course textbook and assessments and development of academic vocabulary.	Prerequisites: A grade of C or better in ALT100 or appropriate reading placement or permission of Instructor. Corequisites: Any 100-level course in Communication or Humanities or Behavioral Sciences or permission of Instructor.	LEC 3.0 3.0 3.0
RDG282AA	Service-Learning Experience in Reading	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
RDG282AB	Service-Learning Experience in Reading	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
RDG282AC	Service-Learning Experience in Reading	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
RDG298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
REA150	Supervisory Appraiser/Appraiser Trainee	Examine the national minimum requirements, responsibilities, and expectations for Trainee Appraisers and Supervisory Appraisers that are included in the Appraiser Qualifications Board (AQB) Criteria.	Prerequisites: None.	LEC 1.0 1.0 1.0
REA179	Real Estate Principles I	Basics of real estate principles including introduction to the profession and license law, definition of real property, legal descriptions, rights and interests in property, ownership, contracts, title transfer and escrow procedures. Also covers an introduction to water rights and environmental hazards as well as procedures for various real estate calculations.	Prerequisites: None.	LEC 3.0 3.0 3.0
REA180	Real Estate Principles II	Advanced work in real estate including governmental restrictions and limitations, property management, insurance and warranties, appraisal procedures, financing and loan security instruments. Also covers Deed of Trust foreclosure options and consumer protection provisions.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
REA201	Real Estate Principles I and II	Comprehensive survey of real estate principles to include careers in real estate, nature and description of real estate, rights and interests in land, forms of real property ownership, forms of business organization, methods of title transfer, title search and insurance, contract law, real estate sales contracts, mortgage and notes payable, deeds of trust, lending practices, loans and consumer rights, sources of financing real estate loans, types of financing instruments, real property taxes and assessments, title closing, escrow and settlement procedures, property management and real estate leases, real estate appraisal, state licensing laws and professional affiliations, real estate brokerage, real estate agency, fair housing and equal credit laws, types of residential real estate, real property insurance, land use control, economics of real estate, and investment considerations.	Prerequisites: None.	LEC 6.0 6.0 6.0
REA205	Introduction to Commercial Real Estate	Introduces key features of the commercial real estate industry and its differences from residential real estate. Provides residential agents with a starting point to transition into commercial real estate.	Prerequisites: None.	LEC 2.0 2.0 2.0
REA208	Ethics in Commercial Real Estate	Course covers ethics in commercial real estate. Review of National Association of Realtors (NAR) code of ethics and scenarios common in commercial real estate transactions.	Prerequisites: None.	LEC 1.0 1.0 1.0
REA211	Compliance in Commercial Real Estate	Course covers compliance in commercial real estate. Review of federal, state, and municipal regulations and scenarios common in commercial real estate transactions.	Prerequisites: None.	LEC 1.0 1.0 1.0
REA214	Finances in Commercial Real Estate	Course covers finances in commercial real estate, including funding sources, taxes, and relevant data and analytic tools. Also includes review of financial presentations to clients.	Prerequisites: None.	LEC 1.0 1.0 1.0
REA220	Multiunit Properties in Commercial Real Estate	This course covers various considerations of the multiunit commercial properties industry sector. Overview of the types of properties, financial considerations, transaction processes, resources, and compliance considerations.	Prerequisites: None.	LEC 1.0 1.0 1.0
REA225	Industrial Properties in Commercial Real Estate	Covers various aspects of the industrial commercial properties industry sector. Overview of the types of properties, financial considerations, transaction processes, resources, and compliance considerations.	Prerequisites: None.	LEC 1.0 1.0 1.0
REA230	Land Properties in Commercial Real Estate	Covers various aspects of the land commercial properties industry sector. Overview of the types of land and land use, financial considerations, transaction processes, resources, and compliance considerations.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
REA235	Commercial Real Estate Essential Tools	Covers various tools for research, analysis, and presentation of data relevant to commercial real estate.	Prerequisites: None.	LEC 1.0 1.0 1.0
REA240	Introduction to Commercial Property Management	Provides an overview of the commercial property management industry. Covers the key aspects of commercial property management, including compliance requirements, financial considerations, and ethical practices. Includes application of commercial property management knowledge and skills in a variety of settings such as medical, office, mixed-used, industrial, bio-science, and non-profit company buildings.	Prerequisites: An Arizona real estate license, or completion of MCCCD`s CCL Real Estate: Prelicense (5139N) or its equivalent, or a real estate license from another state, or completion of pre licensure coursework from another approved Arizona real estate school.	LEC 2.0 2.0 2.0
REA260	Real Estate Broker Pre-Licensing	Advanced study of the real estate industry in Arizona which focuses on the duties and responsibilities of a real estate broker. Designed to meet Arizona Department of Real Estate (ADRE) requirements to take the Arizona Real Estate Broker Examination.	Prerequisites: Permission of Instructor.	LEC 6.0 6.0 6.0
REA261	Broker Management	Exploration of Real Estate Broker topics. Provides an in-depth study of Arizona statutes, rules, policies and supervision.	Prerequisites: Permission of Instructor.	LEC 0.5 0.5 0.5
REA270	Basic Appraisal Principles	Overview of real property concepts and characteristics, legal considerations, value influences, real estate finance, types of value, economic principles, real estate markets and analysis, and ethics in appraisal practice	Prerequisites: None.	LEC 2.0 2.0 2.0
REA271	Basic Appraisal Procedures	Overview of real estate appraisal approaches to valuation procedures, value, property description, residential applications, commercial applications, improvement construction, home inspection, and appraisal math. Practical application of appraisal procedures including case studies, and examples	Prerequisites: A grade of C or better in REA270 or permission of Instructor.	LEC 2.0 2.0 2.0
REA272	Uniform Standards of Professional Appraisal Practice (USPAP)	Basic rules for ethical behavior and competent performance. USPAP requirements for state certified appraisers. Highlights role of the appraiser and implied impartiality of this role. Requirements of the Uniform Standards of Professional Appraisal Practice (USPAP) affect appraisal businesses.	Prerequisites: None.	LEC 1.0 2.0 1.7
REA273	Residential Market Analysis Highest and Best Use	Recognize and evaluate market conditions affecting the buyers' and sellers' activities in understanding and reporting values. Gather and evaluate market data. Markets, sub-markets, market segmentation, supply side analysis, demand analysis and the importance of market examination to the appraisal process	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
REA274	Residential Appraiser Site Valuation and Cost Approach	Learn theories and methodologies for arriving at residential site values and applying the Cost Approach for new and reproduction factors. The advantages and disadvantages of using the cost methods for estimating accrued depreciation. Reading of residential building plans and specifications	Prerequisites: None.	LEC 1.0 1.0 1.0
REA275	Residential Sales Comparison and Income Approaches	Basic understanding and knowledge of the residential sales comparison and income approaches to appraisal including valuation principles and procedures applicable to these approaches. Development of market analysis, including the application and use of matched pairs and capitalization rates, and gross rent multipliers. Includes organizing market data and reconciling value indications.	Prerequisites: None.	LEC 2.0 2.0 2.0
REA276AA	Residential Report Writing and Case Studies I	Exposes appraiser to realistic writing skills essential to producing realistic appraisal reports in their practice. Includes study of writing techniques, grammar, punctuation, and analytical techniques. Actual report writing and case studies are applied	Prerequisites: None.	LEC 1.0 1.0 1.0
REA280AA	Appraiser Practicum I	Application of appraisal theory and methodology through real-world simulations to help students meet the minimum experience requirements to take the Appraisal Qualification Board (AQB)-approved Licensed Residential Real Property Appraiser examination or its equivalent. Appraisal practice under the direct supervision of an assigned mentor.	Prerequisites: A grade of C or better in REA150, REA270, REA271, REA272, REA273, REA274, REA275, and REA276AA.	LEC 6.0 15.0 0.0
REA280AB	Appraiser Practicum II	Application of appraisal theory and methodology through real-world simulations to help students meet the minimum experience requirements to take the Appraisal Qualification Board (AQB)-approved Licensed Residential Real Property Appraiser examination or its equivalent. Appraisal practice under the direct supervision of an assigned mentor.	Prerequisites: A grade of C or better in REA280AA.	LEC 6.0 15.0 0.0
REA281	Principles of Real Estate Law	Incidents of ownership and use of real estate, legal principles, procedures, and methods of acquisition and disposition of real estate	Prerequisites: A grade of C or better in REA179 or permission of Department or Division.	LEC 3.0 3.0 3.0
REA282	Real Estate Finance	Study of lending institutions, including banks, savings and loans, conventional loans, Federal Housing Administration (FHA), Veterans Administration (VA) for residential, commercial and industrial property	Prerequisites: A grade of C or better in REA179 or permission of Instructor.	LEC 3.0 3.0 3.0
REA283	Property Management	Emphasizes realty laws, survey of rentals, housing needs, and rents in Phoenix metropolitan area	Prerequisites: A grade of C or better in REA179 or permission of Instructor.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
REA290AH	Real Estate Seminar: Contract Writing	Contract writing skills, techniques, and requirements. Writing of basic real estate contracts, including purchase offers, counter offers, sales listing agreements, and riders	Prerequisites: None.	LEC 0.5 0.5 0.5
REC120	Leisure and the Quality of Life	Overview of the historical, psychological, social, and cultural aspects of play, leisure, and recreation and their role in contemporary society. Nature of play and leisure behavior in human development within different cultures and the contribution play, recreation, and leisure make to the quality of life for individuals in today's society.	Prerequisites: None.	LEC 3.0 3.0 3.0
REC210	Leisure Delivery Systems	Systematic study of Delivery of Leisure Services in public, commercial, and independent sectors; particular emphasis placed on the urban setting.	Prerequisites: None.	LEC 3.0 3.0 3.0
REC230	Programming of Recreation Services	Foundations for designing, planning, delivering and managing recreational and leisure events. Emphasis on application of recreation programming concepts and practices in a variety of settings and situations for a diversity of participants.	Prerequisites: None.	LEC 3.0 3.0 3.0
REC250	Recreation Leadership	An examination of roles and methods of leadership in leisure services settings. Overview of theories and models of leadership, group dynamics, participant motivation, communication, and face-to-face leadership. Exploration of leadership contexts, including coaching and officiating sports, leading community groups and volunteers, working with persons in various life stages and with varying abilities, and leading different recreation activity areas.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL100	World Religions	The development of various religions from the prehistoric to modern times. Political, economic, social and geographic relationships among world religions. Consideration of both Eastern and Western religions.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL101	Introduction to Religion	Various religious expressions of humankind. Focuses on basic religious themes common to religions, such as encounter with the Holy, search for self and community, mystical illumination, spiritual discipline	Prerequisites: None.	LEC 3.0 3.0 3.0
REL151	Religion in the Hispanic World	Survey of various religious traditions within Spain and the Spanish-settled world. Considers the impact of and impact on both major world religions and indigenous traditions.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL200	Religion and Film	A course examining the relationships between religion and film, with particular attention to representations of religious beliefs, institutions, and practices in film and their reception by various audiences.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
REL202	Classics of Asian Religions	Academic study of selected works from Hindu, Buddhist, Taoist and Confucian traditions. Study of cultural and concepts of the world, history, culture, and human nature as represented in these works.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL203	American Indian Religions	An examination of the historical and cultural background of diverse lifeways and worldviews belonging to the peoples indigenous to the North American continent over time, including a study of modern day American Indian beliefs and practices.	Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.	LEC 3.0 3.0 3.0
REL205	Religion and the Modern World	Introduction to the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
REL206	Religion in America	Introduction of the rich tapestry of religious traditions and movements that have helped to shape the United States of America. Investigate how religion has impacted American culture and institutions, and how the United States has in turn transformed long-standing religious traditions.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL207	Ritual, Symbol, and Myth	Introduction to the academic study of religion through the study of myths, symbols, and rituals. Includes methods and theories used by scholars to study the complex subject of religion. Attention to literate and nonliterate cultures.	Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Department or Division.	LEC 3.0 3.0 3.0
REL212	Introduction to Islam	Introduction to History, scriptures, practices and impact of Islam.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL218	Religion and Culture	Examination of the relationship between religion and culture, with a particular emphasis on how culture influences religion and how religion influences culture historically and in modern settings	Prerequisites: None.	LEC 3.0 3.0 3.0
REL244	Philosophy of Religion	Philosophical investigation of the relation of faith and reason, religious language, the existence and nature of God, the problem of evil, and alternatives to the monotheistic position.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL248	Religion, Peace and Violence	Exploration of the understandings and attitudes toward peace, war and violence in religious traditions from the pre-historical to the present. Includes consideration of a variety of religious scripture traditions, theological and philosophical reflections, and religious symbolism.	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.	LEC 3.0 3.0 3.0
REL250	Religion in Ireland: Neolithic to Early Medieval	Survey of the Ancient religious traditions of Ireland. Students investigate the beliefs and practices of Irish Religions in the context of their social, economical and political systems from the late Neolithic to the early Medieval periods (4000 BCE-700 CE).	Prerequisites: None.	LEC 3.0 3.0 3.0
REL270	Introduction to Christianity	The nature and content of the Christian tradition developed over time, with overview of the New Testament, major historical trends and figures, major Christian ideas and practices, and survey of denominations.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
REL271	Introduction to the New Testament	Focuses on the origins, development, and selection of the New Testament (NT) books in the Christian religion. Includes authorship, historical reliability, translation and transmission over the centuries, and investigative techniques used by modern scholars. Also considers the varieties of literature contained in the NT, its portrayal of the status of women, and the influence of first-century religious and cultural worldviews on its development.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL282AA	Service Learning Experience in Religious Studies	Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in REL100 or permission of Instructor.	LAB 1.0 1.0 0.0
REL282AC	Service Learning Experience in Religious Studies	Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in REL100 or permission of Instructor.	LAB 3.0 3.0 0.0
REL290	Women and World Religions	Focus on the role of women in several organized religions and/or religious sects. Study of myth and symbols as they are used to establish, maintain, and enforce sex-roles within specific cultural contexts around the world.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL291	Religion and Sexuality	Exploration of the perspectives of various religious traditions on human sexuality. Includes consideration of all aspects of sexual practice as well as its incorporation into religious discourse and practice and its impact on social norms and structures.	Prerequisites: None.	LEC 3.0 3.0 3.0
REL296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
RES109	CPR for Health Care Provider	Current American Heart Association standards for one and two rescuer cardiopulmonary resuscitation (CPR) and obstructed airway procedures on the adult, infant, and pediatric victim. Use of automatic, external defibrillation and resuscitation equipment	Prerequisites: None.	LEC 0.5 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RES118	Vascular Access for Clinical Practice	Scope of practice and regulations governing vascular access. Anatomy and physiology of the vascular system. Occupational Safety and Health Administration (OSHA) guidelines. Theory and practice of vascular access as designated by Infusion Nursing Standards (INS).	Prerequisites: None. Corequisites: RES130 or permission of the Program Director.	L+L 1.0 1.5 1.5
RES130	Respiratory Care Fundamentals I	Review of existing clinical data and recommendations. Data required to determine appropriateness of prescribed respiratory care plan. Administration of basic respiratory care therapeutics to include medical gas administration, oxygen therapy administration, and humidity/aerosol therapy administration. Use and maintenance of select respiratory equipment. Use of communication skills during interactions with members of the health care team and patients. Ethical, legal and professional work behaviors.	Prerequisites: Admission into the Respiratory Care program.	LEC 4.5 3.0 3.0 LAB 0.0 5.0 5.0
RES131	Infection Control for Respiratory Care	Techniques and procedures used by Respiratory Therapist to clean and sterilize equipment and environments, and prevent the transmission of nosocomial and other healthcare related infections.	Prerequisites: Admission into the Respiratory Care program or admission into the Polysomnographic Technology program.	LEC 1.0 1.0 1.0
RES133	Respiratory Care Clinical Seminar	Clinical application of concurrent respiratory care course work with emphasis on professionalism, medical record evaluation, communication, universal precaution, infection control, patient safety, patient assessment, age related care, cultural competence, routine hospital regulations, patient education and introduction to respiratory disease and treatment	Prerequisites: Admission into the Respiratory Care program.	LEC 2.0 2.0 2.0
RES134	Respiratory Care Pharmacology I	Pharmacologic principles related to the treatment of acute and chronic pulmonary diseases. Information on mucokinetics, anti-inflammatory, antiasthmatic and anti-infective agents to include mechanism of action, general drug information, side effects, and respiratory care considerations.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.	LEC 2.0 2.0 2.0
RES136	Applied Biophysics for Respiratory Care	Physical principles specific to ventilation. Laws of physics and their relationship to the respiratory system and the application of respiratory care equipment. Role of respiratory care during specific diagnostic procedures. Use of mathematical formulae.	Prerequisites: Admission into the Respiratory Care program.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RES140	Respiratory Care Fundamentals II	Continuation of basic respiratory care procedures to include patient assessment and monitoring, chest physiotherapy techniques and pulmonary rehabilitation. Hyperinflation therapy, airway management and introduction to mechanical ventilation. Equipment operation, quality assurance and maintenance. Use of communications skills during interactions with health care team members and patients. Ethical, legal and professional work behaviors.	Prerequisites: Admission into the Respiratory Care program.	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0
RES142	Respiratory Care Clinical I	Clinical application of concurrent respiratory care course work with emphasis on professionalism, medical record evaluation and performance of oxygen therapy, aerosol therapy, chest physiotherapy techniques, hyperinflation therapy, airway management devices and techniques, and observation of mechanical ventilation.	Prerequisites: Admission into the Respiratory Care program.	LAB 4.0 27.0 0.0
RES144	Introduction to Mechanical Ventilation	Introduction to mechanical ventilation including, technology, impact of the use of technology on patient physiology, and how it affects the oxygenation and ventilation ability of the patient.	Prerequisites: Admission into the Respiratory Care program.	LEC 1.0 1.0 1.0
RES220	Respiratory Care Fundamentals III	Advanced respiratory care therapy and assessment techniques to include ventilator setup and management. Diagnostic testing specific to assessment of oxygenation and ventilation and specific respiratory care procedures utilized in critical care.	Prerequisites: Admission into the Respiratory Care program.	LEC 4.5 3.0 3.0 LAB 0.0 5.0 5.0
RES222	Cardiopulmonary Resuscitation Instructor	Standards of the American Heart Association for Basic Life Support. Procedures and skills for teaching cardiopulmonary resuscitation.	Prerequisites: Health care provider CPR card.	L+L 1.0 1.0 1.0
RES224	Pathophysiology for Respiratory Care	Causes of disease and their impact on the human body. Common physiologic effects of disease on body systems. Role of the respiratory therapist and the members of a multidisciplinary health care team in the diagnosis and treatment of disease. Cultural implications in prevention and treatment of disease.	Prerequisites: Admission into the Respiratory Care program.	LEC 2.0 2.0 2.0
RES226	Respiratory Care Clinical II	Clinical application of all prerequisite respiratory care course work with emphasis on adult critical care and neonatal/pediatric care. Basic and critical care therapeutics, advanced patient assessment and monitoring. Assisting physician during special procedures. Increased responsibility for total patient care, work organization and time management.	Prerequisites: Admission into the Respiratory Care program.	LAB 4.0 27.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RES230	Respiratory Care Fundamentals IV	Advanced respiratory care therapy and assessment techniques to include advanced modes of ventilation, hemodynamic monitoring, performance and interpretation of pulmonary function testing. Assisting physicians during special procedures. Development of advanced respiratory care plans and clinical research techniques. Equipment operation, quality assurance, and maintenance. Use of effective communication skills with members of the health care team and patients.	Prerequisites: Admission into the Respiratory Care program.	LEC 4.5 3.0 3.0 LAB 0.0 5.0 5.0
RES232	Respiratory Care Clinical III	The study and scientific inquiry of issues and demands placed on business enterprise by owners, customers, government, employees and society. Included are social, ethical and public issues and analysis of the social impact of business responses.	Prerequisites: None.	LAB 4.0 27.0 0.0
RES235	Respiratory Care Pharmacology II	Pharmacologic principles specific to the care of the respiratory patient in the acute care environment to include the following agents: cardiac, renal, blood pressure, antithrombotic, neuromuscular, anesthetic, sedative, and analgesics. Utilization of evidence-based practice in the treatment and care of patients.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.	LEC 2.0 2.0 2.0
RES240	Respiratory Physiology	Physiology of the respiratory, cardiovascular and renal systems as related to oxygenation and ventilation of the human body. Physiologic mechanisms of breathing. Role of capillary circulation in fluid regulation. Impact of respiratory care procedures on the organ systems.	Prerequisites: Admission into the Respiratory Care program.	LEC 3.0 3.0 3.0
RES270	Neonatal and Pediatric Respiratory Care	Neonatal and pediatric respiratory care to include development, anatomical and physiological differences, assessment, basic respiratory care procedures, mechanical ventilation and common disorders and conditions. Specific communication skills.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.	LEC 2.0 2.0 2.0
RES278	Vascular Access Review	Scope of practice and regulations governing venipuncture and maintenance of vascular devices specific to the vascular access board certification credentialing examination. Anatomy and physiology of the vascular system. Administration and discontinuation of vascular devices based on best practice guidelines. The use of communication skills for different patient populations and among other healthcare providers. Ethical, legal and professional work behaviors.	Prerequisites: Current license in a medical profession or permission of the Program Director.	LEC 2.0 2.0 2.0
RES280	Respiratory Care Review	Data interpretation, equipment operation and therapeutic procedures specified for the National Board for Respiratory Care (NBRC) Registered Respiratory Therapist (RRT) examination. Quality control and therapeutic procedures. Pharmacologic agents and treatment of cardiopulmonary collapse. Pulmonary rehabilitation and home care.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RES291	Respiratory Care Advanced Life Support	Airway management for the adult, patient. Endotracheal and suctioning procedures. Usage of specific medications for cardiovascular emergencies. Interpretation of electrocardiogram (ECG) dysrhythmias. Performance of defibrillation and synchronized cardioversion in simulated situations. Procedure to be followed during cardiovascular collapse. Special resuscitation techniques for adult, patients. Current American Heart Association validation in Advanced Cardiac Life Support (ACLS).	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.	LEC 1.0 1.0 1.0
RES292	Respiratory Care Pediatric Advanced Life Support	Airway management for the pediatric patient. Endotracheal and suctioning procedures. Usage of specific medications for cardiovascular emergencies. Interpretation of electrocardiograms (ECG) dysrhythmias. Performance of defibrillation and synchronized cardioversion in simulated situations. Procedure followed during cardiovascular collapse in the pediatric patient. Special resuscitation techniques for pediatric patients. Current American Heart Association validation in pediatric advanced life support (PALS).	Prerequisites: Admission into the Respiratory Care program or permission from the Program Director.	LEC 1.0 1.0 1.0
RES297	Respiratory Care Seminar	Presentation of case scenarios of various patient type and disease processes. Application of general principles of respiratory care to arrive at clinical solutions.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.	LEC 2.0 2.0 2.0
RES298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
RES298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RES298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
RPM125	Youth Development Programming	Key principles of positive youth development. Skills to become effective youth development professionals and successfully develop positive youth development programs with a focus on behavior management, inclusion, and risk management.	Prerequisites: None.	L+L 2.0 3.0 3.0
RPM132	Landscape Management	Identification of plants commonly used in Arizona landscaping. Includes trees, shrubs, vines, flowers, and ground covers. Techniques for planting, watering, and fertilizing recreational grounds. Pest control planning.	Prerequisites: None.	L+L 2.0 3.0 3.0
RPM135	Managing Community Recreation Organizations	Effectively manage community recreation organizations focusing on the principles of community development, organizational leadership, evaluation and research methodologies, and justice, equity, diversity, and inclusion in organizations.	Prerequisites: None.	L+L 2.0 3.0 3.0
RPM140	Wilderness First Aid	Patient assessment system, including how to provide effective first aid treatment for common injuries and illnesses in remote outdoor settings, and how to make appropriate evacuation decisions. Cardio-Pulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) training is included.	Prerequisites: None.	L+L 2.0 3.0 3.0
RPM145	Interpretation for Recreation	Foundational competencies of interpretation for recreational activities. Definition of effective interpretation, the skills of interpretation, the purpose of interpretation, and how to provide high quality interpretive programs.	Prerequisites: None.	L+L 2.0 3.0 3.0
RPM150AA	Outdoor Adventure Skills Field Experience	Practical application of camping and outdoor skills including camping, equipment selection and use, cooking, fire building, camp programs, backpacking, and safety.	Prerequisites: None.	LAB 1.0 2.0 0.0
RPM150AB	Outdoor Adventure Skills	Camping and outdoor skills including types of camping, equipment selection and use, cooking and fire building, camp programs, backpacking, and safety.	Prerequisites: None.	LEC 3.0 3.0 3.0
RPM155AA	Canyoneering	Basic canyoneering skills. Includes hydrology, navigation, safety systems, climbing and hiking skills, wading/swimming techniques and flood/weather identification.	Prerequisites: None.	L+L 1.0 2.0 2.0
RPM155AB	Caving	Basic caving skills. Includes cave ecology, navigation, safety systems, lighting systems and equipment selection.	Prerequisites: None.	L+L 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RPM155AC	Outdoor Rock Climbing	Basic outdoor rock climbing skills. Includes belaying, climbing techniques, rope systems and anchor systems.	Prerequisites: None.	L+L 1.0 2.0 2.0
RPM155AD	Rowing	Basic rowing skills for a four or eight person shell. Includes physical conditioning, rowing etiquette and safety, boat handling, proper rowing techniques, and teamwork.	Prerequisites: None.	L+L 1.0 2.0 2.0
RPM155AE	Indoor Rock Climbing	Basic indoor rock climbing skills. Includes belaying, climbing techniques, rope systems, anchor systems and safety.	Prerequisites: None.	L+L 1.0 2.0 2.0
RPM155AF	Backpacking	Covers basic skills and techniques of backpacking and the application of these to wilderness travel.	Prerequisites: None.	L+L 1.0 2.0 2.0
RPM155AG	Hiking	Development of safe and enjoyable hiking skills. Essentials and requirements for safe hiking.	Prerequisites: None.	L+L 1.0 2.0 2.0
RPM155AJ	Outdoor Survival	Introduction to and practice of essential skills needed for procuring shelter, water and fire in a wilderness environment.	Prerequisites: None.	L+L 1.0 2.0 2.0
RPM155AK	Leave No Trace Trainer Certification	Emphasis on seven (7) Leave No Trace principles. Skills needed to effectively teach and demonstrate minimum impact techniques and outdoor ethics.	Prerequisites: None.	L+L 1.0 2.0 2.0
RPM240	Wilderness First Responder	Introduces and provides practical training in the essentials of medical assistance in backcountry emergencies. Includes patient assessment, first aid for trauma victims, and treatment of other medical emergencies.	Prerequisites: None.	L+L 3.0 6.0 6.0
RPM271AC	Recreational Resources and Facilities Management Internship	Work experience in a recreational resources and facilities setting. Fifteen (15) hours of work weekly. Supervision and evaluation by internship coordinator.	Prerequisites: Permission of Department or Division.	LAB 3.0 15.0 0.0
RPM282AA	Volunteerism for Recreation: A Service Learning Experience	Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
RPM282AB	Volunteerism for Recreation: A Service Learning Experience	Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
RPM282AC	Volunteerism for Recreation: A Service Learning Experience	Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RPM296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
RPM296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
RPM296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RPM296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
RPM298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
RPM298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
RPM298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
RUS101	Elementary Russian I	Basic grammar, pronunciation, and vocabulary of the Russian language. Practice of listening, speaking, reading, and writing skills	Prerequisites: None.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
RUS102	Elementary Russian II	Continued study of grammar and vocabulary, with emphasis on speaking, reading, and writing skills.	Prerequisites: A grade of C or better in RUS101 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
RUS201	Intermediate Russian	A continuation of RUS102. Review of essential grammar and continued practice and development of reading, writing, and speaking skills.	Prerequisites: A grade of C or better in RUS102 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
RUS202	Intermediate Russian	Continued development of Russian language skills.	Prerequisites: A grade of C or better in RUS201 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
SBS200	Small Business Operations	In-depth analysis of and individual plan development for the "day-to-day" problems encountered in the operation of a small business. Includes the development of an individual business operations plan including finance, purchasing, production scheduling, maintenance, shipping/receiving,personnel management and insurance/risk management requirements. Investigation of daily problems related to inventory control and business expansion	Prerequisites: None.	LEC 2.0 2.0 2.0
SBS202	Small Business Bookkeeping and Tax Preparation	Introduces accounting and record-keeping with emphasis on practical use of financial data for the successful management of a small business. Develops an understanding of the accounting cycle and preparation of financial statements. Includes section on tax consequences and preparation for small business owners. Designed for the non-financially oriented owner/manager of a small business	Prerequisites: None.	LEC 1.0 1.0 1.0
SBS203	Financing and Cash Management For a Small Business	Planning for and meeting the financial needs of the small business including cash flow planning, identification of financial needs and sources, equity and debt financing, and preparation of loan packages. Participants complete a financial plan for their individual company, with emphasis on cost controls, sales revenue projection, expense allocation, and inventory cost control. Day-to-day operational budgeting also included	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SBS204	Small Business Marketing and Advertising	Introduction to marketing and advertising strategies and methods including business image, target market analysis, and customer buying behavior profile. Analysis and selection of advertising/business promotion methods and timing. Methods of deciding product and market segment focus included. Design of an individual marketing and advertising/promotion plan	Prerequisites: None.	LEC 2.0 2.0 2.0
SBS213	Hiring and Managing Employees	Methods and techniques for managing employees in a small business. Includes supervisor's role, leadership styles, interpersonal communications, staff planning, employee work styles, techniques for handling problem employees, and employee motivation. Focuses on real life situations to enable the business owner to gain high performance from their employee team. Includes segment on hiring, new employee orientation, training, benefits, and developing future staffing needs assessment	Prerequisites: None.	LEC 1.0 1.0 1.0
SBS214	Small Business Customer Relations	Developing and improving customer relations for the small business. Planning and delivering quality customer service. Includes topics on attitude of employees, customer perceptions and motivations, handling customer dissatisfaction, and developing customer, supplier, vendor, and distributor loyalty	Prerequisites: None.	LEC 1.0 1.0 1.0
SBS216	Planning for a Small Business	Relates business management issues to a specific small business through development of an individual study plan. Provides on-site review of business operation by trained instructor.	Prerequisites: A grade of C or better in (SBS200 and SBS204) or SBS220 or permission of Instructor.	LEC 2.0 2.0 2.0
SBS217	Starting/Managing a Home Business	Analysis of the successful operation of a home-based business. Includes study of economic feasibility, practicality, and adjustments for the family. Analysis of the advantages/disadvantages of operating a home based business, versus a "store-front" business. Review of current trends in home business opportunities and franchises. Descriptions of home businesses that have succeeded in local, national, and international markets	Prerequisites: None.	LEC 1.0 1.0 1.0
SBS220	Internet Marketing for Small Business	Focuses on "e-Commerce"-doing business on the Internet and planning a web site. Topics include: how the Internet can help growth and success of business; examples of successful marketing on the Internet; availability of Internet services; necessary hardware and software for marketing on the Internet; determining products/services appropriate for Internet marketing; budget constraints and on-going operations of the Internet site	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SBS221	Social Media Marketing for Small Business	Focuses on use of Social Media for Small Businesses and Entrepreneurs. Topics include: Use of Social Media, types of Social Media, how Social Media can help growth and success of business; examples of successful Social Media marketing, setting up and deploying various types of Social Media. Options for hardware and software for Social Media, determining products/services appropriate for Social Media, Monetization of Social Media. Budget constraints and on-going monitoring and content management of Social Media.	Prerequisites: None.	LEC 2.0 2.0 2.0
SBS230	Financial and Tax Management for Small Business	An overview of accounting and record-keeping for the successful management of a small business. Develops an understanding of the accounting cycle and preparation of financial statements. Includes section on tax consequences and the choice of legal entity choice based on taxation	Prerequisites: None.	LEC 2.0 2.0 2.0
SBS290AA	Developing a Practical Small Business Plan	Practical techniques for developing, writing, and implementing a business plan. Designed for the small business owner or manager.	Prerequisites: None.	LEC 0.5 0.5 0.5
SBS298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
SBS298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
SBS298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SBU200	Society and Business	The study and scientific inquiry of issues and demands placed on business enterprise by owners, customers, government, employees and society. Included are social, ethical and public issues and analysis of the social impact of business responses	Prerequisites: None.	LEC 3.0 3.0 3.0
SCT100	Introduction to Sustainable Built Environments	Study of the built environment and implications on human health, the natural environment, and society. Understanding of strategies that achieve sustainable design. Exploration of positive and negative sustainable product attributes. Emphasis on Leadership in Energy and Environmental Design (LEED).	Prerequisites: None.	LEC 3.0 3.0 3.0
SEM104AA	Secondary Basic Emergency Medical Technology: Patient Assessment	Techniques of emergency medical care in accordance with national and state curriculum. Study of patient assessment.	Prerequisites: Current enrollment in the Phoenix Union High School District Current CPR (Cardiopulmonary Resuscitation) certification from the American Heart Association American Red Cross or other equivalent organization at the Healthcare Provider level meeting the American Heart Association Guidelines 2002 Proof of TB testing or chest x-ray with a negative result within 6 months prior to enrollment.	L+L 0.5 0.75 0.75
SEM104AB	Secondary Basic Emergency Medical Technology: Basic Life Support and Airway Management	Techniques of emergency medical care in accordance with national and state curriculum. Study of the use of mechanical aids for breathing and circulation, administration of oxygen, and techniques of basic life support (BLS)	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AA with a grade of C or better.	L+L 0.5 0.75 0.75
SEM104AC	Secondary Basic Emergency Medical Technology: Soft Tissue and Environmental Emergencies	Techniques of emergency medical care in accordance with national and state curriculum. Study of soft tissue and environmental injuries	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AB with a grade of C or better.	LEC 0.5 0.5 0.5
SEM104AD	Secondary Basic Emergency Medical Technology: Head, Brain, Neck, and Spine	Techniques of emergency medical care in accordance with national and state curriculum. Study of injuries to the head, brain, neck, and spine.	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AC with a grade of C or better.	L+L 0.5 0.75 0.75

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SEM104AE	Secondary Basic Emergency Medical Technology: Shock	Techniques of emergency medical care in accordance with national and state curriculum. Study of shock, hypotension, and hypoperfusion	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AD with a grade of C or better.	LEC 0.5 0.5 0.5
SEM104AF	Secondary Basic Emergency Medical Technology: Head ,Chest, and Abdomen	Techniques of emergency medical care in accordance with national and state curriculum. Study of injuries to head, chest, abdomen, genitalia, and acute abdominal disorders	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AE with a grade of C or better.	LEC 0.5 0.5 0.5
SEM104AG	Secondary Basic Emergency Medical Technology: Medical-Legal	Techniques of emergency medical care in accordance with national and state curriculum. Includes the role and scope of the duties and practice of the Basic Emergency Medical Technician. Includes standard of care, consents, and associated statutes, rules, and regulations	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AF with a grade of C or better.	LEC 0.5 0.5 0.5
SEM104AH	Secondary Basic Emergency Medical Technology: Pediatrics	Techniques of emergency medical care in accordance with national and state curriculum. Study of the human body from birth to 12 years of age. Includes pediatric patient assessment, treatment of medically or traumatically compromised patients, special hazards and abusive situations, and Sudden Infant Death Syndrome (SIDS)	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AG with a grade of C or better.	L+L 0.5 1.0 1.0
SEM104AI	Secondary Basic Emergency Medical Technology: Respiratory, Behavioral, Environmental	Techniques of emergency medical care in accordance with national and state curriculum. Study of acute and chronic respiratory emergencies, behavioral and environmental emergencies, and diabetic states	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AH with a grade of C or better.	L+L 0.5 1.0 1.0
SEM104AJ	Secondary Basic Emergency Medical Technology: Gynecologic or Obstetrical Emergencies	Techniques of emergency medical care in accordance with national and state curriculum. Study of gynecologic and obstetrical emergencies	Prerequisites: Currently enrolled in the Phoenix Union High School District and SEM104AI with a grade of C or better.	L+L 0.5 1.0 1.0
SEM104AK	Secondary Basic Emergency Medical Technology: Musculoskeletal Extremity Injuries	Techniques of emergency medical care in accordance with national and state curriculum. Study of techniques for stabilization and splinting of musculoskeletal injuries in extremities, including participation in two eight-hour clinical rotations through a local emergency department or an ambulance agency scheduled during the semester outside normal class hours	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AJ with a grade of C or better.	L+L 0.5 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SEM104AL	Secondary Basic Emergency Medical Technology: Patient Movement and Ambulance Equipment	Techniques of emergency medical care in accordance with national and state curriculum. Study of techniques for lifting, moving, or positioning a patient, and use of ambulance/rescue vehicle equipment	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AK with a grade of C or better.	L+L 0.5 1.0 1.0
SEM104AM	Secondary Basic Emergency Medical Technology: Triage Management	Techniques of emergency medical care in accordance with national and state curriculum. Study of techniques for triage and disaster management in simulated situations	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AL with a grade of C or better.	L+L 0.5 0.75 0.75
SEM104AN	Secondary Basic Emergency Medical Technology: Intravenous Fluids	Techniques of emergency medical care in accordance with national and state curriculum. Study of techniques for assessing a patient with intravenous (IV) fluids	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AM with a grade of C or better.	L+L 0.25 0.5 0.5
SEM104AO	Secondary Basic Emergency Medical Technology: Evaluations	Techniques of emergency medical care in accordance with national and state curriculum. Includes final written and practical evaluations according to the National Registry of EMTs (NREMT) and Arizona Rules and Regulations	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AN with a grade of C or better.	L+L 0.5 1.0 1.0
SEM106	Secondary Vehicular Extrication and Patient Stabilization	Participative course designed to enhance the knowledge base of the Emergency Medical Technician (EMT) and to incorporate new knowledge and skills necessary to access, extricate, and care for victims of crash incidents. Provides exposure to scene management skills, including size-up, disentanglement, victim stabilization for single- and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures for selected victim scenarios.	Prerequisites: Current enrollment in the Phoenix Union High School District and (a grade of C or better in SEM104AO or permission of instructor).	L+L 1.0 2.5 2.5
SEM108	Secondary Trauma Patient Management	Provides exposure to victim assessment, initial treatment, resuscitative techniques, victim stabilization, victim transportation to an emergency care facility, and documentation	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AO with a grade of C or better.	L+L 0.5 2.0 2.0
SFS101AA	Secondary Introduction to Fire Service Selection: Application Process	Overview of the application and selection processes used by various fire departments and fire service organizations. Identification of the job qualifications and requirements used by various fire departments and fire service organizations.	Prerequisites: Current enrollment in the Phoenix Union High School District.	LEC 0.5 0.5 0.5
SFS101AB	Secondary Introduction to Fire Service Selection: Selection Process and Resumes	Major components of written application processes, requirements, preparation of resumes, and their effect on employment prospects	Prerequisites: Current enrollment in the Phoenix Union High School District and SFS101AA with a grade of C or better.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SFS101AC	Secondary Introduction to Fire Service Selection: Interview Process	Preparation for the interview to include communications skills, mental preparation techniques, behaviors, and the importance of the interview in the pre- employment process. Role of the applicant and interviewer in the interview process	Prerequisites: Current enrollment in the Phoenix Union High School District and SFS101AB with a grade of C or better.	LEC 1.0 1.0 1.0
SFS101AD	Secondary Introduction to Fire Service Selection: Fire Station Culture/Observation	Elements of fire service culture and their effects on personal growth and interpersonal relationships. Preparation for on-site experiences at a fire station	Prerequisites: Current enrollment in the Phoenix Union High School District and SFS101AC with a grade of C or better.	L+L 0.5 1.0 1.0
SFS101AE	Secondary Introduction to Fire Service Selection: Lifelong Learning	General components of the selection process, the importance of general education, and components of lifelong learning in career choices	Prerequisites: Current enrollment in the Phoenix Union High School District and SFS101AD with a grade of C or better.	LEC 0.5 0.5 0.5
SFS102AA	Secondary Fire Department Operations: Organization and Dispatch	Introductory fire science course designed primarily for the potential fire department recruit. Includes fire department organization and dispatch.	Prerequisites: Currently enrolled in the Phoenix Union High School District.	LEC 0.25 0.25 0.25
SFS102AB	Secondary Fire Department Operations: Fire Behavior and Classes	Introductory fire science course designed primarily for the potential fire department recruit. Includes fire behavior, phases of fire, classes of fire, and fire control methods	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AA with a grade of C or better.	LEC 0.5 0.5 0.5
SFS102AC	Secondary Fire Department Operations: Fireground and Station Safety	Introductory fire science course designed primarily for the potential fire department recruit. Includes firefighter safety on the fireground and in the fire station	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AB with a grade of C or better.	L+L 0.25 0.5 0.5
SFS102AD	Secondary Fire Department Operations: Self-Contained Breathing Apparatus	Introductory fire science course designed primarily for the potential fire department recruit. Includes self-contained breathing apparatus (SCBA)	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AC with a grade of C or better.	L+L 0.25 0.5 0.5
SFS102AE	Secondary Fire Department Operations: Ropes, Knots, and Hitches	Introductory fire science course designed primarily for the potential fire department recruit. Includes ropes, knots, and hitches.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AD with a grade of C or better.	L+L 0.25 0.5 0.5
SFS102AF	Secondary Fire Department Operations: Water Supply and Foam	Introductory fire science course designed primarily for the potential fire department recruit. Includes water supply and use of foam	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AE with a grade of C or better.	L+L 0.25 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SFS102AG	Secondary Fire Department Operations: Fire Apparatus	Introductory fire science course designed primarily for the potential fire department recruit. Includes fire apparatus	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AF with a grade of C or better.	L+L 0.25 0.5 0.5
SFS102AH	Secondary Fire Department Operations: Hoses	Introductory fire science course designed primarily for the potential fire department recruit. Includes standard hose rolls, carries, and evolutions	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AG with a grade of C or better.	L+L 0.5 2.0 2.0
SFS102AI	Secondary Fire Department Operations: Hand Ladders	Introductory fire science course designed primarily for the potential fire department recruit. Includes standard hand ladder evolutions	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AH with a grade of C or better.	L+L 0.25 0.5 0.5
SFS102AJ	Secondary Fire Department Operations: Power Tools	Introductory fire science course designed primarily for the potential fire department recruit. Includes power tools.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AI with a grade of C or better.	L+L 0.5 0.75 0.75
SFS102AK	Secondary Fire Department Operations: Building Construction	Introductory fire science course designed primarily for the potential fire department recruit. Includes building construction.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AJ with a grade of C or better.	L+L 0.25 0.5 0.5
SFS102AL	Secondary Fire Department Operations: Forcible Entry	Introductory fire science course designed primarily for the potential fire department recruit. Includes forcible entry	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AK with a grade of C or better.	L+L 0.5 1.0 1.0
SFS102AM	Secondary Fire Department Operations: Search and Rescue	Introductory fire science course designed primarily for the potential fire department recruit. Includes search and rescue techniques	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AL with a grade of C or better.	L+L 0.5 1.0 1.0
SFS102AN	Secondary Fire Department Operations: Ventilation	Introductory fire science course designed primarily for the potential fire department recruit. Includes structure ventilation	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AM with a grade of C or better.	L+L 0.5 1.0 1.0
SFS102AO	Secondary Fire Department Operations: Salvage and Overhaul	Introductory fire science course designed primarily for the potential fire department recruit. Includes salvage and overhaul.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AN with a grade of C or better.	L+L 0.25 1.0 1.0
SFS102AP	Secondary Fire Department Operations: Electrical Hazards	Introductory fire science course designed primarily for the potential fire department recruit. Includes electrical hazards.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AO with a grade of C or better.	L+L 0.25 0.5 0.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SFS102AQ	Secondary Fire Department Operations: Radiological Hazards	Introductory fire science course designed primarily for the potential fire department recruit. Includes radiological hazards	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AP with a grade of C or better.	L+L 0.25 0.5 0.5
SFS102AR	Secondary Fire Department Operations: Special Emergencies	Introductory fire science course designed primarily for the potential fire department recruit. Includes special emergencies	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AQ with a grade of C or better.	L+L 0.5 1.0 1.0
SFS102AS	Secondary Fire Department Operations: Physical and Mental Fitness	Introductory fire science course designed primarily for the potential fire department recruit. Includes physical and mental fitness	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AR with a grade of C or better.	LEC 0.5 0.5 0.5
SFS102AT	Secondary Fire Department Operations: Prevention and Investigation	Introductory fire science course designed primarily for the potential fire department recruit. Includes prevention and investigation.	Prerequisites: Currently enrolled in the Phoenix Union High School District and a grade of C or better in SFS102AS.	LEC 0.5 0.5 0.5
SFS102AU	Secondary Fire Department Operations: Code Violation	Introductory fire science course designed primarily for the potential fire department recruit. Includes code violation	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AT with a grade of C or better.	LEC 0.25 0.25 0.25
SFS102AV	Secondary Fire Department Operations: Incident Organization and Communication	Introductory fire science course designed primarily for the potential fire department recruit. Includes incident organization and communication	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AU with a grade of C or better.	LEC 0.5 0.5 0.5
SFS102AW	Secondary Fire Department Operations: Tactical Priorities	Introductory fire science course designed primarily for the potential fire department recruit. Includes tactical priorities	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AV with a grade of C or better.	LEC 1.0 1.0 1.0
SFS102AX	Secondary Fire Department Operations: Structural Fires	Introductory fire science course designed primarily for the potential fire department recruit. Includes operations applied to structural fires	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AW with a grade of C or better.	L+L 0.5 1.0 1.0
SFS102AY	Secondary Fire Department Operations: Evaluations	Introductory fire science course designed primarily for the potential fire department recruit. Includes final written evaluation and International Fire Service Accreditation Congress Practical Skills Validation.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AX with a grade of C or better.	L+L 0.25 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SFS134AA	Secondary Fitness and Conditioning for Firefighters: Physical Requirements	Overview of firefighters' physical fitness, nutrition, and protective clothing.	Prerequisites: Current enrollment in the Phoenix Union High School District.	LEC 0.5 0.5 0.5
SGT100	Fundamentals of Surgical Services	Preparation for the Certified Registered Central Service Technician (CRCST) role. Central Service work flow, job responsibilities, growth and development in the field, anatomy and physiology, microbiology for Central Service regulations and standards, infection prevention and control, tools for cleaning, decontamination, cleaning and decontamination, disinfection, sterile packaging and storage, processing, sterilization, management of patient care equipment, tracking systems, quality assurance, safety, communication, sterile processing for ambulatory surgery and clinics.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0
SGT101	Medical Terminology for Surgical Services	Medical Terminology for patient care in surgery related areas. Use of word parts, term spelling, pronunciation and abbreviations related to all surgical specialties.	Prerequisites: None. Corequisites: HCS/SGT100. Xref: HCS100	LEC 1.0 1.0 1.0
SGT102	Basic Surgical Instrumentation for Surgical Services	History, construction and assembly of surgical instrumentation, categories, instrument set assembly, soft tissue foundation sets, general surgery instrumentation sets.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
SGT107	Equipment and Supplies for Surgical Services	Introduction to the surgical equipment and supplies used in surgical services areas.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.	L+L 1.0 1.0 1.0
SGT135	Instrument Handling I	Classification of surgical instruments for general surgery including basic laparoscopy, appendectomy, breast procedures, cholecystectomy, colon resection, gastrectomy, hemorrhoidectomy, herniorrhaphy, laparoscopic Nissen fundoplication, liver resection, splenectomy, thyroidectomy, Whipple procedure. Common and proper names for instruments in general surgery. Introduction to aseptic technique for handling instruments. Specific uses, handling, and care for surgical instruments in general surgery.	Prerequisites: None. Corequisites: HCS/SGT102 or permission of Program Director. Xref: HCS102	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SGT152	Advanced Surgical Instruments for Surgical Services	Surgical specialty instrumentation care and assembly of instruments to include plastic, gynecologic, urologic, basic bone and joint, head and neck, neurosurgery, cardiovascular and thoracic, microscopic, endoscopes, stapling guns, and robotics procedures.	Prerequisites: A grade of C or better in HCS/SGT102. Xref: HCS102	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0
SGT155	Instrument Handling II	Classification of specialized surgical instruments for surgical specialties including obstetric and gynecological procedures, genitourinary, otorhinolaryngology, orthopedic, oral and maxillofacial, plastic and reconstructive, ophthalmic, cardiothroacic, peripheral vascular, and neurosurgery. Common and proper names for instruments in the surgical specialties. Specific uses, handling, and care for surgical instruments in the surgical specialties.	Prerequisites: A grade of C or better in SGT135.	L+L 1.0 2.0 2.0
SGT156	Hospital Central Service Practicum for Surgical Technology	Short-term supervised student observation and application for 40 hours of central service theory and laboratory skills. Exposure to limited compilation of case carts, building of instrument trays, distribution of supplies, sterilization and inventory.	Prerequisites: A grade of C or better in HCS/SGT102 or permission of Program Director. Corequisites: HCS/SGT152 or permission of Instructor. Xref: HCS102 HCS152	LAB 0.5 1.5 0.0
SGT165	Surgical Procedures I	General Surgery arena procedures. Pre-operative procedures to include patient`s charts and consent forms. Common diagnostic procedures prior to surgery. Operating room admission procedures and interview, charting, and checklist. Purpose of the post anesthesia care unit (PACU). Impact of specific chronic illnesses on body functions. Issues pertaining to death and dying. Special considerations for the pediatric and geriatric patient.	Prerequisites: A grade of C or better in SGT135.	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0
SGT180	Pharmacology for Surgical Technology I	Role of surgical technologist in safe handling of drugs according to operating room policies and procedures. Uses and classification of drugs. Federal and state pharmacy regulations applicable to the surgical patient. Complications and safety issues during topical, local, regional, and general anesthesia. Antibiotic, diagnostic agent, and hemostatic agent administration in the surgical specialties of obstetrics, peripheral vascular, orthopedics, and oncology.	Prerequisites: A grade of C or better in SGT135.	L+L 2.0 3.0 3.0
SGT200	Operating Room Practicum I	Roles and responsibilities of operating room personnel focusing on the surgical technician under the direction of the clinical facility preceptor demonstrating the role of the surgical technologist and scope of practice and standard of recommendations.	Prerequisites: A grade of C or better in SGT165.	LAB 1.0 6.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SGT205	Operating Room Practicum II	Reinforcement and broadening of knowledge and skills of the surgical technologist required for pre-operative, intra-operative and post-operative care of the patient undergoing general surgery and specialties.	Prerequisites: A grade of C or better in SGT200.	LAB 2.0 12.0 0.0
SGT210	Surgical Procedures II	General surgical procedures to include ophthalmic, plastic surgery, reconstruction with grafting, obstetric, gynecological, genitourinary, otorhinolaryngology, oral and maxilla facial surgery with lasers and scopes. Surgical techniques as applied to major body systems, anatomical structures. Related abbreviations and usage in the pre-operative, intra-operative and post-operative areas of surgical technology. Surgical care provided by the surgical technologist in the perioperative arena.	Prerequisites: A grade of C or better in SGT165.	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0
SGT220	Operating Room Practicum III	Intermediate level reinforcement and broadening of knowledge and skills of the surgical technologist required for pre-operative, intra-operative and post-operative care of the patient undergoing general surgery and specialties.	Prerequisites: A grade of C or better in SGT205.	LAB 3.0 15.0 0.0
SGT225	Operating Room Practicum IV	Advanced level reinforcement and broadening of knowledge and skills of the surgical technologist required for pre-operative, intra-operative and post-operative care of the patient undergoing general surgery and specialties.	Prerequisites: A grade of C or better in SGT220.	LAB 3.0 15.0 0.0
SGT227	Operating Room Practicum V	Continued advanced level reinforcement and broadening of knowledge and skills of the surgical technologist required for pre-operative, intra-operative and post-operative care of the patient undergoing general surgery and specialties.	Prerequisites: A grade of C or better in SGT225.	LAB 3.0 15.0 0.0
SGT230	Surgical Technology Materials Update	Current surgical technology materials. Surgical specialty modifications, introductions, technology. Specific uses, handling, application to surgical procedures.	Prerequisites: Currently enrolled in Surgical Technology or Surgical Technology for the Operating Room Nurse program, or Certified Surgical Technologist, or permission of	LEC 2.0 2.0 2.0 LAB 1.0 3.0 3.0
SGT260	Surgical Procedures III	Specialized surgical procedures of orthopedic, peripheral vascular, cardiovascular, thoracic, and neurosurgery to include open and minimally invasive, including a range of techniques, interventional radiology, robot assisted, lasers, and scopes. Surgical techniques as applied to major body systems, anatomical structures. Related abbreviations and usage in the pre-operative, intra-operative, and post-operative surgical arenas. Care provided by the surgical technologist in each phase of surgery.	Prerequisites: A grade of C or better in SGT210.	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SGT275	Certification Examinations Preparation	Preparation for the National Surgical Technology Certification Examination. Review of the content specifications, techniques for preparation and review of current literature determined by the Liaison Council on Certification for Surgical Technologists. Exploration of career possibilities.	Prerequisites: A grade of C or better in SGT210 or permission of the Program Director.	L+L 2.0 3.0 3.0
SGT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
SGT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
SGT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
SLC201	Introduction to Linguistics	Introduction to the study of language. Study of the nature and diversity of world languages, linguistic structures and functions of language, language variation, pragmatics and the learning/acquisition of first and second languages.	Prerequisites: None.	LEC 3.0 3.0 3.0
SLC202	Introduction to Literary and Cultural Theory	Introduction to the study of literary and cultural theory. Interdisciplinary approaches to analyzing literary texts for context, meaning and form. Assessment of various literary genres which may include fiction, film, visual arts and performance.	Prerequisites: A grade of C or better in ENG101 or ENG107. Corequisites: ENG102 or ENG108.	LEC 3.0 3.0 3.0
SLP104	Speech, Language, and Hearing Development	Provides an overview of the normal development of human communication. Emphasis on normative processes involved in speech, language, and hearing development. Examines the impact of multicultural, multi-linguistic environments on speech and language development.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SLP205	Introduction to Communication Disorders	Explore a variety of communication disorders in children and adults that speech-language pathologists diagnose and treat. Provides an introduction to typical versus disordered communication, the causes, characteristics of a variety of speech, language, hearing, and swallowing disorders, and the effects that they can have on those afflicted with them.	Prerequisites: None.	LEC 3.0 3.0 3.0
SLP210	Speech and Hearing Anatomy and Physiology	Provides a review of the anatomical systems of respiration, phonation, articulation and resonance and hearing and their relationship to pathologies of speech, language and hearing. Includes basic physiology of systems and the neuroanatomy and neurophysiology related to speech and hearing production mechanisms. Examines the physical characteristics of sound and the structure and function of the human auditory system.	Prerequisites: None.	LEC 3.0 3.0 3.0
SLP212	Language Disorders and Rehabilitation	Examines the nature, causes and treatment of language disorders across the lifespan. Focuses on developmental and acquired language disorders in childhood through adulthood. Includes multicultural/multilingual issues and therapy observations.	Prerequisites: None.	LEC 3.0 3.0 3.0
SLP214	Speech Sound Disorders and Phonetics	Provides an overview of English phonetics and phonetic transcription including practice with transcription of normal and disordered speech at the entry-level using the International Phonetic Alphabet (IPA). Examines the nature, causes, characteristics and treatment of a variety of speech sound disorders across the lifespan including phonological processes/disorders, articulation, dysarthria, apraxia, and other organic disorders. Includes multicultural/multilingual issues and therapy observations.	Prerequisites: None.	LEC 3.0 3.0 3.0
SLP215	Speech, Language, Hearing Disorders and Rehabilitation	Examines the nature, causes, and treatment of a variety of speech, language, hearing disorders. Focuses on fluency, voice, hearing, and swallowing/feeding disorders. Expands on language disorders in adolescents and young adults including metacognition and cognitive strategies. Includes therapy observations.	Prerequisites: None.	LEC 3.0 3.0 3.0
SLP217	Clinical Ethics and Documentation	Examines issues associated with professional and ethical behaviors, including the Speech Language Pathology Assistant (SLPA) scope of practice as specified by state and national governing bodies for the profession. Focuses on indirect activities related to client treatment including creation of lessons, implementation of treatment, and documentation. Includes an overview of universal safety precautions, confidentiality, compliance with laws/regulations, and service delivery options in both the educational and health care systems.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SLP218	Behavior Management	Examines a variety of behavior principles, strategies and techniques used with individuals with communication disorders. Focuses on setting up a positive learning environment, increasing motivation and attention, and using Positive Behavioral Interventions and Supports (PBIS) with clients.	Prerequisites: None.	LEC 3.0 3.0 3.0
SLP235AA	Speech-Language Pathology Practicum	Practical experience in completing clinical fieldwork as a Speech Language Pathology Assistant (SLPA). Provides opportunity to create lesson plans, implement therapy, record client performance and maintain appropriate documentation for a variety of speech-language disorders in a therapeutic environment. A minimum of 50 hours for the clinical interaction experience in this course is required.	Prerequisites: None.	L+L 1.0 1.0 0.0
SLP235AB	Speech-Language Pathology Practicum	Practical experience in completing clinical fieldwork as a Speech Language Pathology Assistant (SLPA). Provides opportunity to create lesson plans, implement therapy, record client performance and maintain appropriate documentation for a variety of speech-language disorders in a therapeutic environment. A minimum of 100 hours for the clinical interaction experience in this course is required.	Prerequisites: None.	L+L 2.0 2.0 0.0
SLP240	Assistive Technology and Augmentative Communication	Examines the use of Assistive Technology (AT) and Augmentative Alternative Communication (AAC) systems within various environments to support functional interaction with individuals with disabilities. Focuses on a variety of guiding principles, strategies, accommodations, modifications, computer hardware and software as well as low-tech and high-tech AT and AAC systems. Provides guidelines for need identification and implementation of AT and AAC systems within therapeutic and natural environments.	Prerequisites: None.	LEC 3.0 3.0 3.0
SLP242	Low Incidence Disabilities	Examines disabilities with a focus on treatment techniques for low incidence disabilities. Focuses on blindness, deafness, moderate to severe intellectual disability, complex health issues, serious motor and physical impairment, multiple disabilities, genetic syndromes, moderate to severe autism, and social emotional disabilities. Includes therapy observations.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SLP296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
SLP296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
SLP296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SLP296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
SLP298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
SLP298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
SLP298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to mazimize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
SOC101	Introduction to Sociology	The systematic study of social behavior and human groups, particularly the influence of culture, socialization, social structure, stratification, social institutions, differentiation by region, race, ethnicity, sex/gender, age, class, and socio/cultural change upon people's attitudes and behaviors.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SOC105	Introduction to American Indian Studies	Introduction to political, economic, and social structures of American Indian Nations. Provides overview of American Indian tribal cultures prior to contact, the impact of European contact, and the influence of western social systems on tribal nations.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC110	Drugs and Society	Provides an introduction to the sociological study of legal and illicit drugs, including their use, misuse, abuse, dependency, and addiction. Examines the history and classification of drug use. Reviews theories and research relating to the causes and consequences of drug use and drug culture. Explores the demographics, patterns and cultural determinants of drug use to understand the individual, group and societal impact of drugs. Considers societal and governmental responses to drug use, including treatment, prevention, and policy.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC112	American Indian Policy	Reviews United States government policies and their impact on American Indian sovereignty. Examines historic, legal, economic, and social issues regarding Indian policies and how they impact Indian Nations and individual Indians. Studies historical as well as contemporary policies created by the Federal Government that define the trust relationship between the United States government and Indian Nations	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC130	Human Sexuality	Sociological study of human sexuality. Course examines the social forces that shape a culture's sexual practices, attitudes, and inequalities. Topics include the social construction of sexuality, social change, sexual identities, sexual inequalities, institutional influence and regulation of sexuality, as well as current trends and issues surrounding human sexuality.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC141	Sovereign Indian Nations	Explores the sovereign status of American Indians as it relates to social relationships, traditions, and culture of American Indians. Reviews historic relations with non-Indian societies, the development of federal Indian law, tribal governments and their functions. Examines treaty rights, environmental issues, public policy, economic development, other current issues, and contemporary social problems	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC143	Sociology of African American Problems	Social, economic, political and domestic problems encountered by African Americans in typical urban environments. Emphasis on the specific dynamics of adjustment, survival and empowerment of urban African Americans	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SOC157	Sociology of Families and Relationships	Systemic analysis of socio-cultural and historical origins of modern families in the U.S. and their importance, major challenges and changing trends. Explores being single, dating and attraction, love, cohabitation and marriage, family planning and parenthood, conflict and crisis within the family, and divorce.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC160	American Indian Law	Analyzes the legal system of the United States Government as it applies to American Indian Nations. Examines how United States legal institutions have impacted Indian sovereignty. Units of analysis include the development of Indian law, United States Supreme Court decisions, Congressional Acts, treaty rights and the development of tribal governments. Focuses on legal institutions that have abridged the property rights of Indian Nations.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC180	Social Implications of Technology	Exploration of the transformative power of technology on society, focusing on historical roots, cultural impact, and future implications. Engagement with critical concerns and opportunities that technology presents in shaping human connections, societal structures, and global communities.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC212	Gender and Society	A sociological exploration of the way culture shapes and defines gender in contemporary U.S. society. Major emphasis on gender roles, gender stereotypes, power and the relationship between gender and other intersecting social identities such as race, ethnicity, class, and sexual identity.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC220	Sport and Society	Applies the sociological perspective to the study of sport. Emphasizes how hierarchies of race, class, and gender in the United States impact the sport experience of fans, athletes, and athletic administrators, as well as how professional, collegiate, and amateur sports have at times played a transformative role in society.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC241	Race and Ethnic Relations	Examines how the social construction of race shapes social interaction and social institutions. Explores the consequences of power, privilege and oppression among major ethnic and racial groups in the United States.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC245	Social Deviance	This course explores the social construction of deviance and deviant behavior, with an emphasis on the connections between deviant behavior, societal reactions, and social control. Various forms of deviant behavior, theoretical perspectives, concepts, and methods used by sociologists to describe and explain deviance and conformity are examined.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SOC251	Social Problems	An overview of the sociological study of social problems and inequalities confronting the United States. Emphasis is placed on what is known about social problems, recent trends, causes and consequences, individual and societal responses, and how social policies might solve social problems. Issues to be examined may include: health care, education, family, economy, environment, drug and alcohol abuse, crime and violence, among others.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC253	Social Class and Stratification	Focus on social class structure in American society with emphasis on the socio-economic factors, public policy, and individual life chances due to ascribed and achieved statuses.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC265	Sociology of Aging	A sociological examination of aging, using theoretical perspectives, historical contexts, and contemporary trends to explain the influences of various social institutions and social factors such as race, ethnicity, class, gender, sexuality, culture, and other identities.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC266	Sociology Through Film	Examines movie-going and the experience of spectatorship. Studies how motion pictures reflect, influence, and are influenced by American culture and societal institutions. Explores the role of the movie industry as a vehicle for social commentary, analysis, and criticism.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC270	The Sociology of Health and Illness	The scientific study of the social patterns and social factors (e.g., class, race, gender, religion, ethnicity, kinship networks, marriage, educational status, age, place, and cultural practices) that influence health. The roles of health care providers and patients, various modalities of treatment, prevention and access, and the history, current status, future trends in medicine and medical technology, and complementary health care approaches from a cross-cultural and global sociological perspective.	Prerequisites: None.	LEC 3.0 3.0 3.0
SOC282AA	Service-Learning Experience in Sociology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: A grade of C or better in SOC101 and permission of Instructor.	LAB 1.0 1.0 0.0
SOC282AB	Service-Learning Experience in Sociology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: A grade of C or better in SOC101 and permission of Instructor.	LAB 2.0 2.0 0.0
SOC282AC	Service-Learning Experience in Sociology	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: A grade of C or better in SOC101 and permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SOC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
SOC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
SOC296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SOC296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
SOC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
SOC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
SOC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
SPA055	Fundamentals of Spanish Grammar	Introduces basic concepts of Spanish pronunciation and grammar for successful study of the language. Emphasis on grammar, sentence structure, and practice of simple dialogues	Prerequisites: None.	LEC 1.0 1.0 1.0
SPA085AA	Speedy Spanish I	Basic vocabulary and grammar to develop conversational skills in Spanish. Emphasis on speaking skills	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SPA085AB	Speedy Spanish II	Intermediate development of vocabulary and grammar to develop conversational skills in Spanish. Emphasis on speaking skills.	Prerequisites: A grade of C or better in SPA085AA. Completion of prerequisites within the last three years is required.	LEC 1.0 1.0 1.0
SPA101	Elementary Spanish I	Basic grammar, pronunciation and vocabulary of the Spanish language. Includes the study of the Spanish-speaking cultures. Practice of listening, speaking, reading, and writing skills	Prerequisites: None.	LEC 4.0 4.0 4.0
SPA102	Elementary Spanish II	Continued study of grammar and vocabulary of the Spanish language and study of the Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills.	Prerequisites: A grade of C or better in SPA101 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
SPA103	Elementary Spanish for Spanish Speakers I	Review of basic Spanish grammar and pronunciation. Emphasis on reading and writing skills in Spanish. For native speakers needing review of essential language skills.	Prerequisites: Spanish-speaking or permission of Department or Division.	LEC 4.0 4.0 4.0
SPA104	Elementary Spanish for Spanish Speakers II	Continued review of grammatical problems in speaking and writing and reading in Spanish.	Prerequisites: A grade of C or better in SPA103 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
SPA109	Law Enforcement Spanish I	Conversational and written Spanish for law enforcement personnel. Emphasis on basic sentence structure, pronunciation and vocabulary used in common job-related situations.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPA111	Fundamentals of Spanish	Accelerated study of elementary Spanish for students with previous Spanish coursework. Includes basic Spanish grammar, pronunciation, vocabulary and the study of the Spanish- speaking cultures. Emphasis on speaking, listening, reading, and writing skills.	Prerequisites: A grade of C or better in SPA101 or SPA115 or two years of high school Spanish or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
SPA115	Beginning Spanish Conversation I	Basic pronunciation, vocabulary, sentence structures, and cultural awareness, necessary to develop speaking and listening skills in Spanish	Prerequisites: None.	LEC 3.0 3.0 3.0
SPA116	Beginning Spanish Conversation II	Continued study of basic pronunciation, vocabulary, sentence structures, and a cultural awareness necessary to develop speaking and listening skills in Spanish.	Prerequisites: A grade of C or better in SPA115 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SPA117	Health Care Spanish I	Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPA118	Health Care Spanish II	Basic conversational Spanish for health care personnel or students. Emphasis on basic sentence structure, pronunciation, and vocabulary used in health care settings.	Prerequisites: A grade of C or better in SPA117 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
SPA119	Spanish for Educational Settings I	Basic conversational Spanish for teachers, counselors, administrators and other school personnel. Emphasis on basic sentence structure, pronunciation and vocabulary used in educational settings	Prerequisites: None.	LEC 3.0 3.0 3.0
SPA120	Spanish for Educational Settings II	Basic conversational Spanish for teachers, counselors, administrators and other school personnel. Continuation of SPA119, expanding into secondary and post- secondary educational settings. Emphasis on basic sentence structure, pronunciation and vocabulary.	Prerequisites: A grade of C or better in SPA119 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
SPA130	Spanish for First Responders and 911 Emergencies	Beginning conversational Spanish for first responders and 911 emergency personnel. Emphasis on basic sentence structure, pronunciation, vocabulary, and cultural awareness necessary to develop Spanish speaking and listening skills in medical and non-medical emergencies.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPA201	Intermediate Spanish I	Continued study of essential Spanish grammar and Spanish-speaking cultures. Continued practice and development of reading, writing, and speaking skills in Spanish. Emphasis on fluency and accuracy in spoken Spanish.	Prerequisites: A grade of C or better in SPA102 or SPA111 or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 4.0 4.0 4.0
SPA202	Intermediate Spanish II	Review of grammar, continued development of Spanish language skills with continued study of the Spanish-speaking cultures.	Prerequisites: A grade of C or better in SPA201, or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 4.0 4.0 4.0
SPA203	Spanish for Spanish-Speaking Students I	Designed for Spanish-speaking students. Emphasis on written composition, grammar review, punctuation and spelling, literature and conversation. May be taken in lieu of SPA201.	Prerequisites: Permission of Instructor or Department Chair.	LEC 4.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SPA204	Spanish for Spanish-Speaking Students II	Designed for Spanish-speaking students. Advanced study of Spanish grammar, composition, literature, and conversation.	Prerequisites: A grade of C or better in SPA203 or SPA201 or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 4.0 4.0 4.0
SPA205	Spanish for Medical Interpretation I	Introduction to Spanish interpretation for medical interpreters. Covers code of ethics, national standards and medical interpreter's responsibilities as well as cultural awareness and legal issues. Interpretation for first responders included.	Prerequisites: A grade of B or better in SPA202 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
SPA206	Spanish for Medical Interpretation II	Continuation of Spanish interpretation for medical interpreters. Medical vocabulary and translation relating to human anatomy and physiology emphasized.	Prerequisites: A grade of B or better in SPA205 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
SPA225	Intermediate Spanish Conversation I	Continued study of vocabulary, sentence structures, and cultural awareness necessary to improve speaking and listening skills in Spanish. Emphasis on fluency and accuracy in spoken Spanish.	Prerequisites: A grade of C or better in SPA102 or SPA116 or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 3.0 3.0 3.0
SPA226	Intermediate Spanish Conversation II	Continued study of vocabulary, sentence structures, and cultural awareness necessary to improve speaking and listening skills in increasingly complex Spanish. Emphasis on fluency and moderate accuracy in spoken Spanish.	Prerequisites: A grade of C or better in SPA201 or SPA225 or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 3.0 3.0 3.0
SPA235	Advanced Spanish Conversation I	Continued development of skills in conversational fluency. Class conducted completely in Spanish.	Prerequisites: A grade of C or better in SPA226 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
SPA236	Advanced Spanish Conversation II	Further development of skills in conversational fluency. Grammar presented only to clarify student errors.	Prerequisites: A grade of C or better in SPA235 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SPA241	Spanish and Spanish-American Film I	Analysis of Spanish and Spanish-American film as art form and as social commentary. Includes documentary, biography, and films based on works of literature. All films, coursework, class participation, and oral and written reports conducted in Spanish.	Prerequisites: A grade of C or better in SPA202 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
SPA242	Spanish and Spanish-American Film II	Analysis and critique of movies presented in the Spanish language and produced by cinematographers from Bolivia, Paraguay, Venezuela, Ecuador, Puerto Rico, Costa Rica and the Mexican independent film producers. Includes documentary, biography, and works of literature and their film versions as art form and social commentary.	Prerequisites: A grade of C or better in SPA241 or permission of Department or Division. Completion of prerequisites within the last three years is required.	LEC 3.0 3.0 3.0
SPA251	Spanish Civilization	An introduction to Spanish civilization with a focus on the culture of Spain. History of Spain and each period's cultural manifestations, including economic, sociological, and political factors as well as cultural artifacts such as architecture, literature, visual arts, music, and gastronomy.	Prerequisites: Four years of high school Spanish or a grade of C or better in SPA202 or permission of Department or Division. Completion of prerequisites within the last three	LEC 3.0 3.0 3.0
SPA265	Advanced Spanish I	Introduction and study of Spanish and Spanish-American literature. Selected readings from most Spanish-speaking countries. All discussions, oral reports, and written assignments are in Spanish.	Prerequisites: A grade of C or better in SPA202 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
SPA266	Advanced Spanish II	Further study of Spanish and Spanish-American literature. Reading selections from most Spanish-speaking countries. All oral reports, discussions, and written reports in Spanish. Graduated level of difficulty from the literature studied in SPA265.	Prerequisites: A grade of C or better in SPA265 or permission of Department or Division. Completion of prerequisites within the last three years is	LEC 3.0 3.0 3.0
SPA282AA	Service-Learning Experience in Spanish	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
SPA282AC	Service-Learning Experience in Spanish	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
SPA298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SPA298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
SPA298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
SPE341	Special Education: Language Development and Disorders	Language development and language acquisition of typical children and children with disabilities. Includes language characteristics of children with a variety of disabilities and the creation of enhanced learning experiences in the classroom. Covers augmentative and alternative communication tools. Also compares language disorders and language differences.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 2.0 2.0 2.0
SPE343	Special Education: Effective Collaboration and Communication Practices	Focuses on principles of effective collaboration, consultation, and co-teaching to improve programs, services, and outcomes for students with disabilities and their families. Topics include interpersonal communication strategies and collaboration tools for working with diverse groups of people.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 1.0 1.0 1.0
SPE376	Special Education: Classroom Management and Behavioral Analysis	Application of research-based strategies in classroom management and behavioral analysis. Focuses on the classroom as a multidimensional environment in which principles of design, communication, management, and resources determine behavioral management success. Emphasis on positive behavior supports, group dynamics, student motivation, discipline models, and current research findings related to classroom management and behavior analysis.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division. EDU221 recommended but not required.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SPE409	Special Education: Law, Policy, and Practice	Overview of special education legislation and litigation as it applies in K-12 settings. Examines federal and state level statutes and regulations, including the Individuals with Disabilities Education Act (IDEA), the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act of 1973. Covers regulations governing assessment and evaluation procedures, due process, mediation, manifestation determination, and disciplinary action. Emphasis on the development, implementation, and evaluation of individual education plans (IEPs), free appropriate public education (FAPE), and least restrictive environment (LRE). Focuses on students' and parents' legal rights and schools' responsibilities regarding special education. The Council for Exceptional Children (CEC) Code of Ethics will be examined.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division. EDU222 recommended but not required.	LEC 3.0 3.0 3.0
SPE422	Special Education: Mild to Moderate Disabilities	Application of research-based instruction in special education, including lesson planning, instructional design, assessment accommodations, modification, strategies, and materials appropriate for teaching individuals with mild to moderate disabilities in a variety of educational settings. Covers characteristics, etiologies, legal and educational provisions.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LEC 4.0 4.0 4.0
SPE424	Special Education: Assessment and Eligibility of Exceptional Learners	Examines eligibility criteria for students to receive and maintain special education and related services. Overviews nondiscriminatory assessments and adaptive behavior measurements, including educational achievement tests, standardized diagnostic tests, and intelligence tests, as well as the concepts, laws, current issues, and procedures that relate to formal and informal assessment of students. Analyzes the relationship between assessment data and instruction.	Prerequisites: Formal acceptance to a Maricopa Community College undergraduate state approved teacher preparation program or permission of Department or Division.	LEC 4.0 4.0 4.0
SPE477	Student Teaching: Special Education (Mild to Moderate Disabilities)	Supervised student teacher practicum in a K-12 special education setting. Students are expected to demonstrate appropriate assessment strategies, develop lesson plans, implement instructional strategies, and utilize behavior management systems and programs. Emphasis on the provision of individualized instruction to meet the requirements of Individuals with Disabilities Education Act (IDEA).	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	LAB 6.0 6.0 0.0
SPH241	Spanish and Latin American Film in Translation	A survey of Spanish and Spanish-American film as art form and as social commentary. Includes documentary, biography, and films based on works of literature. Coursework, class participation, and oral and written reports conducted in English.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SPH245	Hispanic Heritage in the Southwest	A survey of Hispanic heritage in the Southwest. Cultural and social institutions and their contribution to the development of the region and its heritage	Prerequisites: None.	LEC 3.0 3.0 3.0
SPH296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
SPH296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
SPH296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SPH296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
SPH298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
SPH298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
SPH298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
SPT150	Introduction to Sports Management	Introduction to the field of sports management, including sports marketing and sales, facility management, event management, professional sports, public relations, intercollegiate and interscholastic athletics.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SPT265	Theory of Coaching	Discusses the impact of sports on the American culture, legal liabilities of coaching, principles of a coaching philosophy, the role of teaching skill, physical conditioning and nutrition in coaching, components of team/group psychology and dynamics, motivation and aggression in sport.	Prerequisites: None. SPT281 suggested but not required.	LEC 3.0 3.0 3.0
SPT265BA	Baseball Theory of Coaching	Reviews the principles, philosophy, strategies and theory of coaching baseball, as a competitive sport.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPT265BB	Basketball Theory of Coaching	Reviews the principles, philosophy, strategies and theory of coaching basketball, as a competitive sport.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPT265GO	Golf Theory of Coaching	Reviews the principles, philosophy, strategies and theory of coaching golf, as a competitive sport.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPT265SB	Softball Theory of Coaching	Reviews the principles, philosophy, strategies and theory of coaching softball, as a competitive sport.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPT271	Sports Medicine Foundations	Introduction to sports medicine knowledge, techniques, and careers. Exploration of current trends in athletic injury prevention, management and rehabilitation including wound care, taping, wrapping, bracing, splinting and protective equipment.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPT273	Athletic Training: Advanced Wrapping and Taping Techniques	Expands and enhances practical uses of basic taping and wrapping skills. Hands-on experience in the use of braces, athletic taping, and elastic wraps to care for athletic injuries	Prerequisites: A grade of C or better in SPT271 or permission of Instructor.	LEC 2.0 2.0 2.0
SPT275	Rehabilitation and Therapeutic Interventions in Sports Medicine	Exploration of current trends in the basic and advanced methodologies used in the rehabilitation of athletic injuries. Incorporates demonstrations of injury-appropriate strength and fitness training and therapeutic exercise techniques.	Prerequisites: A grade of C or better in SPT271 or permission of Department or Division.	L+L 3.0 4.0 4.0
SPT281	Methods of Coaching	Comprehensive overview of the art and science of coaching, including development of coaching philosophy, techniques of sport pedagogy, practical application of sports skill teaching, sport physiology, nutrition, sport/team management and self management.	Prerequisites: None. PED265 suggested but not required.	LEC 3.0 3.0 3.0
SPT281BA	Baseball Methods of Coaching	Overview of the art and science of coaching baseball including: identifying various coaching styles, elements of effective communication, methods and techniques of coaching baseball.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPT281GO	Golf Methods of Coaching	Overview of the art and science of coaching golf including: identifying various coaching styles, elements of effective communication, methods and techniques of coaching golf.	Prerequisites: None.	LEC 3.0 3.0 3.0
SPT281SO	Soccer Methods of Coaching	Overview of the art and science of coaching soccer including: identifying various coaching styles, elements of effective communication, methods and techniques of coaching soccer.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SSH111	Sustainable Cities	Introduction to the field of sustainability and exploration of the practices leading to the development of sustainable cities. Explores the concept of sustainable development of cities within local, regional, and global contexts.	Prerequisites: None.	LEC 3.0 3.0 3.0
SSH298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
SSH298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
SSH298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
STO100AC	How to Tell Personal Stories	Introduction to the art of storytelling. Finding, crafting and telling personal stories in and out of class	Prerequisites: None.	LEC 1.0 1.0 1.0
STO101	Storytelling for Literacy	Introduction to the natural process from oral to written language and the role of storytelling in both. Focus will be on the development and sharing of oral and written stories	Prerequisites: None.	LEC 1.0 1.0 1.0
STO200AA	Biographical Storytelling	Exploration of the art and craft of finding, developing and telling biographical stories	Prerequisites: None.	LEC 1.0 1.0 1.0
STO202	Bilingual Storytelling	Introduction to bilingual storytelling as a genre. Research, develop, and craft bilingual stories. Find appropriate contexts and venues for telling. Assist in the integration and application of bilingual storytelling to the learning environment in the classroom.	Prerequisites: None.	LEC 3.0 3.0 3.0
STO205	Establishing a Family Storytelling Tradition	Developing a family storytelling tradition. Finding, crafting, telling and preserving the stories of family members past and present, including the traditional stories associated with the family's cultural heritages. Sharing stories in family and community contexts.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
STO273	The Biblical Storytelling Tradition	Introduction to the history and practice of biblical storytelling. Overview of the oral foundation of biblical texts and teachings. Utilization of exegesis to develop and adapt stories for modern audiences. Researching, developing, and crafting Bible stories for telling. Telling biblical stories in family, community, and spiritual settings.	Prerequisites: None.	LEC 3.0 3.0 3.0
STO279	Creating and Telling Fact-Based Historical Stories	Creating and telling fact-based stories and stories from history.	Prerequisites: A grade of C or better in EDU/HUM/STO292. Xref: EDU292 HUM292	LEC 3.0 3.0 3.0
STO282AC	Service-Learning Experience in Storytelling	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
STO283	The African Storytelling Tradition	Introduction to the history and practice of storytelling in Africa. Overview of African myths, legends, folktales, parables, and fables. Great story tellers and story collectors of the past and present. Researching, developing, and crafting African stories for telling	Prerequisites: None.	LEC 3.0 3.0 3.0
STO284	Storytelling and Music	Introduction to the role and importance of music in storytelling. Research, craft, and tell stories that include percussion, vocal, or instrumental elements.	Prerequisites: None.	LEC 3.0 3.0 3.0
STO285	Creating/Performing Solo/Collaborative Works	Developing, rehearsing, and performing solo and collaborative works for fringe festivals and other storytelling and theatre venues.	Prerequisites: None.	LEC 3.0 3.0 3.0
STO286	Using Storytelling in a Variety of Settings	The application of storytelling and storytelling activities in the world of health care, business, parks, museums, hospitals, and education	Prerequisites: None.	LEC 3.0 3.0 3.0
STO287	Norse and Scandinavian Storytelling Tradition	Overview of Norse and Scandinavian myths, legends, folktales. Impact of Norse and Scandinavian myth on popular culture. Researching, developing, and crafting Norse and Scandinavian stories for telling, game development, structuring graphic novels and other applications.	Prerequisites: None.	LEC 3.0 3.0 3.0
STO288	Telling Sacred Stories from Around the World	Introduction to sacred stories as a genre. Researching, developing, and crafting traditional and personal sacred stories. Finding appropriate applications and venues for telling.	Prerequisites: None.	LEC 3.0 3.0 3.0
STO289AA	Using Storytelling in Educational Settings	The application of storytelling and storytelling activities in educational settings.	Prerequisites: None.	LEC 1.0 1.0 1.0
STO289AB	Using Storytelling in Business Settings	The application of storytelling and storytelling activities in business settings	Prerequisites: None.	LEC 1.0 1.0 1.0
STO289AC	Using Storytelling in Healing Settings	The application of storytelling and storytelling activities in healing settings	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
STO289AD	Using Storytelling in Interpretive Settings	The application of storytelling and storytelling activities in interpretive settings including museums, gardens, parks, and zoos	Prerequisites: None.	LEC 1.0 1.0 1.0
STO289AF	Using Storytelling in Family Settings	The application of storytelling and storytelling activities in family settings, such as family story nights, holidays, and reunions. Emphasis on finding and sharing family stories.	Prerequisites: None.	LEC 1.0 1.0 1.0
STO289AG	Using Storytelling in Advocacy Settings	The application of storytelling and storytelling activities in contexts of advocacy and civic engagement. Focus on stories that reflect the goals and aims of a civic organization.	Prerequisites: None.	LEC 1.0 1.0 1.0
STO290	The Irish Storytelling Tradition	Introduction to the history and practice of storytelling in Ireland. Overview of Irish myths, legends, folktales, and humorous tales. Great story tellers and story collectors of the past and present. Researching, developing, and crafting Irish stories for telling	Prerequisites: None.	LEC 3.0 3.0 3.0
STO291AA	Storytelling Circle	Designed to provide opportunities for students to practice and develop critical listening and storytelling skills.	Prerequisites: A grade of C or better in EDU/HUM/STO292 or permission of Instructor. Xref: EDU292 HUM292	L+L 1.0 1.5 1.5
STO292	The Art of Storytelling	Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom.	Prerequisites: None.	LEC 3.0 3.0 3.0
STO293	The Art of Storytelling II	Further exploration of the art of storytelling. Provide opportunities for the expansion of storytelling skills and a deeper appreciation of storytelling and its applications.	Prerequisites: A grade of C or better in EDU/HUM/STO292. Xref: EDU292 HUM292	LEC 3.0 3.0 3.0
STO294	Multicultural Folktales	Study of multicultural folktales, exploring the impact of the oral tradition in American society and showing classroom applications	Prerequisites: None.	LEC 3.0 3.0 3.0
STO295	Traditional Storytelling Around the World	Introduction to traditional storytelling practices around the world. Understanding the roles and techniques of traditional storytellers. Telling traditional stories ethically.	Prerequisites: None.	LEC 3.0 3.0 3.0
STO297	Creating and Telling Personal Stories	Exploration of the art and craft of finding, developing and telling personal stories.	Prerequisites: A grade of C or better in EDU/HUM/STO292. Xref: EDU292 HUM292	LEC 3.0 3.0 3.0
STO298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to m	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
STO298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to m	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
STO298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to m	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
SUN101	Basic Math for Carpenters	Mathematical concepts and operations for the carpentry trade. Addition, subtraction, multiplication and division of whole, decimal, fractional and metric numbers. Linear, angular, circular, surface and volume measurements. Basic geometry	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
SUN104	Site Preparation I	Trade terms, local zoning and building ordinances, and plot plan layout. Installation of batter boards and establishing building lines. Set up and use of a builder's level.	Prerequisites: (Registered apprentice status and a grade of C or better in SUN101) or permission of the Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
SUN105	Reading Plans and Elevations	Construction drawings, lines, symbols, dimensions and abbreviations. Specifications and site and plot plan development. Includes plan and elevation reading exercises.	Prerequisites: (Registered apprentice status and a grade of C or better in ABC123) or permission of the Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
SUN108	Wall Systems, Tilt-Up	History and evolution of tilt-up construction processes. Tilt- up versus concrete block or poured in place concrete walls. Testing of concrete and preparation of the slab for tilt-up. Grading and finishing concrete slabs and forming tilt-up panels. Lifting and bracing panels.	Prerequisites: (Registered apprentice status and a grade of C or better in SUN103) or permission of the Apprenticeship Coordinator.	LEC 1.5 1.5 1.5
SUN109	Site Preparation II	Basic field engineering including terminology, methods of land description and the use of tools and instruments. Government land survey system procedures and specific procedures for field surveying.	Prerequisites: Registered apprentice status and a grade of C or better in SUN101 and SUN104 or permission of the Apprenticeship Coordinator.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SUN110	Forming	Concrete formwork including terminology, layout, materials and tolerances. Construction forms for columns, footings, walls, beams and stairs.	Prerequisites: (Registered apprentice status and a grade of C or better in SUN101) or permission of the Apprenticeship Coordinator.	LEC 1.5 1.5 1.5
SUN110AA	Forming (Loose) Fundamentals	Cushion cone and cam-lock forming system. Various form and scaffold bracket systems. Forming teams, snap ties, aluma gang forms. Lumber versus Laminated Veneer Lumber (LVL) strongbacks.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
SUN111	Introduction to Light Equipment	Use, operation and maintenance of light equipment used in the construction trades. Types, assemblies, operator qualifications, controls, safety precautions, operating procedures, and maintenance of aerial lifts, skid steer loaders, trenchers, generators, compressors, compactors and forklifts	Prerequisites: None.	LEC 1.0 1.0 1.0
SUN112	Framing Fundamentals	Wall and ceiling layout procedures. Assembly and erection of exterior walls using common materials and methods. Masonry construction wall framing techniques and use of metal studs.	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.0 1.0 1.0
SUN201	Reinforcing Concrete	Use of reinforced concrete and reinforcing steel. Reinforced concrete in specific settings. Reinforcing steel; bar supports, bar lists, fabrication options, cutting and bending, tying, splicing and placing bars	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 1.5 1.5 1.5
SUN202	Horizontal and Vertical Formwork	Concrete forming and shoring systems and accessories, panel and gang wall patented wall forming systems. Column patented forms, flying form systems and culvert and roof support systems. Slipforming, paving and architectural forms. Application and construction methods for various types of forming and form hardware systems for walls, columns, and stairs as well as slip forms, climbing forms, and shaft forms. Overview of assembly, erection and stripping of gang forms.	Prerequisites: (Registered apprentice status and a grade of C or better in SUN201) or permission of the Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
SUN207	Metal Studs and Drywall	Installation of metal framing members and gypsum dry wall. Gypsum ceiling products and installation procedures	Prerequisites: Registered apprentice status or permission of the Apprenticeship	LEC 1.5 1.5 1.5
SUN208	Construction Plans and Elevations	Construction drawings, plans and elevations. Lines, symbols, dimensions and abbreviations. Specifications and site and plot plan development. Includes plan and elevation reading exercises.	Prerequisites: (Registered apprentice status and a grade of C or better in SUN105) or permission of the Apprenticeship Coordinator.	LEC 1.5 1.5 1.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SUN298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
SUN298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
SUN298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
SUS100	Introduction to Sustainability	Introduction to the basic concepts of sustainability. Includes challenges of land, ocean, and resource management as well as the built environment. Also covers connections between global, local and personal sustainability challenges and responses at each level.	Prerequisites: None.	LEC 3.0 3.0 3.0
SUS110	Sustainable World	Introduction to the field of sustainability and exploration of the interaction between human and natural global systems. Framework for analyzing and investigating the global challenges such as land use change, competition for water and other natural resources, and renewable energy concerns and crises.	Prerequisites: None.	LEC 3.0 3.0 3.0
SUS230	Practical Skills for Sustainability Problem Solving	Introduction to professional skills in sustainability problem solving. Emphasis on four skill areas: teamwork basics, project management tools and professional behaviors, self-directed learning techniques, and stakeholder engagement. Also covers techniques for identification of challenges and conflict resolution within a sustainability project.	Prerequisites: None.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SUS231	Careers in Sustainability	Introduction to career pathways in sustainability. Exploration of career paths, development of interview skills, and resume creation covered in addition to articulation of personal interests and values related to careers in sustainability. Also includes an introduction to networking skills and job search assistance.	Prerequisites: None.	LEC 1.0 1.0 1.0
SUS232	Professional Skills in Sustainability Practice	Introduction to professional skills in sustainability through interpersonal competence. Emphasis on teamwork, project management, stakeholder engagement, communication, and continuous learning.	Prerequisites: A grade of C or better in SUS110 and SSH111 and (ENG101 or ENG107).	LEC 3.0 3.0 3.0
SWU130	Addictions and Substance Use Disorders	Sociological, psychological and physiological aspects of addictive behaviors and chemical abuse. Consideration of a variety of treatment programs offered in community agencies.	Prerequisites: None.	LEC 3.0 3.0 3.0
SWU171	Introduction to Social Work	Analysis of contemporary social welfare services and professional social work.	Prerequisites: None.	LEC 3.0 3.0 3.0
SWU181	Economics: A Social Issues Perspective	Introduction to economic principles through the lens of contemporary social issues for social work and related fields.	Prerequisites: None.	LEC 3.0 3.0 3.0
SWU182	A Social Services Perspective of Government	Government and the role of policy practice in advancing social and economic justice and effective social services within the southwest.	Prerequisites: None.	LEC 3.0 3.0 3.0
SWU183	Introductory Ethics: A Social Service Perspective	Introductory exploration of ethics from a historical and multicultural perspective viewed through the lens of contemporary social issues.	Prerequisites: None.	LEC 3.0 3.0 3.0
SWU225	Statistics for Social Research/Justice and Government	Introductory course in descriptive and inferential statistics for social research. Designed to serve as preparation for interpreting and understanding research related to Justice and Government related agencies.	Prerequisites: A grade of C or better in MAT092 or completion of higher level mathematics course.	LEC 3.0 3.0 3.0
SWU250	Mindfulness for Stress Management	Introduction to the theory, research and practice behind mindfulness and stress management as it relates to quality of life issues and professional self-care. Focus on maintaining a healthy lifestyle and managing personal/professional stress by incorporating evidence based research on nutrition, mindfulness, communication, positive psychology, exercise, environmental factors contributing to wellness and disease; immune system support, activity management and developing practices that facilitate maintaining living in balance.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SWU258	Victimology and Crisis, a Social Services Perspective	A social work response to victimology, working with the criminal justice system, evidence-based techniques in crisis intervention, and the importance of a multicultural and global perspective. Includes a therapeutic approach to topics such as sexual assault, family violence, post-traumatic stress disorder, stress management, natural disasters, effective coping skills, appropriate community resources, and the responsiveness of the justice system.	Prerequisites: None.	LEC 3.0 3.0 3.0
SWU275AA	Case Report Writing I	Documentation skills for human service helpers. Includes privacy and legal issues.	Prerequisites: None.	LEC 1.0 1.0 1.0
SWU282AA	Volunteerism for Social Work: A Service Learning Experience	Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
SWU282AB	Volunteerism for Social Work: A Service Learning Experience	Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
SWU282AC	Volunteerism for Social Work: A Service Learning Experience	Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
SWU285	Social Services Seminar	Special topics in social services with an emphasis on current issues not covered in other Social Work courses.	Prerequisites: None.	LEC 1.0 1.0 1.0
SWU291	Social Service Delivery Systems	Purposes, structures, and delivery systems of human service agencies. Includes 40 hours of volunteer experience in local human service agencies.	Prerequisites: A grade of C or better in SWU171, or permission of Department or Division or Corequisites: SWU171.	LEC 3.0 3.0 3.0
SWU295	Foundations of Social Work Practice	Introduction to professional helper communication skills with respect to cross-cultural practice and diversity issues, in a social work setting.	Prerequisites: None. SWU171 suggested but not required.	LEC 3.0 3.0 3.0
SWU298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
SWU298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
SWU298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
TDR102	Construction Soft Skills I: Workplace Skills	First impressions, relationship building, and team work. Diversity in the work place. Individual and group activities.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.	LEC 1.0 1.0 1.0
TDR104	Construction Soft Skills II: Listening and Speaking	Effective listening, speaking, reading and writing skills for the construction industry. Communication process: channel, receiver and feedback. Communication issues, problems, and noise. Business and form writing for the construction industry. On-the-job site factors. Individual and group activities	Prerequisites: A grade of C or better in TDR102.	LEC 1.0 1.0 1.0
TDR106	Construction Soft Skills III: Resolving Workplace Issues	Stress recognition and management. Time management. Critical thinking and problem solving. Conflict prevention and resolution. Annoying behavior. Coping skills. Criticism. Sexual harassment. drug, alcohol, and substance abuse. Individual and group activities	Prerequisites: A grade of C or better in TDR104.	LEC 1.0 1.0 1.0
TDR122	Basic Electrical Theory	Introduction to electrical theory, direct current (DC) circuits, series, parallel, and series-parallel circuits, DC power sources, DC motors, DC generators	Prerequisites: Permission of Instructor.	LEC 5.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TDR296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
TDR296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
TDR296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TDR296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
TDR298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
TDR298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
TDR298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
TEC103	Developing Your Fashion Business	Creating and understanding a financial plan, developing operating and control systems, planning growth strategies and a business plan for the Fashion Entrepreneur. Emphasis on fashion merchandise and successful fashion business development	Prerequisites: None.	LEC 2.0 2.0 2.0
TEC105	Cultural Aspects of Clothing	Psychological, aesthetic, and economic factors applied to the systematic study of dress and adornment in relationship to world cultures and the global fashion industry.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC106	History of Fashion	Consideration of historic factors influencing fashion and fashion change with special emphasis on historic costume.	Prerequisites: None.	LEC 3.0 3.0 3.0
TEC107	Color in Fashion	Fundamental study of color as it relates to uses in the fashion industry for yarns, fabrics, materials, fashion illustration, fashion photography, collection seasons, and design collections.	Prerequisites: None.	L+L 3.0 3.0 3.0
TEC108	Flat-Pattern Design	Beginning flat-pattern design techniques. Introductory work with pattern accuracy, markings, style variations, seams, and garment features to create basic designs.	Prerequisites: A grade of C or better in TEC110 or permission of Instructor.	L+L 3.0 4.0 4.0
TEC109	Introduction to Fashion Merchandising	Explores the various levels and specialized segment of the fashion industry, the principles of fashion, the fundamentals of merchandising apparel, consumers' influence on demand and marketing activities.	Prerequisites: None.	LEC 3.0 3.0 3.0
TEC110	Beginning Apparel Construction	Basic apparel construction techniques. Use of commercial patterns and sewing machine in the construction of basic garments.	Prerequisites: None.	L+L 3.0 5.0 5.0
TEC111	Intermediate Apparel Construction	Intermediate clothing construction techniques. Emphasis on fit and construction details of commercial patterns.	Prerequisites: A grade of C or better in TEC110 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC112AQ	Pattern Alteration and Fit	Structural features of patterns and altering patterns to achieve proper fit. Includes figure irregularities, pattern style variations, fashion, and individual figure problems.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	L+L 2.0 3.0 3.0
TEC112AU	Sewing Clothing Accessories	Construction of clothing accessories for personal or professional use. Includes overview of accessories, principles of design, selection of fabrics and trims, use of commercial patterns, creation of custom patterns, construction techniques, and evaluation of accessories.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC113	Textiles: Dyeing	Demonstrations and projects emphasizing skills and techniques in creating textile designs on fabric for fashion and interior design applications. Fabric dyeing techniques through hands-on practices such as tie dyeing, shibori dyeing and batik dyeing.	Prerequisites: None.	L+L 1.0 1.5 1.5
TEC114	Textiles: Block Printing/Silk Screening	Block printing and silk screening techniques used to create designs on fabric for apparel and interiors.	Prerequisites: None.	L+L 1.0 2.0 2.0
TEC115	Textiles: Hand Painting	Techniques used to hand paint designs on textiles for fashion and interior design. Techniques include water color and ombre, marbleizing, stenciling, stamping and various resist methods such as gutta and taping. Includes color theory and design development.	Prerequisites: None.	L+L 1.0 1.5 1.5
TEC116	Textiles: Stitchery and Embellishment	Materials and techniques used for stitchery and embellishment on textiles. Includes color schemes and design development.	Prerequisites: None.	L+L 1.0 1.5 1.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC120	Specialty Apparel Construction	Application of specialty fabrics in clothing construction. Emphasis on improved construction quality and garment fit.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	L+L 3.0 5.0 5.0
TEC121	Creative Sewing Machine Use	Use of the sewing machine for other than construction of garments or household items. Emphasis on decorative uses of the sewing machine on items made or purchased by the user.	Prerequisites: A grade of C or higher in TEC110 or permission of Instructor.	L+L 3.0 3.0 3.0
TEC122	Sewing with Knits	Skills and techniques used in the construction of garments made from knit fabrics.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	L+L 3.0 5.0 5.0
TEC125	Fashion Design	Overview of the fashion design industry. Includes terminology, fashion trends, elements and principles of design, sources of inspiration, fabric selection, sketching and costing a collection, an introduction to pattern making techniques, and global fashion centers' design and manufacturing specialties.	Prerequisites: None.	LEC 3.0 3.0 3.0
TEC126	Sewing for the Home	Provides students systemic skills and knowledge to plan and construct draperies, shades, pillows, bedding and other home furnishings through instructional projects. Emphasizes techniques used in producing textile goods for the home.	Prerequisites: None.	LEC 3.0 3.0 3.0
TEC128	Home Upholstery	Demonstration and application of knowledge and skills involved in upholstering stools, chairs, headboards, and other home furnishings. Includes measuring and cutting upholstery fabric and sewing outdoor/indoor cushions.	Prerequisites: None.	L+L 3.0 5.0 5.0
TEC129	Sewing with a Serger	Operation of a home serger. Use in constructing, finishing, and decorating garments and home decorations. Home serger required.	Prerequisites: A grade of C or better in TEC110 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC130	Alteration of Ready-Made Garments	Knowledge, skills, and techniques of altering ready-made garments for personal or professional use. Experience using a sewing machine and constructing garments assumed.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	L+L 3.0 4.0 4.0
TEC133	Fashion Illustration: Croquis	Techniques for working with female and male croquis. Applications for illustrating clothing on croquis and preparing a fashion layout.	Prerequisites: None.	L+L 2.0 4.0 4.0
TEC134	Fashion Illustration I	Proportions and techniques used in drawing fashion figures and clothing. Introduction of media and illustrative styles for portfolio design, trade sketches, and fashion advertisements.	Prerequisites: None.	L+L 3.0 5.0 5.0
TEC135	Fashion Illustration II	Intermediate-level study of proportion and techniques used in drawing fashion figures, clothing, and flats. Continued study of garments, fabric textures and patterns. Development of skills in presentation drawing and commencing fashion design portfolio illustrations.	Prerequisites: A grade of C or better in TEC134 or permission of Instructor.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC136	Fashion Illustration III	Advanced-level study of proportions and techniques used in drawing fashion figures, clothing, and flats. Continued study of illustrative styles for garments, fabric textures and patterns. Further development of skills in portfolio presentation.	Prerequisites: A grade of C or better in TEC135 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC138	Fashion Illustration: Menswear	Study of proportions and techniques used in drawing menswear fashion figures, clothing, accessories, and flats. Focus on the male physique and specific fitting variations of clothing. Introduction of traditional menswear fabrications and poses for tailored clothing and sportswear.	Prerequisites: A grade of C or better in TEC134 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC139	Fashion Illustration: Children's Wear	Study of proportions and techniques used in drawing children's wear fashion figures, clothing, and flats from infants through teenagers. Introduction of body and feature characteristics unique to the various ages of growth for children. Includes emphasis on common clothing styles, fabrics, effects, and details.	Prerequisites: A grade of C or better in TEC134 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC143	Industrial Sewing I	Introduction to industrial sewing machine usage with emphasis on techniques, applications, and stitching control. Basic methods used in constructing, finishing, and decorating apparel.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	L+L 2.0 3.0 3.0
TEC144	Industrial Sewing II	Use of standard industrial sewing machines with emphasis on techniques, applications, speed, and stitching control. Expanded methods in intermediate and advanced construction, finishing, and decorating apparel.	Prerequisites: A grade of C or better in TEC143 or permission of Instructor.	L+L 2.0 3.0 3.0
TEC146	Manufacturing Sewing Methods I	Introduction to skills and techniques of sewing for apparel manufacturing ready-made-garments. Focus on applying correct clothing construction methods required to achieve the right quality level for the apparel customer using the proper commercial design and materials.	Prerequisites: A grade of C or better in TEC144 or permission of Instructor.	L+L 2.0 3.0 3.0
TEC147	Manufacturing Sewing Methods II	Advanced skills and techniques of sewing for apparel manufacturing ready-made-garments. Advanced application of correct clothing construction methods required to achieve the right quality level for the apparel customer using the proper commercial design and materials.	Prerequisites: A grade of C or better in TEC146 or permission of Instructor.	L+L 2.0 3.0 3.0
TEC150	Fashion Show Production	Students will learn and experience real-time production techniques and skills of a fashion show. Includes but not limited to, budget planning, project management, marketing, staffing, d?cor, staging, and production.	Prerequisites: None.	L+L 3.0 4.0 4.0
TEC151	Display and Visual Merchandising	An examination of the principles of design including line, color, balance, and texture as they relate to the display of merchandise. Participation in displays, field trips, and individual projects	Prerequisites: None.	L+L 3.0 4.0 4.0
TEC161	Digital Machine Embroidery Laboratory	Use of the sewing machine and computer for development of decorative designs for garment and fabric design	Prerequisites: None.	LAB 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC200	Retail Buying	Examines management/buyer role in investment, pricing, planning, controlling sales and inventories Any BPC/CIS spreadsheet course recommended	Prerequisites: None. A grade of C or better in any BPC/CIS spreadsheet course recommended.	LEC 3.0 3.0 3.0
TEC201	Custom-Made Jeans	Construction and fit of standard denim jeans. Includes use of flat-felled seams, fly-front zipper, waistband with belt-loops, topstitched pockets and hems.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	L+L 1.0 1.0 1.0
TEC212	Advanced Apparel Construction	Advanced garment construction techniques. Emphasis on lined jacket construction and working with patterned and specialty fabrics.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	L+L 3.0 5.0 5.0
TEC220	Sustainable Fashion Design	Fundamental study of sustainable fabrics, materials, fashions, and industry measures to improve waste prevention and maintain emerging fashions, including reuse, repurpose, recycling, upcycling, and related trends.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	L+L 3.0 4.0 4.0
TEC221	Computer-Assisted Fashion Design	The use of computer hardware and software in the fashion design industry. Create and illustrate fashion designs using computer hardware and software. Color and design principles applied in creating an apparel line and developing a portfolio.	Prerequisites: A grade of C or better in (TEC125 and TEC134) or permission of Instructor.	L+L 3.0 5.0 5.0
TEC222	Textiles	Study of textile fibers, yarns, fabrication, color and finishes and their impact on product performance. Includes labeling laws, fiber manufacturing processes, technical textiles, fiber properties, care, end use, and global sustainability efforts.	Prerequisites: None.	L+L 3.0 4.0 4.0
TEC223	Tailoring	Principles of tailoring as applied in the construction of a coat or suit. Alteration of patterns and fitting techniques.	Prerequisites: A grade of C or better in TEC212 or permission of Instructor.	L+L 3.0 6.0 6.0
TEC224	Pattern Drafting	Draft patterns from measurements of dress forms and human figures. Development of slopers and garment patterns. Design and produce an original garment using pattern drafting techniques.	Prerequisites: A grade of C or better in TEC108, or TEC225, or TEC226, or permission of Instructor.	L+L 2.0 4.0 4.0
TEC225	Pattern Design I	Creation of pattern designs by flat pattern methods. Produce a variety of styles. Production of an original pattern design and garment.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	L+L 3.0 5.0 5.0
TEC226	Draping for Fashion Design	Manipulation of fabrics on a dress form and/or live figure to create designs and patterns. Use of woven fabrics to create basic and intermediate designs. Introduction of knitwear draping. Drape and construct an original design.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	L+L 3.0 5.0 5.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC227	Couture Sewing	Construction techniques used in couture sewing. Includes fabric selection, fabric preparation, hand sewing, garment shaping, edge finishes, embellishments, and closures. Emphasis on fitting and couture construction techniques used to construct skirts, pants, blouses, dresses, sleeves, pockets, jackets, coats, and evening wear.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	L+L 3.0 5.0 5.0
TEC228	Advanced Draping for Fashion Design	Advanced draping techniques for fashion design. Includes draping jackets/coats, shorts/pants, dresses/gowns and other woven fabrics. Also includes draping swimwear/leotards and other garments in knit fabrics. Drape and construct an original design.	Prerequisites: A grade of C or better in TEC226 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC229	Advanced Serging	Operation of a home serger in advanced application of construction and embellishment for garments and home decoration projects. Home serger required.	Prerequisites: A grade of C or better in TEC129 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC230	Pattern Design II	Practical application in designing clothing/patterns using flat pattern method. Principles of flat pattern and use of sloper reviewed. Includes creation of woven and knit original designs.	Prerequisites: A grade of C or better in TEC225 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC231	Pattern Grading	Grading patterns to change sizes. Includes grading terminology, grading methods, figure types, grading charts, types of grade, even and uneven grades, and grading basic and intermediate designs.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC232	Costume Construction	Costume construction techniques applied to period reproduction, vintage, fantasy and anime; stage and dance costumes. Includes alteration of commercial patterns, drafting of original patterns, and fitting techniques.	Prerequisites: A grade of C or better in TEC111 and (TEC224 or TEC225 or TEC226 or permission of Instructor).	L+L 3.0 5.0 5.0
TEC233	Computer-Assisted Pattern Making	Pattern making using the computer and various software programs. Includes measuring, block patterns, pattern development, production patterns, modifications for size and fit, and markers.	Prerequisites: A grade of C or better in TEC225 or permission of Instructor.	L+L 3.0 5.0 5.0
TEC234	Vintage Fashion Design	Research of 20th-century fashions from the 1920s through the 1990s influencing vintage garment styles. Analysis of vintage era and revival trends. Development and construction of an original vintage garment/ensemble including design, fabric selection, and commercial pattern use with flat-patternmaking and/or draping variations.	Prerequisites: A grade of C or better in (TEC225 or TEC226) or permission of Instructor.	L+L 3.0 5.0 5.0
TEC235	Custom Tailored Pants	Designed for the home sewing enthusiast or dressmaker who desires a perfectly fitted pant pattern. Pattern adjustments; selecting proper size; fitting procedures for a personalized pant. Fabric draft of the basic pant to be fitted on each student	Prerequisites: A grade of C or better in TEC111 or equivalent.	L+L 2.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC236	Portfolio Development	This course is designed to assist students in the preparation and presentation of an original professional portfolio. Students will design, produce, and present artistic sketches and illustrations of fashion figures wearing designs, flats for garment designs, and fabric swatches/samples selected for designs. Including but not limited to using computer-assisted design software, presentation boards, and other required components in the field of portfolio development.	Prerequisites: A grade of C or better in TEC134 and permission of Department or Division. TEC221 is recommended.	LAB 1.0 3.0 2.40
TEC237	Intermediate Computer-Assisted Fashion Design	Intermediate-level study in the use of computer hardware and software in the fashion design industry. Draw fashion figures, create textile designs, develop and illustrate an original portfolio collection.	Prerequisites: A grade of C or better in (TEC134 and TEC221) or permission of Instructor.	L+L 3.0 5.0 5.0
TEC238	Industry Patternmaking Standards	Study of patternmaking techniques for industry. Specifications for production patterns, labeling methods, and direction cards.	Prerequisites: A grade of C or better in TEC225 or permission of Instructor.	L+L 1.0 2.0 2.0
TEC240	Apparel Production Management	Overview of apparel production management for the global marketplace examining component details of the technical package, tech-pack, which include specifications and costing in the most time-efficient manner.	Prerequisites: None.	L+L 2.0 3.0 3.0
TEC241	Advanced Computer-Assisted Fashion Design	Advanced techniques and use of computer hardware and software in the fashion design industry. Create and illustrate fashion designs using multiple computer applications. Create advanced textile surface pattern design using color and design principles on the computer. Manipulate CAD pattern design for original patterns, grading, and markers. Create storyboards for product development and personal portfolio.	Prerequisites: A grade of C or better in TEC124 and TEC237.	L+L 3.0 5.0 5.0
TEC244	Industrial Sewing III	Mastery study of industrial sewing machine usage for straight-stitch, zigzag, over-lock, cover stitch and blind-hem machines. Use in detailed or complex constructing, finishing, and decorating apparel and home decor.	Prerequisites: A grade of C or better in TEC144 or permission of Instructor.	L+L 2.0 3.0 3.0
TEC245	Wardrobe Strategies	Methods of clothing selection, coordination, evaluation, and planning to meet men's and women's wardrobe needs.	Prerequisites: None.	LEC 3.0 3.0 3.0
TEC247	Manufacturing Sewing Methods III	Mastery knowledge, skills, and techniques of sewing for apparel manufacturing ready-made-garments. Mastery level application of correct clothing construction methods required to achieve the right quality level for the apparel customer using the proper commercial design and materials.	Prerequisites: A grade of C or better in TEC147 or permission of Instructor.	L+L 2.0 3.0 3.0
TEC255	Fashion Retail Merchandising	Surveys the structure and operation of fashion retail organizations. Emphasizes the global nature of fashion merchandising and techniques of merchandising for the fashion merchandising major.	Prerequisites: A grade of C or better in MKT/TEC109. Xref: MKT109	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC260	Fashion Sales Management	Emphasizes the fashion aspects of sales, and the application and management of a sales force for the fashion industry.	Prerequisites: A grade of C or better in MKT/TEC109. Xref: MKT109	LEC 3.0 3.0 3.0
TEC270	Design Studio	Design and production of original garments for a line/collection. Includes design inspirations, sketches/illustrations, fabric/materials selection, pattern development, construction and fit.	Prerequisites: A grade of C or better in (TEC225 or TEC226) or permission of Instructor.	LAB 3.0 4.0 4.0
TEC271AA	Fashion Design Internship	Work experience in fashion design business or industry. Work hours are coordinated for a minimum of 80 hours per semester. Supervision and evaluation by internship coordinator.	Prerequisites: Permission of Department or Division.	LAB 1.0 5.0 0.0
TEC271AC	Fashion Design Internship	Work experience in fashion design business or industry. Fifteen hours of work weekly. Supervision and evaluation by an internship coordinator	Prerequisites: Permission of Department or Division.	LAB 3.0 15.0 0.0
TEC272AA	Retail Merchandising Internship	Retail Merchandising work experience in a Fashion Retail business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.	LAB 1.0 1.0 0.0
TEC272AC	Retail Merchandising Internship	Retail Merchandising work experience in a Fashion Retail business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.	LAB 3.0 3.0 0.0
TEC274AA	Fashion Merchandising Study Tour	A tour of the fashion merchandising industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of this multifaceted career	Prerequisites: Permission of Department or Division.	LAB 1.0 5.0 1.0
TEC274AB	Fashion Merchandising Study tour	A tour of the fashion merchandising industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of this multifaceted career.	Prerequisites: Permission of Department or Division.	LAB 2.0 10.0 2.0
TEC274AC	Fashion Merchandising Study Tour	A tour of the fashion merchandising industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of this multifaceted career	Prerequisites: Permission of Department or Division.	LAB 3.0 15.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC275AA	Image Consultant Internship	Image Consultant work experience in a Fashion Retail business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.	LAB 1.0 1.0 0.0
TEC275AC	Image Consultant Internship	Image Consultant work experience in a Fashion Retail business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.	LAB 3.0 3.0 0.0
TEC277AA	Alteration Internship	Alteration work experience in a business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.	LAB 1.0 1.0 0.0
TEC277AC	Alteration Internship	Alteration work experience in a business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC278AA	Costume Design and Production Internship	Costume Design and Production work experience in a business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of	LAB 1.0 1.0 0.0
TEC278AC	Costume Design and Production Internship	Costume Design and Production work experience in a business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.	LAB 3.0 3.0 0.0
TEC282AA	Service-Learning in Fashion Merchandising and Design	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
TEC282AB	Service-Learning Experience in Fashion Merchandising and Design	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
TEC282AC	Service-Learning Experience in Fashion Merchandising and Design	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
TEC296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0
TEC296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
TEC296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TEC298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
TEC298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
TEC298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
THE111	Introduction to Theatre	A survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism	Prerequisites: None.	LEC 3.0 3.0 3.0
THE220	Modern Drama	Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright's structure and style.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	LEC 3.0 3.0 3.0
THE260	Film Analysis	Understanding and enjoyment of film and its correlation to literature, art, music, and other disciplines	Prerequisites: None.	LEC 3.0 3.0 3.0
THE274AA	Theatre Study Tour	A tour that focuses on theatre production outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about theatre production	Prerequisites: Permission of Department or Division.	LAB 1.0 5.0 1.0
THE274AB	Theatre Study Tour	A tour that focuses on theatre production outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about theatre production	Prerequisites: Permission of Department or Division.	LAB 2.0 10.0 2.0
THE274AC	Theatre Study Tour	A tour that focuses on theatre production outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about theatre production	Prerequisites: Permission of Department or Division.	LAB 3.0 15.0 3.0
THE282AA	Service-Learning Experience in Theatre	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THE282AB	Service-Learning Experience in Theatre	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
THE282AC	Service-Learning Experience in Theatre	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
THE298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
THE298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
THE298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
THF120AA	Audition Techniques for Stage and Screen: Prepared Monologue	Practice in the techniques of auditioning for stage and screen. Identifies and illustrates techniques of the prepared monologue audition.	Prerequisites: None.	L+L 1.0 2.0 2.0
THF120AB	Audition Techniques for Stage and Screen: Cold Readings	Practice in the techniques of auditioning for stage and screen. Identifies and illustrates techniques of the cold reading audition.	Prerequisites: None.	L+L 1.0 2.0 2.0
THF205	Introduction to Cinema	Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements.	Prerequisites: None.	LEC 3.0 3.0 3.0
THF206	Introduction to Television Arts	History and development of electronic media and its impact on popular arts.	Prerequisites: None.	LEC 3.0 3.0 3.0
THF209	Acting for the Camera	Special technical aspects of acting before a camera.	Prerequisites: A grade of C or better in THP112 or permission of Instructor.	L+L 3.0 4.0 4.0
THF210	Contemporary Cinema	A study of contemporary films, directors and critics with emphasis on evaluating film as an art form.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THF219	Advanced Acting for the Camera	Focuses on special technical aspects of advanced acting before a camera.	Prerequisites: A grade of C or better in THF209 or permission of Instructor.	L+L 3.0 4.0 4.0
THO115	Makeup for Stage and Screen	Purposes, materials, and techniques of makeup for stage and screen.	Prerequisites: None.	L+L 3.0 4.0 4.0
THO118	Playwriting	Practice and study of theories and techniques of writing for the stage; creating characters, dialogue, and plot for monodramas, scenes, and plays	Prerequisites: None.	L+L 3.0 3.0 3.0
THO130	Combat for Stage and Screen	Fundamental techniques and terminology of staged combat with and without weapons. Analysis and performance of safely choreographed violence that tells a story for stage and screen.	Prerequisites: None.	L+L 3.0 4.0 4.0
THO130AA	Specialized Stage Combat: Unarmed	Teaches fundamental techniques and terminology of unarmed staged combat as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in unarmed stage combat.	Prerequisites: None.	L+L 1.5 2.0 2.0
THO130AB	Specialized Stage Combat: Broadsword	Teaches fundamental techniques and terminology of staged combat utilizing the broadsword as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the broadsword in stage combat.	Prerequisites: None.	L+L 1.5 2.0 2.0
THO130AC	Specialized Stage Combat: Rapier and Dagger	Teaches fundamental techniques and terminology of staged combat utilizing the rapier and dagger as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the rapier and dagger in stage combat.	Prerequisites: None.	L+L 1.5 2.0 2.0
THO130AD	Specialized Stage Combat: Single Sword	Teaches fundamental techniques and terminology of staged combat utilizing the single sword as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the single sword in stage combat.	Prerequisites: None.	L+L 1.5 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THO130AE	Specialized Stage Combat: Small Sword	Teaches fundamental techniques and terminology of staged combat utilizing the small sword as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the small sword in stage combat.	Prerequisites: None.	L+L 1.5 2.0 2.0
THO130AF	Specialized Stage Combat: Sword and Shield/Buckler	Teaches fundamental techniques and terminology of staged combat utilizing the sword and shield/buckler as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the sword and shield/buckler in stage combat.	Prerequisites: None.	L+L 1.5 2.0 2.0
THO130AG	Specialized Stage Combat: Quarterstaff	Teaches fundamental techniques and terminology of staged combat utilizing the quarterstaff as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the quarterstaff in stage combat.	Prerequisites: None.	L+L 1.5 2.0 2.0
THO130AH	Specialized Stage Combat: Knife	Teaches fundamental techniques and terminology of staged combat utilizing the knife as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the knife in stage combat.	Prerequisites: None.	L+L 1.5 2.0 2.0
THO135AA	Stage Combat Recertification: Unarmed	Course to provide Society of American Fight Directors (SAFD) recertification in unarmed stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	L+L 0.5 1.0 1.0
THO135AB	Stage Combat Recertification: Broadsword	Course to provide Society of American Fight Directors (SAFD) recertification in using the broadsword in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	L+L 0.5 1.0 1.0
THO135AC	Stage Combat Recertification: Rapier and Dagger	Course to provide Society of American Fight Directors (SAFD) recertification in using the rapier and dagger in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	L+L 0.5 1.0 1.0
THO135AD	Stage Combat Recertification: Single Sword	Course to provide Society of American Fight Directors (SAFD) recertification in using the single sword in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	L+L 0.5 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THO135AE	Stage Combat Recertification: Small Sword	Course to provide Society of American Fight Directors (SAFD) recertification in using the small sword in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	L+L 0.5 1.0 1.0
THO135AF	Stage Combat Recertification: Sword and Shield/Buckler	Course to provide Society of American Fight Directors (SAFD) recertification in using the sword and shield/buckler in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	L+L 0.5 1.0 1.0
THO135AG	Stage Combat Recertification: Quarterstaff	Course to provide Society of American Fight Directors (SAFD) recertification in using the quarterstaff in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	L+L 0.5 1.0 1.0
THO135AH	Stage Combat Recertification: Knife	Course to provide Society of American Fight Directors (SAFD) recertification in using the knife in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	L+L 0.5 1.0 1.0
THO169	Theatrical Career Preparation	Development and preparation for performing arts careers, including portfolio and resume building, initial design of an unpublished digital presence, exploration of educational and employment opportunities in the industry, and skills and techniques for job interviews or auditions.	Prerequisites: None.	LAB 1.0 2.0 2.0
THO202AA	Theatre Production I Scene Shop	The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done in a Theatre Scenic Shop. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-type facilities and equipment are made available for student use.	Prerequisites: None.	LAB 1.0 2.0 2.0
THO202AB	Theatre Production I Electrics	The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done in a Theatre Electric Shop. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-type facilities and equipment are made available for student use.	Prerequisites: None.	LAB 1.0 2.0 2.0
THO202AC	Theatre Production I Costume Shop	The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done in a Theatre Costume Shop. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-type facilities and equipment are made available for student use.	Prerequisites: None.	LAB 1.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THO202AD	Theatre Production Advanced Projects	The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done in a leadership role on a theatrical production. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-type facilities and equipment are made available for student use.	Prerequisites: None.	LAB 1.0 2.0 2.0
THO203	Technical Theatre Production	Designed to give college credit to the technical production crews of college theatre productions.	Prerequisites: None.	LAB 3.0 6.0 6.0
THO208	Costume Play Solo Performance Practicum	Introduction to Costume Play (Cosplay) skills for the creation of a solo based performance through practical experience. Focus on the origins of Cosplay and use of tools for prop and costume development, design and application of make-up, safety practices, character development and performance, and growing a social presence for promotion.	Prerequisites: None.	L+L 3.0 4.0 4.0
THO209	Costume Play Group Performance Practicum	Introduction to Costume Play (Cosplay) skills for the creation of a group based performance through practical experience. Focus on the development and collaborative performance of Cosplay characters within a canon/shared world. Use of tools for prop and costume development, design and application of make-up, safety practices, and growing a social presence for promotion.	Prerequisites: None.	L+L 3.0 4.0 4.0
THO215	Advanced Makeup Techniques for Stage and Screen	Advanced character analysis and makeup design for stage and screen. Technical application of makeup for stage and screen.	Prerequisites: A grade of C or better in THO115.	L+L 3.0 4.0 4.0
THO216	Wig and Hair Production for Theatre and Film	Introduction to wig technology, including the use of tools and techniques for making, ventilating, measuring, and styling period wigs.	Prerequisites: None.	L+L 3.0 4.0 4.0
THO218	Beginning Stage Lighting	Basic theories and methods of stage lighting for all production types. Emphasis on technical/theoretical facts, artistic/design concept development, and teamwork structure of theatre. Examines stage lighting optics, instrument selection and application, color theory, circuiting and control systems, and basic design.	Prerequisites: A grade of C or better in THP213 or permission of Instructor.	L+L 3.0 4.0 4.0
THO219	Introduction to Puppetry	Use of different types of puppets in a variety of performance settings. Practical experience with diverse audiences.	Prerequisites: None.	L+L 3.0 4.0 4.0
THO225	Visual Script Analysis	Theory and practice in analysis of dramatic literature for the technician and designer. Emphasis on techniques of script analysis for visual information.	Prerequisites: None.	LEC 2.0 2.0 2.0
THO226	Theatrical Design: Costuming	Basic techniques involved in researching and designing costumes for the stage.	Prerequisites: None.	L+L 3.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THO235	Principles of Stage Combat Safety/Fight Captain	Evaluate stage combat performances for safety in order to identify issues that might require intervention, communication, and revision. Course to prepare students for work as a fight captain in a stage or film environment. Provides opportunity to practice weapon maintenance and instruction; safe choreography; analysis of how choreography design elements affect safety; written and recorded choreography notation; and the implementation and communication of choreography and intervention strategies. Includes practical experience as a teaching assistant for other stage combat courses or as an assistant fight captain on dramatic productions.	Prerequisites: A grade of C or better in at least four (4) stage combat courses (THO130AA, THO130AB, THO130AC, THO130AD, THO130AE, THO130AF, THO130AG, or THO130AH) or permission of Program Director.	L+L 4.0 5.0 5.0
THO246	Digital Fabrication	Introduction to concepts and application of computer visualization, modeling, and rapid prototyping for interdisciplinary arts. Students will design sculptures applying 3D computer modeling techniques, rapid prototyping, and other available digital output devices to produce solid models.	Prerequisites: None.	L+L 3.0 6.0 6.0
THO250	Stage Properties	Introduction to stage properties including design, construction and maintenance features. Provides skills in property design and construction using an assortment of standard materials.	Prerequisites: None.	L+L 3.0 4.0 4.0
THO251	Safety Practices in Theatre and Film Production	Safety practices in theatre and film production. Includes Focus on national safety organizations and production practices of theatre stages and soundstages, theatrical rigging, electrical, scenic construction, paint and chemical handling, automation, special effects, welding, and personal safety practices.	Prerequisites: None.	L+L 1.0 2.0 2.0
THO260	Theatrical Design: Rendering	Provides experience and explores multiple illustration techniques used to communicate ideas in entertainment production. Provides basic skills including pictorial drawing and sketching.	Prerequisites: None.	L+L 2.0 4.0 4.0
THO261	Previsualization Modeling	Provides experience and explores basic pre-visualization methods used to communicate ideas in entertainment preproduction. Provides basic models skills.	Prerequisites: None.	L+L 2.0 4.0 4.0
THO262	Entertainment Industry Design Drafting	The fundamentals of drafting for the Entertainment Industry. Includes drafting equipment, geometry, lettering, symbols, drawings (orthographic, isometric, oblique, sectional) and standard drawings used in the entertainment industry including floor plans, sections, elevations, working drawings, and perspective.	Prerequisites: None.	L+L 3.0 6.0 6.0
THO263	Entertainment Industry Drafting I: 2D CAD	Introduction to Computer Aided Drafting (CAD) for the Entertainment industry, including stage, screen and television venues, using CAD software. Includes basic set-ups, formats, two-dimensional drawing and editing commands, dimensions, text, and plotting typical to entertainment industries.	Prerequisites: None.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THO265	Introduction to Stage Management	The focus of this course is the role of the stage manager. Topics include all aspects of preparation and implementation of rehearsals and performances for the stage manager position.	Prerequisites: None.	L+L 3.0 4.0 4.0
THO266	Production Careers in Technical Theatre	Provides the continuing design, stage management and technical student with opportunities to explore the versatility of the job opportunities within the Tech Theatre industry. Emphasis on presenting the work and talent both in person and on paper. Development of a professional resume and vita.	Prerequisites: None.	L+L 1.0 2.0 2.0
THO267	Painting Techniques for Film, TV and Theatre	Theory and skills in scenic artistry. Techniques of painting two-dimensional and three-dimensional scenery, tools, and the use of color.	Prerequisites: A grade of C or better in THP213.	L+L 3.0 4.0 4.0
THO268	Opportunities in Production	Provides the continuing design student, dramaturge, stage management, technical director, and directing students with opportunities to expand the versatility of professional skills. Emphasis on relating their work to the total production process. Linking design ideas to production concept. Maintain dramaturge, stage manager, director documentation. Practical application of student work for portfolio development.	Prerequisites: Permission of Department or Division.	L+L 3.0 6.0 6.0
THO269	Technical Theatre Portfolio Development	The analysis and preparation of all elements of a Technical Theatre/Design Portfolio including the use of digital portfolios and application to specific disciplines. Practice with portfolio presentation and maintaining and updating portfolio materials.	Prerequisites: None.	L+L 1.0 1.0 1.0
THO270	Musical Theatre Workshop	Workshop in the study and performance of Musical Theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: None.	L+L 2.0 5.0 5.0
THO270AA	Musical Theatre Workshop	Workshop in the study and performance of musical theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: None.	LAB 1.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THO296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 1.0 5.0 0.0
THO296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 2.0 10.0 0.0
THO296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 3.0 15.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THO296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with	LAB 4.0 20.0 0.0
THP101	Introduction to Theatrical Production	Introduction to the positions and process of theatrical production through participation in a fully-realized educational or community theatre production.	Prerequisites: None.	LAB 1.0 2.0 2.0
THP102	Theatre Service Practicum	Use and develop theatrical skills for service to the community through practical experience.	Prerequisites: Permission of Department or Division.	LAB 1.0 2.0 0.0
THP112	Acting I	Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization.	Prerequisites: None.	L+L 3.0 4.0 4.0
THP131	Stage Movement	Movement skills for the actor to develop a flexible, expressive physical instrument. Includes pantomime, physical isolation, and awareness exercises	Prerequisites: None.	L+L 3.0 4.0 4.0
THP151	Theatre for Youth	Principles and techniques of selecting plays, adapting stories, playwriting, directing, designing, producing, and acting in theatre for youth. The course will provide the opportunity to analyze and experience the production process from creating a script to performing a theatre production for a youth audience.	Prerequisites: None.	L+L 3.0 4.0 4.0
THP201AA	Theatre Production I	Designed to give college credit to the cast and technical production crews of college theatre productions.	Prerequisites: None.	LAB 1.0 2.0 2.0
THP201AB	Theatre Production II	Designed to give college credit to the cast and technical production crews of college theatre productions.	Prerequisites: None.	LAB 2.0 4.0 4.0
THP202	Theatre Production Projects	The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done on a production. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-type facilities and equipment are made available for student use.	Prerequisites: None.	LAB 1.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THP206	Introduction to Costume Construction for Theatre	Introduction to basic principles used in costuming for theatre including the use of tools and techniques for costume construction, understanding of fabrics and materials, and a selected survey of historical fashion.	Prerequisites: None.	LEC 4.0 4.0 4.0 LAB 0.0 2.0 2.0
THP211	Creative Drama	Theory and practice of creative drama, including improvisation, storytelling, puppetry, and script and program development in drama, and their application to elementary and secondary school levels	Prerequisites: None.	LEC 3.0 3.0 3.0
THP211AA	Creative Drama: Improvisation	Theory and practice of creative drama, including improvisation. Covers improvisation theatre-based activities. Emphasis on application in elementary and secondary school levels	Prerequisites: None.	LEC 1.0 1.0 1.0
THP211AB	Creative Drama: Storytelling/ Puppets	Theory and practice of creative drama in storytelling and puppetry. Covers use of puppets to enhance storytelling skills. Emphasis on application in elementary and secondary school levels	Prerequisites: None.	LEC 1.0 1.0 1.0
THP211AC	Creative Drama: Script Development	Theory and practice of creative drama in script development. Covers creation and adaptation of dramatic materials from a variety of sources. Emphasis on application in elementary and secondary school levels	Prerequisites: None.	LEC 1.0 1.0 1.0
THP212	Acting II	Fundamental techniques of acting through script analysis, rehearsal, and performance	Prerequisites: A grade of C or better in THP112 or permission of Department or Division.	L+L 3.0 4.0 4.0
THP213	Introduction to Technical Theatre	Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties.	Prerequisites: None.	LEC 4.0 4.0 4.0 LAB 0.0 2.0 2.0
THP214	Directing Techniques	Contemporary theory and practice in directing, the evolution of present-day directing procedures, and a sampling of scripts for directing practice. Principles of script analysis, blocking, casting, rehearsing, and performing.	Prerequisites: A grade of C or better in THP112 or THE220, or permission of Instructor.	L+L 3.0 4.0 4.0
THP217	Introduction to Design Scenography	The role of the theatre designer in creating scenic, lighting, costume, sound, and multimedia effects for stage productions. Elements of the design process and communication of dramatic themes and visions to the audience.	Prerequisites: None.	L+L 3.0 4.0 4.0
THP241	Oral Interpretation of Literature	The study, analysis, and preparation for performance of prose, poetry, and dramatic literature. Preparation of material for public audiences.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
THP271	Voice and Diction	Exercises and techniques to free the voice and improve projection, resonance, and articulation. Covers international phonetic alphabet and standard stage speech	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THP273	Musical Theatre Production	Principles and techniques for musical theatre production performance. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: By audition.	LAB 1.0 5.0 5.0
THP281	Production and Acting I	Provides the continuing acting student with opportunities to expand the versatility of characterization skills. Emphasis on relating the actor's work to the total production process. Performance of monologues, scenes, and one-act plays.	Prerequisites: Permission of Department or Division.	L+L 3.0 4.0 4.0
THP282	Production and Acting II	Provides the continuing acting student with opportunities to expand the versatility of characterization skills. Emphasis on relating the actor's work to the total production process. Performance of monologues, scenes, and one-act plays	Prerequisites: A grade of C or better in THP281 or permission of Department or Division.	L+L 3.0 4.0 4.0
THP285	Creating/Performing Solo/Collaborative Works	Developing, rehearsing, and performing solo and collaborative works for fringe festivals and other storytelling and theatre venues.	Prerequisites: None.	LEC 3.0 3.0 3.0
THP291AA	Summer Conservatory: Stage Movement	Techniques of body centering, coordination, relaxation, energization, and physical expression for the actor.	Prerequisites: By audition and interview only, or permission of Instructor, or Program Director.	L+L 1.0 2.0 2.0
THP291AB	Summer Conservatory: Voice and Diction	Basic principles and techniques of voice production and stage speech for the actor.	Prerequisites: By audition and interview only, or permission of Instructor, or Program Director.	L+L 1.0 2.0 2.0
THP291AC	Summer Conservatory: Script Analysis (ACT)	Theory and practice in analysis of dramatic literature for the actor. Emphasis on techniques of character analysis for interpretation.	Prerequisites: By audition and interview only.	LEC 1.0 1.0 1.0
THP291AD	Summer Conservatory: Improvisation	Techniques of improvisation to develop the actor's creativity. Emphasis on inner resources, sensory memory, and emotional memory.	Prerequisites: By audition and interview only, or permission of Instructor, or Program Director.	L+L 1.0 2.0 2.0
THP291AE	Summer Conservatory: Scene Study	Basic methodology and process of rehearsing and creating a character through prepared scenes for faculty critique and analysis.	Prerequisites: By audition and interview only, or permission of Instructor, or Program Director.	L+L 1.0 2.0 3.0
THP291AG	Summer Conservatory: Production (ACT)	Practicum in rehearsal and stage performance through public productions.	Prerequisites: By audition and interview only.	L+L 4.0 5.0 5.0
THP292AA	Summer Conservatory: Theatre Technology	Theory and practice of technical phases of play production. Includes applications in scenery, properties, and lighting.	Prerequisites: By interview only.	L+L 3.0 4.0 4.0
THP292AB	Summer Conservatory: Projects	Independent supervised studies in technical theatre applications. Emphasis on topic selection addressing individual student interests and abilities.	Prerequisites: By interview only.	L+L 3.0 4.0 4.0
THP292AC	Summer Conservatory: Script Analysis (TECH)	Theory and practice in analysis of dramatic literature as preparation for technical production applications.	Prerequisites: By interview only.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THP292AD	Summer Conservatory: Career Development (TECH)	Techniques of preparation and presentation of professional materials for the theatre technician and designer.	Prerequisites: By interview only.	L+L 1.0 2.0 2.0
THP292AE	Summer Conservatory: Production (TECH)	Practicum in various aspects of technical theatre production for public performance.	Prerequisites: By interview only.	L+L 4.0 5.0 5.0
THP296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.	LAB 1.0 5.0 0.0
THP296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.	LAB 1.0 5.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THP296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.	LAB 3.0 15.0 0.0
THP296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.	LAB 4.0 20.0 0.0
THP298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
THP298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
THP298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
TLT100	Telecommunications Math	Application of the scientific calculator to solve mathematical problems in telecommunications electronics. Scientific notation, engineering notation, metric conversion, algebraic equations, linear equations, graph interpretation, exponents, logarithmic expressions and, binary/hexadecimal concepts related to subnetting.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.	LEC 2.0 2.0 2.0
TLT142	Drop Connections	Technical concepts for drop connections. Includes passive and active devices as well as use of filters. Also covers electronics hook up and troubleshooting procedures.	Prerequisites: None.	LEC 1.0 1.0 1.0
TLT143	Digital Video Systems	Customer cable digital video signal reception establishment procedures. Covers system feature information, signal fault identification, and system and end-use equipment troubleshooting procedures. Also includes customer education information.	Prerequisites: None.	L+L 2.0 3.0 3.0
TLT144	Drop Planning and Maintenance	Procedures for the planning and installation of Broadband Networks to a customer address. Emphasis on drop connection location, configuration, and hardware component selection. Covers internal cable routing considerations and grounding, splitting, and directional tap/coupler component information. Also includes basic Broadband Network operation information and electronic hook-up procedures.ectronic hook-up procedures.	Prerequisites: None.	L+L 2.0 3.0 3.0
TLT149	Digital Phone Network Installation	Telephone network installation procedures. Emphasis on multi dwelling unit, multiple broadband applications, and residential telephone networks. Covers component connection as well as basic electronics principles.	Prerequisites: None.	L+L 2.0 3.0 3.0
TLT162	High Speed Internet/Networking	High speed internet installation and networking. Includes features and services of high-speed internet as well as procedures for installation. Also covers home network installation and configuration.	Prerequisites: None.	L+L 3.0 4.0 4.0
TLT163	High Speed Internet Technical Training	Procedures for presenting high speed internet products and services. Includes service tiers as well as network facilities and responsibilities. Also covers navigation of operating systems and troubleshooting common problems and procedures.	Prerequisites: None.	L+L 2.0 4.0 4.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TLT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
TLT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
TLT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
TOO101	Elementary Tohono O'odham I	Basic grammar, pronunciation, and vocabulary of the Tohono O'odham language. Practice of listening, speaking, reading, and writing skills. Includes the study of the Tohono O'odham culture, with participation in an off-campus Tohono O'odham cultural event.	Prerequisites: None.	LEC 4.0 4.0 4.0
TQM101	Quality Customer Service	Examines the nature of quality customer service and the attitudes, knowledge, and skill needed to work effectively in a quality customer service environment. Foundation skills for quality customer services are taught, applied, and practiced	Prerequisites: None.	LEC 3.0 3.0 3.0
TQM220	Leadership and Empowerment Strategies	Methods for facilitating teams and empowering employees which effectively enable all employees to act upon a shared vision.	Prerequisites: None.	LEC 2.0 2.0 2.0
TQM230	Teamwork Dynamics	Theory and practice of how team members and team leaders use listening, negotiating and interpersonal skills for the enhancement of team process. Included are concepts of team development and team problem-solving techniques.	Prerequisites: None.	LEC 2.0 2.0 2.0
TQM235	Motivation, Evaluation, and Recognition Systems	Presents methods for benchmarking, assessing team performance, linking recognition to team performance, and valuing victories and mistakes with all personnel.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
TQM240	Project Management in Quality Organizations	Presents methods for quality organizations in how to plan and schedule a project in use of Critical Path Method (CPM) and Program Evaluation and Review Technique (PERT) techniques and software to monitor and control projects	Prerequisites: None.	LEC 3.0 3.0 3.0
UAS100	sUAS Batteries and Electronics	Small Unmanned Aircraft Systems (sUAS) basic electronics and circuits, communications, information display systems, transmitter and receiver fundamentals, flight controller installation and tuning, lithium polymer battery basics, radio telemetry, basic electrical troubleshooting and repair techniques.	Prerequisites: Appropriate placement test score in Reading, Writing and Math, or [eligibility in ENG101, (RDG100 or RDG100LL), MAT120, MAT121 and MAT122].	LEC 5.0 5.0 5.0
UAS101	Introduction to Uncrewed Aircraft Systems Operation	Introduction to Small Unmanned Aircraft Systems (sUAS) and the National Airspace System. Familiarizes students with career paths such as emergency response, geographic information systems, and precision agriculture.	Prerequisites: None.	LEC 2.0 2.0 2.0
UAS107	Uncrewed Aircraft Systems Operator Certification	This course offers in-depth preparation for students to take the Federal Aviation Administration (FAA) Remote Pilot Aeronautical Knowledge test. Topics include regulations, air space, charts, airport operations, weather, loading, flight performance, radio communications, aeronautical decision making, small Uncrewed Aircraft Systems (sUAS) flight operations, and maintenance. In the associated flight lab, students receive a sUAS and acquire practical skills and experience including maintenance and pre-flight inspections, flight skills, and emergency procedures while operating a sUAS through various uncrewed flight scenarios.	Prerequisites: None.	LEC 3.0 1.0 1.0 LAB 0.0 3.0 3.0
UAS205	sUAS Instruments and Autopilot Programming and Uses	Small unmanned aircraft systems (sUAS) proper operation of ground control stations with remote aircraft, troubleshooting radio link issues, changing parameters, setting up waypoints, flying on autopilot only.	Prerequisites: A grade of C or better in UAS101 and UAS107. Corequisites: UAS206,	LEC 3.0 3.0 3.0
UAS206	sUAS Instrument and Autopilot Flight Lab	Students will use their advanced skills to manipulate a ground control station in the practical operation of Small Unmanned Aircraft Systems (sUAS) in a controlled, but realistic environment.	Prerequisites: A grade of C or better in UAS101 and UAS107. Corequisites: UAS205.	LAB 2.0 2.0 2.0
UAS207	sUAS Dynamics and Design	Design, configuration, and concepts of Small Unmanned Aircraft Systems (sUAS). Platform types including multi-rotors, single rotor, and fixed wing aircraft.	Prerequisites: A grade of C or better in UAS205 and UAS206. Corequisites: UAS208.	LEC 5.0 5.0 5.0
UAS208	sUAS Dynamics and Design Lab	Students will assemble, program, preflight, and fly a Small Unmanned Aircraft System (sUAS) manufacturing equipment.	Prerequisites: A grade of C or better in UAS205 and UAS206. Corequisites: UAS207.	LAB 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
UAS211	sUAS Ground Control Stations, Telemetry, and Communications	Small Unmanned Aircraft Systems (sUAS) proper set-up, operation, and basic troubleshooting of many different Ground Control Stations used in the industry. Set-up, use, and configuration of different radio telemetry units. Proper use and procedures of communications with Air Traffic Control. Proper use of applications for use in Air Traffic Management.	Prerequisites: A grade of C or better in UAS207 and UAS208.	L+L 3.0 4.0 4.0
UAS212	sUAS Maintenance Lab	Proper inspection, troubleshooting, and repair techniques for Small Unmanned Aircraft Systems (sUAS).	Prerequisites: A grade of C or better in UAS207 and UAS208.	LAB 2.0 2.0 2.0
UAS215	sUAS Commercial Flight Training	Proper pre-flight and operation techniques used in a Small Unmanned Aircraft (sUAS) Commercial Environment. Gathering digital information from an inspection or surveillance flight, then demonstrate post-production skills and techniques for a useable customer product.	Prerequisites: A grade of C or better in UAS207 and UAS208.	L+L 3.0 6.0 6.0
UCS101	Introduction to Billing	An introduction to basic billing procedures in the public utility industry. Includes computer familiarization, coordinates system, billing cycle, payment plans, and components of the bill.	Prerequisites: None.	LEC 3.0 3.0 3.0
UCS108	Account Services for Public Utilities	Overview of procedures for accessing and maintaining customer accounts. Includes the billing cycle, rates and payment options as well as various types of service orders	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
UCS110	Meter and Trouble Orders	Fundamentals of meters and their functions. Instruction on handling trouble calls and determining and processing corrective action.	Prerequisites: None.	LEC 2.0 2.0 2.0
UCS115	Introduction to Water Customer Services	Introduction to water customer account services. Includes the irrigation process, accounts, and schedules. Also covers delivery systems, controls, and use of a mapping system in addition to water rights and typical irrigation problems.	Prerequisites: None.	LEC 2.0 2.0 2.0
UCS116	Water Services Accounts I	Water services procedures and restrictions for opening, combining, and updating accounts as well as responding to billing and payment inquiries and opening accounts. Also covers Supplemental Supply Program (SSP) water and various user accounts in addition to company role and responsibilities.	Prerequisites: A grade of C or better in UCS115.	LEC 2.0 2.0 2.0
UCS117	Water Services Accounts II	Water services rules and restrictions for handling property sales, special requests, and order revisions in addition to typical irrigation problems. Also covers procedures for handling private system controls, flood calls, and water theft issues as well as facility notices.	Prerequisites: A grade of C or better in UCS116.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
UCS118	Water Customer Services Procedures I	Practical application of water customer account services. Includes procedures for creating, accessing, and updating accounts as well as completing and documenting water orders. Also covers use of the mapping system and procedures for handling typical irrigation calls.	Prerequisites: A grade of C or better in UCS115.	L+L 2.0 4.0 4.0
UCS119	Water Customer Services Procedures II	Procedures for completing billing and payment account procedures. Covers refunds, overdraft accounts, and procedures for handling water theft. Also covers special requests, flood calls, and townsite issues in addition to Supplemental Supply Program (SSP) requests.	Prerequisites: A grade of C or better in UCS118.	L+L 2.0 4.0 4.0
UCS120	Payments, Credits and Rates	Examination of procedures to perform payment, deposit and credit operations. Includes various connect orders and rate calculations.	Prerequisites: None.	LEC 3.0 3.0 3.0
UCS130	Service Orders I	Fundamentals of processing service orders. Emphasis on customer service, making determinations of services required and placing appropriate orders	Prerequisites: None.	LEC 3.0 3.0 3.0
UCS135	Service Orders II	Further examination of the processing of service orders. Emphasis on customer account data, account status, third party billings and placing appropriate orders	Prerequisites: A grade of C or better in UCS130.	LEC 2.0 2.0 2.0
UCS140	Service Order Procedures	Practical application of service order processing. Includes meter and trouble orders, requests for service, billings and rates, as well as account turn-offs and reconnects.	Prerequisites: A grade of C or better in UCS135.	L+L 2.0 4.0 4.0
UCS180	Introduction to Water Delivery Customer Service	Introduction to water customer delivery operations. Includes an overview of the irrigation process, the irrigation system, delivery responsibilities and schedules. Also covers delivery systems, controls, and use of a mapping system in addition to water rights and typical irrigation problems.	Prerequisites: None.	LEC 3.0 3.0 3.0
UCS182	Water Delivery Management	Water delivery procedures for managing the flow of irrigation water through the irrigation system to both residential and agricultural customers. Also covers field customer service for agricultural and residential water customers as well as role and responsibilities for irrigation water delivery.	Prerequisites: None.	LEC 2.0 2.0 2.0
UCS184	Water Delivery Operations	Water delivery service areas, delivery devices, and responsibilities for managing irrigation water. Covers procedures for handling system controls and issues as it relates to water delivery in addition to procedures for dry-up and clearance.	Prerequisites: None.	L+L 2.0 3.0 3.0
UCS186	Water Delivery Measurements	Practical application of irrigation water delivery measurement. Includes procedures to safely and correctly open water delivery devices, determine accuracy of and correct water flow. Also covers safety and security procedures.	Prerequisites: None.	L+L 2.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
UCS188	Water Delivery Operations Lab	Practical application of water delivery procedures for managing the flow of water through the irrigation system to both residential and agricultural customers.	Prerequisites: None.	L+L 1.0 3.0 3.0
UTP110	Hand and Power Tools for Linemen	Use, maintenance, and safety procedures for common hand and power tools used in the electric power industry.	Prerequisites: None.	LEC 1.0 1.0 1.0
UTP111	Line Work Equipment and Safety	Overview of the line work industry including its history, technological developments, and current practices. Covers an introduction to industry equipment and tools with a focus on safety practices and procedures. Inspection and maintenance of equipment and tools used in pole climbing and cover-up procedures. Emphasis on safety operations.	Prerequisites: None.	LEC 4.0 4.0 4.0
UTP112	Line Construction	Introduction to line construction equipment and procedures. Includes personal protective equipment, climbing equipment, and basic line materials. Also covers procedures for handling wood poles, de-energized lines, and one-man pole-top rescues, in addition to equipment and procedures for grounding and creating a safe zone.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP113	Rigging Fundamentals	Fundamentals of rigging for linemen. Includes safe use of rigging components including ropes, knots, handlines, and block and tackle. Covers rigging calculations and approaches to basic rigging tasks, in addition to hazards.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP114	Line Construction Procedures	Line construction procedures including pole change out, horizontal line construction, and taking lines out of service. Covers distribution line symbols, compatible units, and second point of contact, in addition to calculating pulling tension and procedures for stringing overhead service and approaching hot circuits.	Prerequisites: A grade of C or better in UTP112.	LEC 3.0 3.0 3.0
UTP115	Underground Line Construction	Introduction to underground line construction. Includes a comparison of duct and vault underground systems. Also covers Blue Stake laws and markings, procedures for pulling and maintaining underground cable, and safety considerations for trenching and excavating.	Prerequisites: None.	LEC 2.0 2.0 2.0
UTP150	Introduction to Transformer Theory	Introduction to transformers and transformer theory. Covers the basic structure, components and applications of single-phase and three phase transformers. Includes interpretation of transformer nameplates, in addition to characteristics and functions of distribution transformers.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
UTP151	Transformer Theory Design and Function	Comparison of function of various types of transformers. Includes design of single-phase and three-phase transformers, as well as safety procedures and precautions for energizing transformers. Also covers wiring transformers in parallel and three-phase connection diagrams.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP152	Transformer Diagramming and Calculations	Diagramming and calculations in transformer theory. Includes use of the Pythagorean Theorem and sine and cosine waves and functions to complete calculations. Also covers secondary and primary voltage, voltage ratio and loss calculations, in addition to blueprint reading.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP155	Introduction to Hot Stick	Introduction to hot stick terminology, tools, and procedures. Includes procedures for cleaning, storage, and handling in addition to inspection and testing. Also covers tie-wires, preform ties, hold tags, and live line tailboard development.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP156	Hot Stick Theory and Calculations	Rigging theory and calculations for hot stick application, including Working Load Limit (WLL). Also covers slings, personal protective grounding, and protective cover, in addition to energized conductors and lines.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP157	Hot Stick Work Site and Equipment	Hot stick work site, materials, and equipment procedures. Covers fault location, meter load, tower erection, and phasing sequences in addition to procedures for managing safety in confined spaces. Also includes cable preparation and pulling procedures as well as equipment and site operations and safety.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP210	Personal Protective Grounding	Considerations and procedures for personal protective grounding with a review of basic electrical circuits. Covers function, sizing, and installation of protective grounding sets on trucks, underground distribution systems, and construction projects. Also covers resistance testing, equipotential zones, lightning protection, and live line tools.	Prerequisites: None.	LEC 2.0 2.0 2.0
UTP211	Overhead Distribution Line Design	Introduction to overhead distribution line construction design. Includes overhead construction standards, distribution pole standards, and primary construction units as well as controls and installation standards for various types of capacitors. Also covers clearances, calculations, drawings, and design criteria for overhead distribution line design.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP212	Underground Distribution Line Design	Introduction to underground distribution line construction design. Includes construction assembly units, capacitor banks, switching, and fusing as well as applications for conduit and feeder riser compatible units. Also covers clearances, calculations, drawings, and design criteria for underground distribution line design.	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
UTP215	Emerging Technologies	Overview of emerging technologies in electrical energy production. Includes applications, limitations, and advantages of various types of alternative energy. Also covers characteristics of and advantages to the use of fiber optics. Design and function of Extra High Voltage (EHV) lines also examined.	Prerequisites: None.	LEC 2.0 2.0 2.0
UTP216	Transformer Operations and Troubleshooting	Advanced transformer operation and troubleshooting procedures. Includes characteristics of three-phase systems, distribution capacitors, and fusing. Covers transformer calculation including voltage regulation, fault current, and load. Procedures for isolating and testing transformers and system change-out also covered.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP217	Electrical Substations	A comparison of operation and design of various types of substations. Includes construction planning, design, diagrams, and blueprints, in addition to hazards and safety issues. Also covers substation stresses, superstructures, and equipment function and maintenance.	Prerequisites: None.	LEC 3.0 3.0 3.0
UTP250	Maps and Schematics for Linemen	Components, coordinates, and symbols for maps and schematics used by linemen. Also includes procedures for access and navigation of mobile Geographic Information Systems (GIS).	Prerequisites: None.	LEC 1.0 1.0 1.0
UTP251	Metering Theory for Linemen	Concepts of energy measurement and metering theory for linemen. Includes the power triangle and various metering types, ratings, and strategies for troubleshooting metering problems.	Prerequisites: None.	LEC 2.0 2.0 2.0
UTP255	Power Distribution Operations	Transmission and Generation Operations (TGO), Distribution Operations Center (DOC), and Power Distribution Operations (PDO) organization and responsibilities.	Prerequisites: None.	LEC 2.0 2.0 2.0
UTP258	Applied Line Topics	Applied line topics for linemen. Includes rigging calculations and derating factors as well as diagramming of three-phase vectors and wiring. Also covers procedures, documentation, and restrictions for receiving, modifying, and releasing clearances.	Prerequisites: None.	L+L 3.0 4.0 4.0
VET101	Introduction to Veterinary Technology	Introduces the role of the veterinary paraprofessional to the veterinary science industry. Addresses professional development, including ethics, professionalism, and legal implications of veterinary practice. Students will be introduced to animal husbandry and nutrition, animal behavior, species and breed identification, the human-animal bond, biosecurity, equine medicine, livestock medicine, companion animal medicine, and lab animal medicine.	Prerequisites: None. Corequisites: VET101LL.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
VET101LL	Animal Care Skills I Laboratory	Principles of daily animal husbandry, socialization, enrichment, and clinical care of animals housed in campus facilities. Introductory veterinary technology students work on building teamwork, communication and veterinary technical skills encountered in the daily operations of a multi-species veterinary facility.	Prerequisites: None. Corequisites: VET101.	LAB 2.0 2.0 2.0
VET103	Veterinary Assisting I	Provides students with the hands-on skills needed to perform the duties of a veterinary assistant. Introduction of the basic veterinary assistant skills needed to assist veterinary professionals in the quality care of animals. Includes basic introduction to anatomy and physiology of domestic animals, front office skills, communication and client relations, animal restraint, nursing, vaccinations and other basic assisting skills.	Prerequisites: None.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
VET104	Veterinary Assisting II	This is a lecture/laboratory course where students will learn hands on skills needed to perform the duties of a veterinary assistant. The course will build foundation skills for veterinary clinical care for the veterinary assistant. This course includes foundations in pharmacy and pharmacology, surgical preparation and assisting, the veterinary assistant's role in collection of laboratory samples, and diagnostic imaging.	Prerequisites: A grade of C or better in VET101 and VET103. High school biology strongly recommended.	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0
VET109	Veterinary Assisting Internship	Provides students with clinical experience in a small animal general veterinary practice. Provides the opportunity for practical application and development of knowledge, skills, and abilities acquired in program coursework at a veterinary assistant level. Students have exposure to practice philosophies, methodologies, and real-life situations requiring critical thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the National Association of Veterinary Technicians in America Veterinary Assistant Student Essential and Recommended Skills list.	Prerequisites: A grade of C or better in VET101 and VET103. Corequisites: VET104.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
VET112	Animal Nursing I	Training in and supervised performance of skills necessary in the husbandry and clinical care and treatment of animals. Occupational hazards and safety in livestock, companion animal, and laboratory animal facilities. Introduction to medical terminology. Restraint and handling, feeding, and housing of a variety of animal species. Physical examination of various species of animals. Principles of sanitation, disinfection, sterilization, and aseptic technique. Principles and techniques of medication administration, fluid therapy, and vaccination. Familiarization with operation of various types of animal care equipment. Introduction to laboratory techniques. Professional ethics and the human-animal bond.	Prerequisites: A grade of C or better in VET101 and admission to the Veterinary Technology/Animal Health program or permission of Instructor.	LEC 2.0 2.0 2.0 LAB 0.0 3.0 3.0
VET132	Veterinary Office Management and Client Communication	Principles and practice of veterinary office management for veterinary technology students. Client relations, receptionist skills, telephone techniques, interpersonal skills, and personnel management. Generation and maintenance of correspondence, medical records, legal forms, and hospital logs. Basic bookkeeping, accounting, and financial management principles. Marketing and public relations. Professional ethics and professionalism. Use of computers for data entry, patient record management and inventory control.	Prerequisites: A grade of C or better in VET101 or permission of Instructor.	LEC 3.0 3.0 3.0
VET140	Animal Care Skills II	Practical application of animal care skills and principles of animal care and management using techniques and knowledge learned in the veterinary technology classes. Students expand their animal care knowledge, skills and abilities to include skills needed to be successful in clinical internships.	Prerequisites: Acceptance into the Veterinary Technology program. Corequisites: VET150 or VET151.	LAB 2.0 2.0 2.0
VET150	Veterinary Anatomy and Physiology I	Comparative evaluation of the anatomy and physiological functions of various body systems of livestock, companion animals, and laboratory animals.	Prerequisites: A grade of C or better in (BIO181, CHM130, CHM130LL, CRE101, ENG102, MAT120, and VET101) and admission to the Veterinary Technology/Animal Health Program.	LEC 3.0 3.0 3.0
VET150LL	Veterinary Anatomy and Physiology Laboratory I	Laboratory experience in support of VET150. Includes dissection of preserved animal specimens.	Prerequisites: None. Corequisites: VET150.	LAB 1.0 3.0 3.0
VET151	Veterinary Anatomy and Physiology II	Focuses on unique anatomic structures and physiological processes which are clinically important in veterinary medicine. Anatomical and physiological bases of clinic procedures, animal disease processes, and veterinary treatments.	Prerequisites: A grade of C or better in VET150 or permission of Instructor.	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
VET200	Veterinary Clinical Pathology Methods	Fundamental studies of laboratory techniques and procedures involved in evaluating veterinary clinical samples. Includes hematology, urinalysis, hemostasis, blood biochemistry and enzymology, serology, cytology, and parasitology. The veterinary technician's role in sample collection, sample storage and handling, and performance of analytic procedures. Use of laboratory equipment, laboratory safety and management, and quality control.	Prerequisites: A grade of C or better in BIO205 or permission of Instructor. Corequisites: VET223	LEC 2.0 2.0 2.0 LAB 0.0 3.0 3.0
VET201	Animal Care Skills III	Practical application of animal care skills and principles of animal care and management using techniques and knowledge learned in the veterinary technology classes. Students expand their animal care knowledge, skills and abilities to include skills needed to be successful in clinical internships.	Prerequisites: A grade of C or better in VET140, and acceptance into the Veterinary Technology program.	LAB 2.0 2.0 2.0
VET210	Animal Nursing II	Instruction in and hands-on application of techniques of veterinary nursing care, patient assessment, equipment operation, diagnostic sample collection, and medical treatment. Physical examination, clinical nutrition, and reproductive management of the dog and cat. Operation of E.C.G. and anesthetic machine. Fluid therapy, wound therapy, and bandaging. Surgical instruments and packs. Common diagnostic and therapeutic procedures on animals.	Prerequisites: A grade of C or better in (VET112 and VET151) or permission of Instructor.	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0
VET220	Veterinary Pharmacology for the Veterinary Technician	Actions and uses of pharmacological agents used in veterinary medicine; drug classifications, modes of action, indications and contraindications, routes of administration, and mechanisms of elimination. Dispensing and pharmacy management, and laws regulating controlled substances. Solving medical math problems and calculating drug doses.	Prerequisites: A grade of C or better in VET101 and VET151.	LEC 3.0 3.0 3.0
VET223	Animal Diseases	Study of common infectious, parasitic, metabolic, immunologic, and degenerative diseases of domestic animals. Infectious disease transmission, mechanisms of disease, the host-parasite relationship, and host responses to disease agents. Clinical signs and management of common diseases. Life cycles of common parasites. Principles of disease prevention, environmental management, vaccination, and zoonosis. Diagnostic techniques including gross and microscopic identification of common animal pathogens.	Prerequisites: A grade of C or better in VET151. BIO205 recommended.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
VET230	Veterinary Radiology and Imaging for the Veterinary Technician	Veterinary and radiographic terminology, radiation and electrical protection, technical principles, radiographic equipment operation - manual and digital, and radiographic duties of the Veterinary Technician. Introduction to ultrasound, MRI, CAT scans, and other non-traditional imaging uses and techniques. Lab allows for practical application of theories and radiographic positioning as taught in lecture.	Prerequisites: A grade of C or better in (VET150 and VET150LL) or permission of Instructor.	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0
VET235	Veterinary Technician Proficiency	Review of pertinent subject matter in preparation for the Arizona State Veterinary Technician Examination and the Veterinary Technician National Examination. Guided review and discussion of exam application process. Review of student's Veterinary Technology Student Essential and Recommended Skills to ensure completion for graduation as required by the American Veterinary Medical Association. May included field trips or guest lecturers.	Prerequisites: A grade of C or better in VET210, VET220, and VET223. Corequisites: VET240.	L+L 2.0 2.0 2.0
VET240	Veterinary Anesthesia, Surgery, and Emergency Nursing	Veterinary surgical and dental nursing skills associated with aseptic technique and proper protocol in the surgery/dental suite. Pre and post-op monitoring, record keeping, and client education skills. Procedures and techniques with intravenous and inhalation anesthetics, surgical asepsis, skin preparation, instrument sterilization techniques and monitoring veterinary patients for vital signs. Introduction to emergency nursing care and triage skills.	Prerequisites: A grade of C or better in VET210 and VET220.	LEC 3.0 3.0 3.0 LAB 0.0 4.0 4.0
VET250AA	Veterinary Technician Internship	Provides Veterinary Technology program students with off-campus clinical experience in a small animal general veterinary practice. Opportunity for practical application and development of knowledge, skills, and abilities acquired in program coursework. Exposure to practice philosophies, methodologies, and real-life situations requiring critical thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the American Veterinary Medical Association's Veterinary Technology Student Essential and Recommended Skills list.	Prerequisites: A grade of C or better in VET112, VET132, and VET151.	LAB 0.5 0.5 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
VET250AB	Veterinary Technician Internship	Provides Veterinary Technology program students with off-campus clinical experience in a large animal general veterinary practice. Opportunity for practical application and development of knowledge, skills, and abilities acquired in program coursework. Exposure to practice philosophies, methodologies, and real-life situations requiring critical thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the American Veterinary Medical Association's Veterinary Technology Student Essential and Recommended Skills list.	Prerequisites: A grade of C or better in VET250AA.	LAB 0.5 0.5 0.0
VET250AC	Veterinary Technician Internship	Provides Veterinary Technology program students with off-campus clinical experience in an emergency veterinary clinic and in a veterinary specialty practice. The internship hours will be split equally between the emergency clinic and the specialty practice. Specialty practices may include surgery, ophthalmology, internal medicine, dentistry, dermatology, radiology, exotics, zoo, research, and others. Opportunity for practical application and development of knowledge, skills, and abilities acquired in program coursework. Exposure to practice philosophies, methodologies, and real-life situations requiring critical thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the American Veterinary Medical Association's Veterinary Technology Student Essential and Recommended Skills list.	Prerequisites: A grade of C or better in VET250AA or permission of Instructor.	LAB 0.5 0.5 0.0
VET250AD	Veterinary Technician Internship	Continuing practical application and mastery of knowledge, skills, and abilities in the selected clinical setting. Exposure to practice philosophies, methodologies, and real-life situations requiring critical thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the American Veterinary Medical Association's Veterinary Technology Student Essential and Recommended Skills list.	Prerequisites: A grade of C or better in VET250AC or permission of Instructor.	LAB 0.5 0.5 0.0
VGP298AB	Special Projects	Focus on art, audio, coding, and/or narrative in the development, execution, and presentation of a capstone game or project of interactive media exhibiting skills in video game production.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WAC101	Writing Across the Curriculum	Expressive, expository, and academic writing experiences to develop students' rhetoric and composition foundation. Experience planning and drafting multi-paragraph essays through a writing process with emphasis on essay and paragraph structure and the elements of sentence structure. Participation in writing workshop, group work, reading to support writing tasks, and writing from sources. A minimum of three multi-paragraph essays and a final reflection paper.	Prerequisites: None.	LEC 3.0 3.0 3.0
WED106	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)	Basic overview of Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED). Covers choking procedures and the importance, guidelines, and techniques for performing CPR and utilizing an AED.	Prerequisites: None.	LEC 0.5 0.5 0.5
WED107	Community First Aid	Basic first aid course for the layperson. Training with the assessments and skills that be performed with minimal equipment in common home or workplace emergencies until emergency medical personnel arrive.	Prerequisites: None.	L+L 0.5 0.5 0.5
WED120	Massage Therapy: Anatomy Refresher - Upper Body	This course is designed for individuals in the field of massage therapy and provides a review of upper body musculature affecting the neck, shoulder, spine, elbow and wrist joints. Origins and insertions and resistive stretches included.	Prerequisites: None.	L+L 1.0 1.0 1.0
WED125	Reiki: Healing and Symbols	Introduction to Reiki as a Japanese technique for stress reduction and relaxation that also promotes healing. Instruction in the Usui method of Reiki and its symbols and applications to personal health and everyday life.	Prerequisites: None.	L+L 2.0 2.0 2.0
WED126	Cupping Therapy	Introduction to cupping therapy for individuals in the field of massage therapy. In addition but not limited to the history, techniques and application in various therapeutic settings.	Prerequisites: None.	L+L 1.0 1.0 1.0
WED145	Reflexology	History and application of specific pressure points on the hands and feet that have correlation to different body organs and systems. Practice of micromovement techniques with the goal of creating a response throughout the body.	Prerequisites: None.	L+L 1.0 1.0 1.0
WED151	Introduction to Alternative Medicine	Definition of health; exploration of mind-body-spirit connection in health; various therapeutic modalities; identification of strengths and limitations of alternative therapies. Also includes development of ability to critically review written material in the alternative therapy area	Prerequisites: None.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WED152	Comparative Healing Techniques	Comparative approaches to healing, including allopathy, homeopathy, chiropractic, osteopathy, Chinese medicine, Ayurveda, Shamanism, and therapeutic touch. Contrast explanations for causation of disease, diagnostic procedures, and healing methodology.	Prerequisites: None.	LEC 3.0 3.0 3.0
WED154	First Aid/Cardiopulmonary Resuscitation	Cardiopulmonary Resuscitation (CPR) and first aid for the adult, child and infant patients includes Automated External Defibrillator (AED), rescue breathing, obstructed airway, and other first aid procedures. Designed to train citizen responders in skills and procedures required during emergency situation.	Prerequisites: None.	LEC 3.0 3.0 3.0
WED155	Introduction to Chinese Medicine	Basic theories, principles, and methods that constitute the backbone of Chinese Medicine. Explores concepts of Yin, Yang, the Five Elements (Wood, Fire, Earth, Metal, and Water), and the Five Vital substances (Qi, Blood, Body Fluids, Jing, and Shen). Overview of the physiology of the major internal organs (Five Zang and Six Fu) with a focus on their various interrelationships.	Prerequisites: None.	LEC 3.0 3.0 3.0
WED162	Meditation and Wellness	Physiology of meditation and its effects on physical and mental health; scholastic abilities and interpersonal relationships; differentiation between meditation and other relaxation techniques.	Prerequisites: None.	LEC 1.0 1.0 1.0
WED165	Overview of Massage Therapy	History of massage; overview of bodywork systems; benefits and indications of massage; legal requirements for practice in Arizona	Prerequisites: None.	LEC 2.0 2.0 2.0
WED166	Overview of FELDENKRAIS (R) Awareness Through Movement (R)	Movement activity lessons which are verbally directed, exploratory in nature, designed to clarify the full range of possibility for human movement and action. Self-paced lessons in a noncompetitive environment.	Prerequisites: None.	LEC 1.0 1.0 1.0
WED170	Principles of Homeopathy	Origins of homeopathy; key concepts; perceptions of disease; schools of homeopathy; scientific studies; preparation of remedies; case taking	Prerequisites: None.	LEC 1.0 1.0 1.0
WED172	Overview of Herbal Remedies	History and evolution of herbs for healing applications. Preparation, usage, and effects of certain herbs used for healing purposes. Basic literature review skills in the area of herbal medicine	Prerequisites: None.	LEC 1.0 1.0 1.0
WED174	Myofascial Release	Introduction to myofascial release techniques and application. Myofascial Release (MFR) is a therapeutic modality that allows restricted fascia to release from a tightened state. MFR improves nerve conductivity and circulation of blood and lymph, which allows the healing powers of the body to flow to restricted tissues. The result is relief from chronic pain and the potential for healing injured tissue.	Prerequisites: None.	L+L 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WED176	Flower Essences	Healing properties of Bach flower remedies; Bach's development of remedies and his philosophy of healing; use and preparation of a variety of flower essences	Prerequisites: None.	LEC 1.0 1.0 1.0
WED181	Essential Oil Properties and Formulations	Focuses on the benefits of individual plant oils, profiling past to present day uses and documented properties; experiential evaluation of the oils; how to formulate topical blends; oil substitution using less expensive oils; hands-on learning.	Prerequisites: None.	L+L 1.0 1.0 1.0
WED182	Health Conditions and Popular Herbs	In-depth look at some of today's most popular herbs and their relationship to specific health conditions. Emphasis on research skills in relation to popular herbs. Includes the effects, uses, and application strategies of herbs.	Prerequisites: None. WED172 suggested but not required.	LEC 2.0 2.0 2.0
WED183	Introduction to Ayurvedic Principles	Introduction to Ayurveda: "the science of life"; a complete system of balancing the body, mind and spirit, originating from ancient India. Introduction to foundational Ayurvedic principles, health philosophy and self assessment of basic constitution. Application of basic health and self care practices such as food selection and preparation, exercise and movement, renewal and restoration activities, environmental influences to promote health and well-being.	Prerequisites: None.	L+L 2.0 2.0 2.0
WED185	Overview of Movement Therapy Systems	Definition of health, exploration of mind-body-spirit connection in health, various therapeutic modalities, identification of strengths and limitation of movement based therapies. Also includes development of ability to critically review written material in the physical or movement therapy area.	Prerequisites: None.	LEC 2.0 2.0 2.0
WED195	Special Topic in Wellness Education	Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle.	Prerequisites: None.	LEC 0.5 0.5 0.5
WED195AA	Special Topics in Wellness Education A	Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle.	Prerequisites: None.	L+L 0.5 1.0 1.0
WED195AB	Special Topics in Wellness Education A	Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle. Focuses on a variety of techniques and strategies to promote wellness.	Prerequisites: None.	L+L 1.0 1.0 1.0
WED195AC	Special Topics in Wellness Education A	Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle. Focuses on a variety of techniques and strategies to promote wellness.	Prerequisites: None.	L+L 2.0 2.0 2.0
WED195AD	Special Topics in Wellness Education A	Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle. Focuses on a variety of techniques and strategies to promote wellness.	Prerequisites: None.	LEC 3.0 3.0 3.0
WED195BB	Special Topics in Wellness Education B	Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle.	Prerequisites: None.	L+L 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WED195BC	Special Topics in Wellness Education B	Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle.	Prerequisites: None.	L+L 2.0 2.0 2.0
WED204	Establishing a Massage Practice	Explore career options in therapeutic massage, including state licensing requirements, and determine how to lay the groundwork for a successful massage practice	Prerequisites: None.	LEC 3.0 3.0 3.0
WED210	Sports Massage	Purpose, benefits, and contraindications of sports massage; principles of sports physiology; massage techniques, applications, and procedures; treatment of injuries.	Prerequisites: A grade of C or better in WED165 and WED230 or permission of Program	L+L 2.0 3.0 3.0
WED215	Self-Care for Health Care Providers	Emphasis on mind-body methods for personal wellness through integration of physical, emotional, social, and spiritual dimensions of being. Development of a personal practice to achieve and sustain a balanced program to support personal health and well being	Prerequisites: None.	L+L 2.0 5.0 5.0
WED218	Aromatherapy	Physiology of aromatherapy; methods of use; preparation of oils; uses in sports, beauty care, massage, child care, health care, at work, and in the home	Prerequisites: None.	LEC 1.0 1.0 1.0
WED220	Gentle Touch for Individuals Living with Cancer	Introduction to the gentle-touch approach to massage for individuals who are living with or have survived cancer. Overview of cancer and principal cancer treatments. Clinical considerations, including practice guidelines and hands-on adjustments related to cancer and treatment side effects. Administrative considerations for client intake, treatment plans and session documentation. In addition, comprehensive practical application of massage.	Prerequisites: None.	L+L 2.0 2.0 2.0
WED225	Reiki: Master Level and Teacher Training	Advanced Usui method of Reiki, including but not limited to the preparation for placement of symbols, hand movements and attunements. Exploration of the four pillars of Reiki and 4th Reiki symbol and strategies for instruction, relationships and classroom management.	Prerequisites: A grade of C or better in WED125 or permission of Department or Division.	LEC 2.0 2.0 2.0
WED230	Therapeutic Massage Practices I	Principles of professionalism, ethics, and legalities. Includes use of terminology related to massage therapy. Applications, indications, and contraindications of the nine strokes of Swedish massage. Study of the human osseous and muscular structure. Emphasis on normal movement patterns, origins, insertions, and functions of the muscular system.	Prerequisites: Acceptance into the Therapeutic Massage program or permission of Program Director.	L+L 6.0 9.0 9.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WED231	Therapeutic Massage Practices II	Refined application of the nine strokes of Swedish massage and contraindications to avoid. Application of advanced principles and techniques of trigger point therapy, muscle energy technique, stretching, hydrotherapy protocols, hot and cold applications, reflexology, and corporate massage. Study of the human osseous and muscular structure. Emphasis on normal movement patterns and the origin, insertion, and function of the muscular system	Prerequisites: A grade of C or better in WED230.	L+L 6.0 9.0 9.0
WED232	Therapeutic Massage Practices III	Refinement and integration of technical skills, psychosocial competencies, and role identity. Exploration of techniques to assess and facilitate range of motion and function; purpose, benefits, indications, and contraindications of therapeutic massage for specific neuro-musculoskeletal disorders/injury and special populations. Application of massage techniques with therapists pre- and post-client evaluations of the client. Adaptation of massage techniques for special populations.	Prerequisites: A grade of C or better in WED231. Corequisites: WED250 or permission of Program Director.	L+L 6.0 10.0 10.0
WED250	Clinical Practicum	Application of fundamental massage techniques.	Prerequisites: A grade of C or better in WED231. Corequisites: WED232 and permission of Program Director.	LAB 3.0 6.0 0.0
WED250AA	Clinical Practicum: Part I	Application of fundamental massage techniques.	Prerequisites: A grade of C or better in WED231. Corequisites: WED232 and permission of Program Director.	LAB 1.5 3.0 0.0
WED250AB	Clinical Practicum: Part II	Continued application of fundamental massage techniques.	Prerequisites: A grade of C or better in WED250AA.	LAB 1.5 3.0 0.0
WED282AA	Service-Learning Experience in Wellness Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 1.0 1.0 0.0
WED282AB	Service-Learning Experience in Wellness Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 2.0 2.0 0.0
WED282AC	Service-Learning Experience in Wellness Education	Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	LAB 3.0 3.0 0.0
WED297AA	Special Topics: Therapeutic Massage	Explores a special topic related to therapeutic massage. Topics vary and include concepts relevant to those pursuing careers in therapeutic massage	Prerequisites: None.	L+L 1.0 1.0 1.0
WED297AB	Special Topics: Therapeutic Massage	Explores a special topic related to therapeutic massage. Topics vary and include concepts relevant to those pursuing careers in therapeutic massage	Prerequisites: None.	L+L 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WED297AC	Special Topics: Therapeutic Massage	Explores a special topic related to therapeutic massage. Topics vary and include concepts relevant to those pursuing careers in therapeutic massage	Prerequisites: None.	L+L 3.0 3.0 3.0
WED298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
WED298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
WED298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
WFR110	Re-Entry Skills: Personal Skill Development	Personal skill development necessary for transition from incarceration to community. Includes development of a personal value system and decision-making strategies as well as conflict management. Also covers time and money management, goal setting, and the basics for everyday life	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
WFR112	Re-Entry Skills: Family Reunification	Reunification procedures for the incarcerated person's effective transition. Includes building and maintaining self- esteem and effective communication for healthy families or support systems. Also covers family and networking culture, discipline, and expectations for release	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
WFR114	Re-entry Skills: Social Skill Development	Social skill development for the incarcerated person preparing to re-enter society. Includes identifying and establishing boundaries as well as modeling these behaviors. Also covers identification of core emotions and development of positive character traits	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WFR116	Re-Entry Skills: Substance Abuse Education	Substance abuse education for incarcerated persons. Includes warning signs and the "chain of events" to addiction. Also covers decision making skills as well as strategies and resources available for prevention	Prerequisites: Permission of Department or Division.	LEC 1.0 1.0 1.0
WFR118	Re-Entry Skills: Job Readiness	Preparing the incarcerated person for release into the working world. Includes education, skills assessment, and work experience. Also covers job search skills such as resume writing, applications, and interviewing	Prerequisites: Permission of Department or Division.	LEC 3.0 3.0 3.0
WFR120	Re-Entry Skills: Job Retention	Job retention procedures and techniques for incarcerated persons in transition. Includes workplace protocol, job performance, and employer-employee interaction. Also covers stress management and communication skills as well as interpersonal relationships in the workplace	Prerequisites: Permission of Department or Division.	LEC 2.0 2.0 2.0
WLD100	Basic Welding	Shop procedures, safety and personal protection. Grinders, drill presses, and saws. Resistance and oxyacetylene welders. Arc welders: alternating current (AC) and direct current (DC) modes, electrodes, positioning and securing	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	LEC 2.0 2.0 2.0
WLD101	Introduction to Welding	Introduction to safe operation of shop equipment and common joining and thermal cutting processes used in the welding industry. It is designed to provide a brief exposure to the SMAW, GMAW, FCAW, GTAW, OFW, OFC, PAC processes while developing incremental hands-on skills through sequenced lab experiences.	Prerequisites: None.	L+L 3.0 6.0 6.0
WLD102	Basic Welding Metal Sculpture	Practical training for welders in artistic welding and metal sculpter with emphasis on oxy-ace welding, arc welding, and metal inert gas (MIG) welding.	Prerequisites: None.	L+L 3.0 6.0 6.0
WLD103	Basic Blacksmithing and Metal Shaping	Selection and safe use of blacksmithing and metal shaping tools and equipment. Material selection and conditioning, practical forging techniques, metal shaping experience, and finishing processes.	Prerequisites: None.	L+L 3.0 8.0 8.0
WLD106	Arc Welding	Electric welding with emphasis on metallic arc welding in out-of-position practice and procedures	Prerequisites: None.	L+L 5.0 8.0 8.0
WLD106AA	Introduction to SMAW	Introduction to arc welding with emphasis in Shielded Metal Arc Welding (SMAW). Designed to provide the knowledge and skills needed to cut and prepare weld joints utilizing current technology. Develops hands-on skills through sequenced lab experiences.	Prerequisites: None.	L+L 5.0 8.0 8.0
WLD106AB	SMAW 6010 Plate	Continued training in shielded metal arc welding (SMAW) with emphasis on using E6010 (fast-freeze) electrodes in all joint positions. Focus is on fillet welds for structural steel and open root groove weld joints.	Prerequisites: A grade of C or better in WLD106AA or permission of Instructor.	L+L 5.0 8.0 8.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WLD106AC	SMAW 7018 Plate	Continued training in shielded metal arc welding (SMAW) with emphasis on using E7018 (low hydrogen) electrodes in all joint positions. Focus is on fillet welds and groove weld joints with backing to prepare students for welding code certification testing.	Prerequisites: A grade of C or better in WLD106AA or permission of Instructor.	L+L 5.0 8.0 8.0
WLD106AD	SMAW Introduction to Pipe	Advanced training in shielded metal arc welding (SMAW) with emphasis on pipe welding using E6010 and E7018 electrodes in various pipe joint positions (1G, 2G, 5G, 6G). Focus is on the open root groove pipe weld joints to prepare students for industry code certification.	Prerequisites: A grade of C or better in WLD106AA or permission of Instructor.	L+L 5.0 8.0 8.0
WLD131	Ferrous Metals	Use of ferrous metals, specification of ferrous metals, use of identification and study of welding industry standards	Prerequisites: None.	LEC 3.0 3.0 3.0
WLD150	Welding Blueprint Reading	Analysis and interpretation of technical drawings common to the metal fabrication and construction trades. Welding blueprint symbols.	Prerequisites: None.	LEC 3.0 3.0 3.0
WLD201	Advanced Welding Concepts	Further study of electric arc and oxyacetylene welding with emphasis on GTAW (heliarc) and GMAW (mig) processes to weld both ferrous and nonferrous metal.	Prerequisites: A grade of C or better in WLD101.	L+L 3.0 6.0 6.0
WLD202	Construction Welding III	Metal arc welding processes, blueprint and weld symbol reading, joint layout preparation and welding procedures, gas-tungsten arc welding with related instruction in practice on ferrous and nonferrous metals	Prerequisites: Permission of Instructor.	L+L 3.0 5.0 5.0
WLD203	Welding Certification Preparation	Emphasis on the weld certification process including the Welding Procedure Qualification Record (WPQR), Welder Performance Qualification Test Record (WPQTR), and the Weld Procedure Specification (WPS) in Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), or Gas Metal Arc Welding (GMAW) welding processes.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.	L+L 6.0 6.0 6.0
WLD206	Advanced Welding - Heliarc and Wire Feed	Instruction in theory and practice on tungsten inert gas and wire feed welding. Welding procedures on ferrous and nonferrous metals. Set up and operation of all types of machines used in tig and mig welding	Prerequisites: A grade of C or better in WLD106 or permission of Department or Division.	L+L 5.0 8.0 8.0
WLD206AA	Introduction to GMAW/FCAW and GTAW	Instruction in theory and practice of gas metal arc welding (GMAW, commonly referred to as MIG), flux cored arc welding (FCAW), and gas tungsten arc welding (GTAW, commonly referred to as TIG). Basic welding procedures on ferrous and nonferrous metals. Setup and operation of welding process equipment. Covers selection of proper filler materials and shielding gas options.	A grade of C or better required in all Prerequisites. Prerequisites: WLD101 or permission of Instructor. Prerequisites or Corequisites: WLD106AA or permission of	L+L 5.0 8.0 8.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WLD206AB	Advanced GMAW and FCAW	Instruction and practice of gas metal arc welding (GMAW) and flux cored arc welding (FCAW) in the horizontal, vertical, and overhead positions. Prepare for industry code performance qualification plate tests with both welding processes.	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.	L+L 5.0 8.0 8.0
WLD206AC	Advanced GTAW Non-Ferrous	Instruction and practice of gas tungsten arc welding (GTAW) aluminum sheet in the flat, horizontal, and vertical positions. Prepare for industry code performance qualification tests in any welding position.	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.	L+L 5.0 8.0 8.0
WLD206AD	Advanced GTAW Ferrous	Instruction and practice of gas tungsten arc welding (GTAW) carbon and stainless-steel in any position. Prepare for industry code performance qualification tests in any welding position.	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.	L+L 5.0 8.0 8.0
WLD208	Advanced Arc Welding - Certification	Advanced metallic arc welding emphasizing out-of-position welding in preparation for certification. Includes various test methods. Provides training on machine flame cutting and gouging and arc air cutting and gouging	Prerequisites: A grade of C or better in WLD106 or permission of Instructor.	L+L 5.0 8.0 8.0
WLD208AA	SMAW Code Welding	Advanced training in shielded metal arc welding (SMAW) to achieve successful welder performance qualification testing in any position. Focus is on single v-groove weld joints per industry codes and specification requirements.	Prerequisites: A grade of C or better in (WLD101 and WLD106AA), or permission of Instructor.	L+L 5.0 8.0 8.0
WLD208AB	GMAW Code Welding	Advanced training in gas metal arc welding (GMAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.	L+L 5.0 8.0 8.0
WLD208AC	FCAW Code Welding	Advanced training in flux cored arc welding (FCAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.	L+L 5.0 8.0 8.0
WLD208AD	SMAW Code Welding Pipe	Advanced training in pipe welding using either shielded metal arc welding (SMAW), gas metal arc welding (GMAW), or flux cored arc welding (FCAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WLD106AD or WLD208AA, or permission of Instructor.	L+L 5.0 8.0 8.0
WLD214	American Welding Society Certification Preparation	Principles and techniques of electric arc welding and American Welding Society (AWS) certification requirements, certification pretest and preparation. Technical theory and skill training in all position welding processes.	Prerequisites: A grade of C or better in (WLD101 and registered apprenticeship status) or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
WLD215	Welding Fabrication	Introduction to layout, basic welding, and fabrication. Introduction to the basic skills of measuring, equipment setup and cutting, shaping, grinding, welding, filing, and heating and bending of metal parts.	Prerequisites: A grade of C or better in WLD101 or WLD106++ or WLD206++ or Apprentice status or permission of the Apprenticeship Coordinator.	L+L 3.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WLD215AA	Weld Fabrication I for Millwrighting	Layout, fabrication and basic skills of measuring, cutting, shaping, grinding, drilling and tapping, welding, filing, shimming, heating and bending of metal parts. Safe and proper use of all necessary hand and power tools.	Prerequisites: Permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
WLD215AB	Weld Fabrication II for Millwrighting	Welding layout and fabrication. Advanced skills in measuring, cutting, shaping, grinding, drilling and tapping, welding, filing, shimming, heating and bending of metal parts. Safe and proper use of all necessary hand and power tools.	Prerequisites: A grade of C or better in (WLD215AA and registered apprenticeship status) or permission of the Apprenticeship Coordinator.	L+L 2.0 2.0 2.0
WLD225	Welding Inspection and Quality Control	Welding inspection and quality control standards and practices in the construction and fabrication industries. Welding inspector certification requirements and functions performed in industry.	Prerequisites: A grade of C or better in WLD106++ or permission of Instructor.	LEC 3.0 3.0 3.0
WLD296WA	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 1.0 5.0 0.0
WLD296WB	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 2.0 10.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WLD296WC	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 3.0 15.0 0.0
WLD296WD	Cooperative Education	Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. COMMON COMPETENCY COURSE	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest	LAB 4.0 20.0 0.0
WLD298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
WLD298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WLD298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
WRT100	Introduction to Water Resources	Fundamental principles of water resources. Basic concepts and strategies in the study of water, the current focus on water pollution and water purification. Topics include ground water, surface water, water quality, water purification, and water pollution. Presentation of ongoing studies related to work of earth scientists.	Prerequisites: Admission to the Water Resources Technology program and placement into MAT120, MAT121, MAT122, MAT150, MAT151, MAT152, or higher-level mathematics course for which College Algebra is a prerequisite or permission of the Program Director.	LEC 3.0 3.0 3.0
WRT102	Water Resources Computations and Data Analysis	Fundamentals of water resources technology formulas for real-world problems. Discussion of best practices in water resources given the results of the calculations.	Prerequisites: Math assessment score on District placement exam placing students into MAT090 or MAT091 or MAT092 or higher level mathematics course.	LEC 3.0 3.0 3.0
WRT108	Fundamentals of Environmental Science Technology	This course provides fundamental concepts and problem-solving methods that address environmental conditions, pollution monitoring and prevention, and approaches for protecting air, land and water using technology.	Prerequisites: Admission into the Water Resources Technology program. Corequisites: WRT100 or permission of Program	LEC 3.0 3.0 3.0
WRT110	Principles of Water Treatment Plant Operations	Principles in the safe and effective operation and maintenance of drinking water treatment plants, reservoir management and intake structuring. The source of water, basic water laboratory test procedures and calculations also covered.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT100 or permission of Program Director.	LEC 3.0 3.0 3.0
WRT115	Water Technology Calculations	Application of water technology formulas for operation and maintenance of water/wastewater plants and distribution and collections systems. Includes operator examination preparation and discussion of best practices in water technologies given the results of the calculations.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT100 or permission of Program Director.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WRT117	Geographic Information Systems (GIS)	Purpose and applications of desktop Geographic Information Systems (GIS) technology applied to water resources and planning. ArcView software program applications and data management. Includes data query and spatial data functions. Analysis of spatial relationships and presentation of spatial information.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in BPC110, or CIS105, or permission of Program Director).	LEC 3.0 3.0 3.0
WRT121	Operation of Wastewater Treatment Plants	Safe and effective operation and maintenance of wastewater treatment plants. Overview of treatment processes and laboratory testing used in wastewater treatment plants. Principles and processes involved in waste treatment ponds, disinfection and chlorination process.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT100 or permission of Program Director.	LEC 3.0 3.0 3.0
WRT125	Surveying for Water Resources	Fundamental surveying principles utilized in water field studies. Level and transit, horizontal measurement by tape or stadia. Benchmark and profile leveling traverse surveys and computations and establishment of line and grade.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 or permission of Program Director).	LEC 2.0 2.0 2.0
WRT130	Groundwater Hydrology	Fundamentals of groundwater resources. Includes basic flow equations, well hydraulics, groundwater fluctuations, artificial recharge and basic-data collection techniques. Emphasis on the use of data in analysis of local and regional flow systems.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 or permission of Program Director).	LEC 3.0 3.0 3.0
WRT130LL	Groundwater Field Techniques	Field exercises to acquire groundwater data and service data-gathering equipment. Safety procedures stressed.	Prerequisites: A grade of C or better in WRT130 or Corequisites: WRT130 or permission of Department or	LAB 1.0 3.0 3.0
WRT131	Wastewater Collection Systems Operation and Maintenance	Overview of wastewater collection systems with an emphasis on inspection and cleaning of sewer systems. Safety considerations, maintenance and underground repair procedures also covered.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 and WRT115, or permission of Program Director).	LEC 3.0 3.0 3.0
WRT134	Water Distribution System Operation and Maintenance	Safe and effective operation and maintenance of water distribution systems. Water contaminants, disinfection and chlorination in addition to development of a plant safety plan.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 and WRT115, or permission of Program Director).	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WRT140	Water Quality for Treatment Industry	Introduction to water quality including common parameters in the treatment industry, regulations, and types and methods of monitoring. Laboratory safety, sampling and reporting, wet analytical methods, sample analyses, and process chemistry.	Prerequisites: Admission to the Water Resources Technology program. Prerequisites: A grade of C or better in WRT100 or Corequisites: WRT100 or permission of the Program Director.	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0
WRT140LL	Water Quality for Treatment Industry Laboratory	Laboratory safety, sampling and reporting; wet analytical methods; sample analyses; process chemistry.	Prerequisites: A grade of C or better in WRT140 or Corequisites: WRT140 or permission of Department or	LAB 1.0 3.0 3.0
WRT150	Introduction to Surface Water Data Collection	Fundamentals of surface water data collection while stressing safe practices. Map reading and navigation, field inspections, accessing, collecting, recording and retrieving surface water data.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 or permission of Program Director).	LEC 3.0 3.0 3.0
WRT150LL	Introduction to Surface Water Data Collection Field Techniques	Hands-on experience in surface water data collection while stressing safe practices. Map reading and navigation, field inspections, accessing, collecting, and recording surface water data.	Prerequisites: A grade of C or better in WRT150 or Corequisites: WRT150 or permission of Department or	L+L 2.0 3.0 3.0
WRT152	Water Resources Field Investigations I: Groundwater and Surface Water	Hands-on experience and field exercises to acquire surface water and groundwater data and service data-gathering equipment. Hands-on experience in surface water data collection while stressing safe practices. Map reading and navigation, field inspections, accessing, collecting, and recording surface water and groundwater data. Safety procedures stressed.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT130 and WRT150, or permission of	L+L 3.0 6.0 6.0
WRT153	Environmental Law and Regulations	Introduction to various environmental laws and fundamentals of environmental laws relating to federal, state, and local levels. Overview and application of the permitting processes related to drinking and wastewater designed to provide a better sense of real-world issues from a regulator and regulated standpoint.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT108 or permission of Program Director).	LEC 3.0 3.0 3.0
WRT180	Environmental Sampling and Analysis	Introduction to the theory and methodology of sampling and analysis of environmentally significant parameters in water, wastewater, hazardous waste, soil, sediment, and air.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 and WRT108, or permission of Program Director).	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WRT190AA	Water Resources Technologies Seminar	Interaction with other students and professionals in the water resources technologies industry. Stress placed on sharing knowledge and demonstrating understanding through discussion of current issues in the industry, operational tasks, and emerging issues.	Prerequisites: None.	LEC 1.0 1.0 1.0
WRT200	Industrial Pretreatment	Principles of industrial pretreatment programs. Overview of industrial facilities inspections and pollution prevention strategies. Sampling techniques of industrial wastewaters. Field exercises to acquire industrial wastewater quality data and industrial discharge flow measurements. Quality Assurance/Quality Control (QA/QC), and data processing techniques included. Safety procedures stressed.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT100 or permission of Program Director.	LEC 3.0 3.0 3.0
WRT204	Water/Wastewater Mechanical Systems, Power, and Instrumentation	Maintenance of facilities and equipment in both water and wastewater systems. Principles of basic electricity, electrical circuits, motors, transformers, and process control instrumentation.	Prerequisites: Admission to the Water Resources Technology program and permission of the Program Director.	LEC 3.0 3.0 3.0
WRT205	Power and Instrumentation	Principles of basic electricity, electrical circuits, motors, transformers, and process control instrumentation.	Prerequisites: A grade of C or better in WRT110 or WRT121 or WRT131 or WRT134.	LEC 3.0 3.0 3.0
WRT207	Groundwater Production and Management	Basic hydrology and hydrogeology; construction of water wells from site selection and specifications through drilling, design, development, testing, and equipping; rehabilitation of existing wells, Arizona Groundwater Management Law of 1980; water quality; common operational problems of well fields; types and purposes of monitoring wells.	Prerequisites: A grade of C or better in WRT100 or permission of Program Director.	LEC 3.0 3.0 3.0
WRT221	Water and Wastewater Treatment Plants Administration	Administration safety and maintenance of a water and wastewater treatment plants. Handling and disposal of process wastes and instrumentation use. Emphasis on reporting data in reports, graphs, and record keeping.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT110 or WRT121 or permission of	LEC 3.0 3.0 3.0
WRT240	Water Quality	Fundamental chemical and physical factors involved in evaluating water quality. Water quality deterioration from land fills, underground storage tanks, and hazardous waste. Sampling techniques of groundwater, soil, and surface water. Quality assurance, quality control, and data processing techniques included.	Prerequisites: A grade of C or better in WRT140, or permission of Department or Division.	LEC 3.0 3.0 3.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WRT240LL	Water Quality Field Techniques	Field exercises to acquire water quality data and service data gathering equipment. Safety procedures stressed.	Prerequisites: A grade of C or better in WRT240 or Corequisites: WRT240 or permission of Department or	LAB 1.0 3.0 3.0
WRT252	Water Resources Field Investigations II: Surveying and Surface Water	Field reconnaissance of water resources. Lab experiences in surveying techniques and procedures. Field exercises to acquire surface water data and develop hydrologic models. Safety procedures stressed.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT152 or permission of Program Director).	L+L 3.0 6.0 6.0
WRT270AA	Water Resources Internship	Water resources work experience in business, industry, or government. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	LAB 1.0 6.0 0.0
WRT270AB	Water Resources Internship	Water resources work experience in business, industry, or government. Eighty (80) hours of designated work per credit [total of one hundred sixty (160) hours].	Prerequisites: Permission of Department or Division.	LAB 2.0 12.0 0.0
WRT270AC	Water Resources Internship	Water resources work experience in business, industry, or government. Eighty (80) hours of designated work per credit [total of two hundred forty (240) hours].	Prerequisites: Permission of Department or Division.	LAB 3.0 18.0 0.0
WRT298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0
WRT298AB	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 2.0 2.0 0.0
WRT298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WST100	Introduction to Women's and Gender Studies	Introduction to critical issues in women's studies.	Prerequisites: None.	LEC 3.0 3.0 3.0
WST105	Women of Color in the Americas	Interdisciplinary, multi-perspective, and comparative study of the experiences of Women of Color in the Americas and their impact on the arts, literature, social structures and political movements. Examines how the intersection of race, class, gender, and sexuality has shaped their lived experiences and legacy.	Prerequisites: None.	LEC 3.0 3.0 3.0
WST120	Gender, Class and Race	A feminist discussion of gender, class and race as basic and central social categories that determine how we see ourselves and others and how they circumscribe our opportunities and privileges in American society.	Prerequisites: None.	LEC 3.0 3.0 3.0
WST160	Women and the Early American Experience	Introduction to American women's history, from the colonial period to suffrage in 1920, based on a feminist perspective.	Prerequisites: None.	LEC 3.0 3.0 3.0
WST161	American Women Since 1920	Continuation of the history of women in America from 1920 to the present, based on a feminist perspective. Includes discussion of the roles and status of immigrant and ethnic minority women	Prerequisites: None.	LEC 3.0 3.0 3.0
WST200	Essential Feminist Writing	Literary tracing of feminism from 18th century to present. Explores major issues related to women in the 20th century	Prerequisites: A grade of C or better in ENG101 or permission of Instructor.	LEC 3.0 3.0 3.0
WST206	La Mujer	Analysis and discussion of critical issues for Latinas in America today	Prerequisites: None.	LEC 3.0 3.0 3.0
WST207	Black Women	Analysis and discussion of critical issues for Black women in America today	Prerequisites: None.	LEC 3.0 3.0 3.0
WST209	Women and Films	Analysis of images of women in films from both historical and contemporary perspectives	Prerequisites: None.	LEC 3.0 3.0 3.0
WST261	Indigenous Women's Literature of the Americas	Explores contemporary voices of Indigenous women authors and artists in the Americas as expressed in poetry, fiction, nonfiction, drama, and oral traditions. Focuses on themes relevant to Indigenous women and examines the trends and movements within Indigenous peoples and women's literary history. Examines themes relevant to Indigenous women such as racial and gender oppression, reservation life, acculturation, and their sociopolitical activism in the Americas.	Prerequisites: A grade of C or better in ENG101 or ENG107.	LEC 3.0 3.0 3.0
WST282AA	Volunteerism for Women's Studies: A Service Learning Experience	Service learning field experience within private/public agencies and citizen volunteer groups. Students will develop writing skills, analysis, and synthesis in an on-site volunteer experience.	Prerequisites: A grade of C or better in WST100 and permission of Instructor.	LAB 1.0 1.0 0.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WST284	19th Century Women Writers	Investigates major themes in literature by women writing in the 19th century including the nature of women's lives in the family, in work situations, and in society. Poetry, prose, essays and drama are examined with an emphasis on common themes	Prerequisites: None.	LEC 3.0 3.0 3.0
WST285	Contemporary Women Writers	Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women's lives regardless of age, creed, or ethnic background	Prerequisites: None.	LEC 3.0 3.0 3.0
WST286	Women and Health: Body/Mind/Spirit/Connecti on	Economic, sociopolitical, and demographic factors affecting women's health. Methods for optimizing physical, emotional, and spiritual health. Specific health concerns of women throughout the lifespan. Activism for health promotion	Prerequisites: None.	LEC 3.0 3.0 3.0
WST290	Women and World Religions	Focus on the role of women in several organized religions and/or religious sects. Study of myth and symbols as they are used to establish, maintain, and enforce sex-roles within specific cultural contexts around the world.	Prerequisites: None.	LEC 3.0 3.0 3.0
WST295	Women's Studies Seminar	Special topics in women, gender, and sexuality studies with an emphasis on current issues not covered in other Women's Studies (WST) courses.	Prerequisites: None.	LEC 1.0 1.0 1.0
WST298AC	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 3.0 3.0 0.0
WTO106AA	Introduction to SMAW	Introduction to arc welding with emphasis in Shielded Metal Arc Welding (SMAW). Designed to provide the knowledge and skills needed to cut and prepare weld joints utilizing current technology. Develops hands-on skills through sequenced lab experiences.	Prerequisites: None.	180
WTO106AB	SMAW 6010 Plate	Continued training in shielded metal arc welding with emphasis on using E6010 (fast-freeze) electrodes in all joint positions. Focus is on fillet welds for structural steel and open root groove weld joints.	Prerequisites: A grade of C or better in WTO106AA or permission of Instructor.	180
WTO106AC	SMAW 7018 Plate	Continued training in shielded metal arc welding with emphasis on using E7018 (low hydrogen) electrodes in all joint positions. Focus is on fillet welds and groove weld joints with backing to prepare students for welding code certification testing.	Prerequisites: A grade of C or better in WTO106AA or permission of Instructor.	180

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WTO106AD	SMAW Introduction to Pipe	Advanced training in shielded metal arc welding with emphasis on pipe welding using E6010 and E7018 electrodes in various pipe joint positions (1G, 2G, 5G, 6G). Focus is on the open root groove pipe weld joints to prepare students for industry code certification.	Prerequisites: A grade of C or better in WTO106AA or permission of Instructor.	180
WTO206AA	Introduction to GMAW/FCAW and GTAW	Instruction in theory and practice of gas metal arc welding (GMAW) and gas tungsten arc welding (GTAW), commonly referred to as MIG and TIG. Basic welding procedures on ferrous and nonferrous metals. Setup and operation of welding process equipment. Covers selection of proper filler materials and shielding gas options.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: WTO106AA or permission of Instructor.	141
WTO206AB	Advanced GMAW and FCAW	Instruction and practice of gas metal arc welding (GMAW) and flux cored arc welding (FCAW) in the horizontal, vertical, and overhead positions. Prepare for industry code performance qualification plate tests with both welding processes.	Prerequisites: A grade of C or better in WTO206AA or permission of Instructor.	165
WTO206AC	Advanced GTAW Non-Ferrous	Instruction and practice of gas tungsten arc welding (GTAW) aluminum sheet in the flat, horizontal, and vertical positions. Prepare for industry code performance qualification tests in any welding position.	Prerequisites: A grade of C or better in WTO206AA or WTO206DA or permission of Instructor.	180
WTO206AD	Advanced GTAW Ferrous	Instruction and practice of gas tungsten arc welding (GTAW) carbon and stainless-steel in any position. Prepare for industry code performance qualification tests in any welding position.	Prerequisites: A grade of C or better in WTO206AA or WTO206DA or permission of Instructor.	180
WTO206DA	Introduction to GMAW/FCAW and GTAW	Instruction in theory and practice of gas metal arc welding (GMAW) and gas tungsten arc welding (GTAW), commonly referred to as MIG and TIG. Basic welding procedures on ferrous and nonferrous metals. Setup and operation of welding process equipment. Covers selection of proper filler materials and shielding gas options.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: WTO106AA or permission of Instructor.	180
WTO206DB	Advanced GMAW and FCAW	Instruction and practice of gas metal arc welding (GMAW) and flux cored arc welding (FCAW) in the horizontal, vertical, and overhead positions. Prepare for industry code performance qualification plate tests with both welding processes.	Prerequisites: A grade of C or better in WTO206AA or WTO206DA or permission of Instructor.	180
WTO208AA	SMAW Code Welding	Advanced training in shielded metal arc welding (SMAW) to achieve successful welder performance qualification testing in any position. Focus is on single v-groove weld joints per industry codes and specification requirements.	Prerequisites: A grade of C or better in WTO106AA or permission of Instructor.	180
WTO208AB	GMAW Code Welding	Advanced training in gas metal arc welding (GMAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WT0206AA or permission of Instructor.	165

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
WTO208AD	SMAW Code Welding Pipe	Advanced training in pipe welding using either shielded metal arc welding (SMAW), gas metal arc welding (GMAW), or flux cored arc welding (FCAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WTO106AD or WTO208AA or permission of Instructor.	180
WTO208AE	GTAW Code Welding	Advanced training in welding using gas tungsten arc welding (GTAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: None.	180
WTO208DB	GMAW Code Welding	Advanced training in gas metal arc welding (GMAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WTO206AA orWTO206DA or permission of Instructor.	180
YAQ100	Yaqui Indian History and Culture	Surveys Yaqui Indian history and culture from pre-contact to the present. Explores themes of resistance, dispersion, survival, tradition, family, community, belief systems, and identity. Places Yaqui history within the context of Arizona, American Indian, Mexican, and Mexican-American History. Examines historical writing and analysis, life histories, poetry, language, and emphasis on Yaqui experiences in 20th century Arizona.	Prerequisites: None.	LEC 3.0 3.0 3.0
YAQ110	Yaqui Language and Culture	Introduction to the Yaqui language and overview of the traditional culture as a background for language use. Instruction in the grammar and writing system to assist student in speaking, reading, and writing Yaqui	Prerequisites: None.	LEC 3.0 3.0 3.0
YOG101	Beginning Yoga	Yoga practice at the beginning level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: None.	L+L 1.0 3.0 3.0
YOG101PA	Beginning Yoga	Yoga practice at the beginning level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: None.	L+L 0.5 1.5 1.5
YOG102	Intermediate Yoga	Yoga practice at the intermediate level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: None. Prior experience recommended.	L+L 1.0 3.0 3.0
YOG102PA	Intermediate Yoga	Yoga practice at the intermediate level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: None. Prior experience recommended.	L+L 0.5 1.5 1.5
YOG130	Yoga and the Body	In-depth study of how the human body functions during yoga both theoretically and practically. Attention given to correct body alignment and mechanics while performing yoga, exploring essential areas of the body individually and analyzing the body as a whole.	Prerequisites: None. YOG101, or YOG102, or YOG201 recommended.	L+L 2.0 3.0 3.0
YOG150	Tradition and Practice of Yoga I	Introduction to the art and science of yoga, including terminology, concepts, issues, trends and health benefits. Explores the history and philosophy of yoga and the teaching of yoga as a career.	Prerequisites: None.	LEC 2.0 2.0 2.0

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
YOG170	Teaching Yoga: Level I	Methods of teaching yoga. Studies assessment techniques, establishing course goals, and organizing the classroom. Reviews yoga instruction techniques and how these differ from other movement-based activities; application of anatomical knowledge and practice teaching experiences.	Prerequisites: None. Corequisites: YOG101, or YOG102, or YOG201, or permission of Instructor.	L+L 2.0 2.0 2.0
YOG171	Teaching Yoga: Level II	Emphasizes practice teaching experiences. Reviews instructional methods and techniques for assessing student skill levels, organizing the classroom and writing lesson plans. Application of anatomical knowledge to build movement skills, improvement of observational skills and development of an individual teaching style.	Prerequisites: A grade of C or better in YOG170 or permission of instructor. Corequisites: YOG101, or YOG102, or YOG201, or permission of Instructor.	L+L 2.0 2.0 2.0
YOG172	Teaching Yoga: Level III	Instructional methods for teaching more advanced asanas. Principles of alignment of back bending, inversion, forward bending and arm balancing asanas and techniques for identifying and correcting misalignments. Emphasis on instructional techniques that safely build yoga movement skills while encouraging progression in the practice of challenging asanas.	Prerequisites: A grade of C or better in YOG171 or permission of Instructor. Corequisites: YOG101, or YOG102, or YOG201, or permission of Instructor.	L+L 2.0 2.0 2.0
YOG174	Teaching Yoga: Level I	Emphasizes practice teaching experiences. Reviews instructional methods and techniques for assessing student skill levels, organizing the classroom and writing lesson plans. Application of anatomical knowledge to build movement skills, improvement of observational skills and development of an individual teaching style.	Prerequisites: None.	L+L 4.0 6.0 6.0
YOG175	Teaching Yoga: Level II	Instructional methods for teaching more advanced asanas. Principles of alignment of back bending, inversion, forward bending and arm balancing asanas and techniques for identifying and correcting misalignments. Emphasis on instructional techniques that safely build yoga movement skills while encouraging progression in the practice of challenging asanas.	Prerequisites: A grade of C or better in YOG174 or permission of Instructor.	L+L 4.0 6.0 6.0
YOG201	Advanced Yoga	Yoga practice at the advanced level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: A grade of C or better in PED102YO, or PED103YO, or YOG102, or YOG102PA, or permission of Instructor.	L+L 1.0 3.0 3.0
YOG201PA	Advanced Yoga	Yoga practice at the advanced level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: A grade of C or better in PED102YO, or PED103YO, or YOG102, or YOG102PA, or permission of Instructor.	L+L 0.5 1.5 1.5

Course	Course Title	Course Description	Course Requisite	Credits/Periods/Load
YOG250	Tradition and Practice of Yoga II	Examination of the art and science of yoga. Explores the history and philosophy of yoga. In-depth review of significant literature associated with the yoga tradition. Examines cultural aspects of yoga, relevance of yoga to modern day life and health benefits of yoga.	Prerequisites: A grade of C or better in YOG150.	LEC 2.0 2.0 2.0
YOG274	Teaching Yoga: Practicum Level I	Guided, practical experience in teaching yoga students. Requires implementation of lesson plans, application of individual teaching techniques and analysis of teaching sessions.	Prerequisites: A grade of C or better in YOG174 or permission of Instructor.	L+L 4.0 6.0 6.0
YOG275	Teaching Yoga: Practicum Level II	Guided, practical experience in teaching intermediate level yoga students. Requires implementation of lesson plans, application of individual teaching techniques and analysis of teaching sessions.	Prerequisites: A grade of C or better in YOG274 or permission of Instructor.	L+L 4.0 6.0 6.0
YOG298AA	Special Projects	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	LAB 1.0 1.0 0.0