Academic Divisions

Courses offered at CGCC fall under one of eleven academic divisions. They include:

Aviation and Applied Technology
Mike Hutto, Division Chair -
(480) 988-8116
Bluford Hall
Williams Campus
7360 East Tahoe Avenue
Mesa, AZ 85212

Courses:
- AET - Aeronautics
- AJS - Administration of Justice Studies
- AMT - Aircraft Maintenance Technology
- ATC - Air Traffic Controllers
- AVT - Avionics Technology
- EUT - Electric Utility Technology
- PPT - Power Plant Technology

Career Programs:
- Administration of Justice Studies
- Correctional Studies
- Forensic Science
- Homeland Security
- Justice Studies
- Law Enforcement Training Academy
- Aircraft Flight Technology
  - Flight Technology
  - Airway Science Technology, Flight Emphasis
- Aircraft Maintenance Technology
  - Airframe Maintenance (Part 147)
  - Powerplant Maintenance (Part 147)
  - Aircraft Maintenance Technology (Part 147)
  - Aircraft Maintenance Technology
- Electric Utility Technology
  - Electric Utility Technology
  - Electric Utility Design Technology
  - Meter Technology

Biological Sciences
Regi Munro, Division Chair -
(480) 732-7109

Courses:
- BIO - Biology
- SUS - Sustainability/Natural Sciences

Business and Computing Studies
Matthew Fisher, Division Chair -
(480) 857-5538

Courses:
- ACC - Accounting
- BPC - Business-Personal Computers
- CIS - Computer Information Systems
- CNT - Cisco Network Technology
- COV - Covey
- CSC - Computer Science
- GBS - General Business
- IBS - International Business
- ITS - Information Technology Security
- MGT - Management
- MKT - Marketing
- MST - Microsoft Technology
- OAS - Office Automation Systems
- SBS - Small Business Management
- SBU - Society and Business

Career Programs:
- Accounting
  - General Business
  - Organizational Leadership
  - Organizational Management
  - Retail Management
- Cisco Networking
  - Networking Administration: Cisco
  - Networking Technology: Cisco
- Computer Applications
  - Computer Applications:
    - Office Specialist/ Core Level
  - Computer Applications:
    - Office Specialist/ Expert Level
  - Computer Business Applications
- Computer Database Administration and Development
- Oracle Database Operations
- Computer Hardware Maintenance and Desktop Support
  - Computer Hardware and Desktop Support
- Computer Information Technology
  - Information Technology
- Computer Programming
  - Programming and System Analysis
  - Linux Networking
  - Linux Professional
Microsoft Networking
Network Administration: Microsoft Windows Server
Small Business
Small Business Start-Up

Communication and Fine Arts
Diane Travers Shipman, Division Chair - (480) 732-7036

Courses:
ARH - Art Humanities
ART - Art
COM - Communication
DAH - Dance Humanities
DAN - Dance
MCO - Mass Communications
MHL - Music: History/Literature
MTC - Music: Theory/Composition
MUC - Music: Commercial/Business
MUP - Music: Performance
THE - Theater
THP - Theater Performance/Production

Career Programs:
Art: Computer Illustration
Media Arts: Computer Art/Illustration
Art: Digital Photography
Media Arts: Digital Imaging
Music Business
Communication
Communication Competence in the Workplace

Composition, Creative Writing and Literature
Chris Schnick, Division Chair - (480) 732-7186

Courses:
CRE - Critical Reading
CRW - Creative Writing
ENG - English
ENH - English Humanities
HUM - Humanities
JRN - Journalism
RDG - Reading
WAC - Writing Across Curriculum

Career Programs:
Creative Writing

Library, Learning Center and Counseling
Carol Dichtenberg, Division Chair - (480) 857-5133

Courses:
AAA - Advancing Academic Achievement
BHS - Behavioral Health Services Technology
CPD - Counseling and Personal Development
IFS - Information Studies
LBS - Library Skills

Mathematics
Frank Wilson, Division Chair - (480) 988-8608

Courses:
MAT - Mathematics

Modern Languages and Humanities
Virginia Edwards, Division Chair - (480) 732-7342

Courses:
ARB - Arabic
CHI - Chinese
ESL - English as a Second Language
FRE - French
GER - German
HIS - History
ITA - Italian
JPN - Japanese
NAV - Navajo
PHI - Philosophy
REL - Religious Studies
SLG - Sign Language
SPA - Spanish
SSH - Sustainability/Social Sciences and Humanities
WST - Women’s Studies

Career Programs:
Sustainability and Ecological Literacy
Nursing and Health Sciences

Jill Anderson, Division Chair - (480) 988-8865
Engel Hall
Williams Campus
7360 East Tahoe Avenue
Mesa, AZ 85212

Courses:

- EMT - Emergency Medical Technology
- EXS - Exercise Science
- FON - Food and Nutrition
- FSC - Fire Science Technology
- HCC - Health Core Curriculum
- HCR - Health Care Related
- HES - Health Science
- NCE - Nursing Continuing Education
- NUR - Nursing Science: Basic
- PED - Physical Education
- REC - Recreation
- WED - Wellness Education

Career Programs:

- Fire Science
  - Driver Operator
  - Emergency Medical Technology
  - Emergency Response and Operations
  - Fire Officer Leadership
  - Fire Science
  - Firefighter Operations
- Massage
  - Therapeutic Massage
- Nursing
  - Registered Nurse
- Nutrition
  - Dietetic Technology
- Personal Training
  - Personal Training Specialist
  - Strength, Nutrition and Personal Training

Social and Behavioral Sciences

Nancy Short, Division Chair - (480) 732-7227

Courses:

- AIS - American Indian Studies
- ASB - Anthropology
- CFS - Child/Family Studies
- ECN - Economics
- EDU - Education
- EED - Early Education
- GCU - Cultural Geography
- POS - Political Science
- PSY - Psychology
- SOC - Sociology

Career Programs:

- Child and Family Professional Development
- Early Learning and Development

Physical Sciences and Engineering

Brad Bates, Division Chair - (480) 988-8996

Courses:

- AST - Astronomy
- CAD - Computer-Aided Drafting
- CHM - Chemistry
- ECE - Engineering Science
- EEE - Electrical Engineering
- ELE - Electronic
Course Descriptions

All courses offered by the Maricopa Community Colleges appear in a standardized format using six common course elements. Students are encouraged to become familiar with the course elements included in a course description. Please see “How to Read Course Descriptions”.

The courses that follow are offered at Chandler-Gilbert Community College (CGCC). Not all courses in this section will necessarily be offered during any given school year. Not all courses listed in the required courses and/or restricted elective areas of shared occupational programs are offered at CGCC. Please check the current class schedule for course availability. The intent of the Course Description section is to enable students to review courses that are available at CGCC.

How to Read Course Descriptions

All courses offered at the Maricopa Community Colleges are identified by a three-letter abbreviation of the academic subject plus a three-digit number (e.g., ENG101 identifies an English course). Course descriptions are listed alphabetically and in ascending numerical order.

Each course listing has six common elements:

1. **Course Prefix:** Three-letter subject code abbreviation indicating discipline or area of study (e.g., ENG for English).

2. **Course Number:** Three-digit number assigned to indicate sequence and academic level. Numbers range from 001-299. Courses numbered below 100 are offered for the purpose of strengthening skills and knowledge and cannot be applied toward degrees awarded by Maricopa Community Colleges. These courses cannot be transferred to four-year institutions. First-year courses are generally identified with 100-level numbers. Second-year courses are generally identified with 200-level numbers.

3. **Course Title:** Identifying name of the course. May also indicate course level (e.g., College Mathematics or Beginning Spanish Conversation I).

4. **Course Description:** Brief statement describing the content of the course. Instructor’s course syllabus gives additional information, including objectives and grading criteria.

5. **Course Credit Hours:** College credit hours awarded for satisfactory completion of the course.

6. **Course Prerequisites and/or Corequisites:** Requirements that must be met before or, in the case of corequisites, at the same time as enrollment in a course. Not all courses have prerequisites or corequisites.

7. **Shared Unique Number (SUN) System:** The Shared Unique Number (SUN) System is a college course numbering system designed to help students locate and enroll in courses that have direct equivalents for transfer among Arizona’s public community colleges and three state universities.

**EXAMPLE:**

(1) = Course Prefix  
(2) = Course Number  
(3) = Course Title  
(4) = Course Description  
(5) = Course Credits  
(6) = Course Prerequisites and/or Corequisites  
(7) = Shared Unique Number (SUN) System  

* = Periods: Weekly time in class during a typical 16-week semester; 50 minutes = 1 period.

1. **ENG**  
2. **101**  
3. **3 CREDITS**  
4. **3 PERIODS**  
5. **ENG 1101**  

**First-Year Composition**

(4) 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.  
(6) Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG091 or ESL097.
**AAA - Advancing Academic Achievement**

**AAA115**

1 CREDIT 1 PERIOD

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.

**AAA150**

3 CREDITS 3 PERIODS

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.

**AAA150AA**

1 CREDIT 1 PERIOD

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.

**ACC - Accounting**

**ACC105**

3 CREDITS 3 PERIODS

Payroll, Sales and Property Taxes

Tax reporting for payroll, sales, and personal property. Prerequisites: None.

**ACC111**

3 CREDITS 3 PERIODS

Accounting Principles I

Fundamental theory of accounting principles and procedures. Prerequisites: None.

**ACC115**

2 CREDITS 3 PERIODS

Computerized Accounting

Mastery of a microcomputer accounting system including the general ledger, accounts receivable, accounts payable and payroll. Prerequisites: ACC107 or ACC111 or ACC211 or ACC230, or permission of Instructor.

**ACC121**

3 CREDITS 3 PERIODS

Income Tax Preparation

Preparation of and practical experience in preparing individual federal income tax returns using computer software. Prerequisites: None.

**ACC219**

3 CREDITS 3 PERIODS

Intermediate Accounting I

Theory and practice applicable to determination of asset values, liabilities, and related problems of income determination. Prerequisites: ACC212 or ACC240 with a grade of "C" or better, or permission of Department/Division.

**ACC220**

3 CREDITS 3 PERIODS

Intermediate Accounting II

Continuation of the theory and practice applicable to liabilities and owner's equity; special problems and financial reporting. Prerequisites: ACC219 with a grade of "C" or better, or permission of Department/Division.

**ACC230**

3 CREDITS 3 PERIODS

Uses of Accounting Information I

Introduction to the uses of accounting information for internal and external purposes with emphasis on financial statement analysis. Prerequisites: Grade of "C" or better in ACC111 or ACC211, or a grade of "C" or better in (ENG101 and MAT151 and CRE101), or equivalent, or satisfactory score on District placement exam.

**ACC240**

3 CREDITS 3 PERIODS

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: ACC230.

**ACC296WA**

1 CREDIT 5 PERIODS

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.
AET - Aeronautics

AET100  1 CREDIT  1 PERIOD
Aviation Orientation
Exploration of career options and employment practices in the aviation industry, including topics such as academic requirements, employment requirements, regulatory issues, and airport procedures. Prerequisites: None.

AET107  5 CREDITS  5 PERIODS
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. Corequisite: AET110.

AET107HH  5 CREDITS  5 PERIODS
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. Corequisite: AET110HH.

AET110  2 CREDITS  5 PERIODS
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. Corequisite: AET107.

AET110HH  2 CREDITS  5 PERIODS
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. Requires passing check ride similar to the FAA Private Pilot check ride. Prerequisites: None. Corequisite: AET107HH.

AET115  3 CREDITS  3 PERIODS
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.

AET203  2 CREDITS  2 PERIODS
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: AET207, AET217 and AET210 or permission of instructor. Corequisites: AET220 and AET213.

AET203HH  2 CREDITS  2 PERIODS
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: AET207HH, AET217HH and AET210HH or permission of Instructor. Corequisites: AET220HH and AET213HH.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET205</td>
<td>4</td>
<td>4</td>
<td>Aircraft Structures, Systems, and Maintenance</td>
<td>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.</td>
</tr>
<tr>
<td>AET207</td>
<td>2</td>
<td>2</td>
<td>Attitude Instruments and Navigation</td>
<td>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: AET110 or permission of instructor. Corequisites: AET217 and AET210.</td>
</tr>
<tr>
<td>AET207HH</td>
<td>2</td>
<td>2</td>
<td>Attitude Instruments and Navigation: Helicopter</td>
<td>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: AET110HH, AET217HH, and AET210HH. Corequisites: AET220HH and AET203HH.</td>
</tr>
<tr>
<td>AET210</td>
<td>2</td>
<td>5</td>
<td>Instrument Commercial Flight I</td>
<td>Initial flight course in preparation for the Federal Aviation Administration (FAA) Instrument rating practical examination. Emphasis on night and instrument operations. Student must fly approximately 75 hours at own expense. Requires passing operational phase checks. Prerequisites: AET110HH or permission of Instructor. Corequisites: AET207HH and AET217HH.</td>
</tr>
<tr>
<td>AET213</td>
<td>2</td>
<td>2</td>
<td>Aerodynamics and Performance</td>
<td>Advance instrument and 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: AET207, AET217, and AET210. Corequisites: AET203 and AET220.</td>
</tr>
<tr>
<td>AET213HH</td>
<td>2</td>
<td>2</td>
<td>Aerodynamics and Performance: Helicopter</td>
<td>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: AET207HH, AET217HH, and AET210HH. Corequisites: AET220HH and AET203HH.</td>
</tr>
<tr>
<td>AET215</td>
<td>4</td>
<td>4</td>
<td>Aircraft Powerplants</td>
<td>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: AET205 or permission of instructor.</td>
</tr>
</tbody>
</table>
**AET217** 2 CREDITS 2 PERIODS

**Instrument Procedures**

Advance instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Include 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: AET110 or permission of instructor. Corequisites: AET210 and AET207.

**AET217HH** 2 CREDITS 2 PERIODS

**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: AET110HH or permission of Instructor. Corequisites: AET210HH and AET207HH.

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**AET220** 2 CREDITS 5 PERIODS

**Instrument Commercial Flight II**

Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examinations. Emphasis on commercial and high performance 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: AET210, AET207 and AET217. Corequisites: AET203 and AET213.

**AET220HH** 2 CREDITS 5 PERIODS

**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: AET210HH, AET207HH and AET217HH. Corequisites: AET203HH and AET213HH.

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**AET225** 4 CREDITS 4 PERIODS

**Advanced Aircraft Systems**

Advanced aircraft systems for pilots. Pressurization, cabin atmosphere, ice control, rain control, fire detection and extinguishing, hydraulic, landing gear, anti-skid systems, and weight and balance for transport category airplanes. Prerequisites: AET215 or permission of instructor.

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**AET226** 2 CREDITS 2 PERIODS

**Introduction to Unmanned Aircraft Systems Operation**

Overview of the history of Unmanned Aircraft Systems (UAS), as well as regulatory issues and both current and future applications. Prerequisites: AET100. Proof of U.S. Citizenship required per U.S. State Department International Traffic in Arms Regulations (ITAR) regulations.

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**AET227** 4 CREDITS 4 PERIODS

**Certified Flight Instructor: Airplane, Single Engine Land Ground School**


**AET227HH** 4 CREDITS 4 PERIODS

**Certified Flight Instructor: Helicopter Ground School**

AET228  3 CREDITS  3 PERIODS
Public Safety Aviation
Organization, operations, tactics and techniques related to air support operations within law enforcement, fire protection and resource protection agencies. Includes Use of Unmanned Aircraft System (UAS) within the United States, Airborne law enforcement patrol, surveillance, special operations and Special Weapons and Tactics (SWAT); fire operations including fire chemistry and behavior, fire department organization and tactics, airborne firefighting equipment, fire extinguishment tactics and air ambulance operations; and, resource protection air operations including wildlife surveys, hunting and fishing enforcement patrols, search and rescue, and operations from unimproved landing sites and seaplane operations. Prerequisites: AET107 and AET110. Corequisites: AET260. Course Notes: International Traffic in Arms Regulations (ITAR) Defined: U.S. State Department regulations that govern the export of restricted technology to foreign states. United States Munitions List (USML) of restricted articles and services. ITAR Compliance: Due to the ITAR requirements surrounding the UAS Operations, only United States Citizens will have access to the operating system, simulators, related documentation, and Learning Management System (LMS). Students/Instructors must not disclose ITAR sensitive information or materials to any foreign person at any time whether in the U.S. or abroad. A Foreign Person is defined by ITAR as any natural person who is not a lawful permanent resident as defined by 8 U.S.C.1101(a)(20) or who is not a protected individual as defined by 8 U.S.C. 1324b(a)(3). It also means any foreign corporation, business association, partnership, trust, society or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments and any agency or subdivision of foreign governments (e.g. diplomatic missions). Export control violations can result in civil and criminal personal liability of up to $100,000 per violation, imprisonment, or fines and imprisonment. If the violation is determined to be knowingly or willfully committed the personal liability is up to $250,000 per violation, imprisonment, or fines and imprisonment.

AET229  3 CREDITS  3 PERIODS
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: AET217.

AET230  1 CREDIT  3 PERIODS
Certified Flight Instructor: Airplane, Single Engine Land
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 postflight 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: AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisite: AET227.

AET230HH  1 CREDIT  3 PERIODS
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.
AET237  2 CREDITS  2 PERIODS
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: AET220 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET240.

AET240 .5 CREDIT  1.5 PERIODS
Multiengine Airplane Pilot Flight
Flight course in preparation for the Federal Aviation Administration (FAA) Multiengine Airplane practical examination. Approximately 15 hours of flight experience at the student’s expense and passing check ride similar to the FAA Multiengine check ride are required. Prerequisites: AET220 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET237.

AET257  3 CREDITS  4 PERIODS
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: ENG102 or ENG111, and permission of instructor.

AET258  3 CREDITS  3 PERIODS
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 instrument rating and the appropriate category and class of airplane used in the course; and Flight Instructor Certificate-Airplane. Corequisites: AET270.

AET260  1 CREDIT  3 PERIODS
Public Safety Aviation Applications in Unmanned Aircraft Systems Flight Lab
Knowledge and skills needed to safely employ small unmanned aircraft systems. Includes aircraft operating software, launch and recovery operations, payload operations, normal and emergency procedures, and mission planning and execution. Emphasis on use of small Unmanned Aircraft Systems (UAS) operations conducted by non-military governmental organizations, such as law enforcement and resource protection agencies. Students must complete the appropriate flight lessons to satisfactorily complete the course. Prerequisites: AET220. Corequisites: AET228. Course Notes: Due to U.S. State Department regulations that govern the export of restricted technology to foreign states, only United States Citizens will have access to the operating systems, simulators, and related documentation. Students/Instructors must not disclose sensitive information or materials to any foreign person at any time whether in the U.S. or abroad. A Foreign Person is defined as any natural person who is not a lawful permanent resident as defined by 8 U.S.C.1101(a) (20) or who is not a protected individual as defined by 8 U.S.C. 1324b(a)(3). It also means any foreign corporation, business association, partnership, trust, society or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments and any agency or subdivision of foreign governments (e.g. diplomatic missions). Export control violations can result in civil and criminal personal liability of up to $100,000 per violation, imprisonment, or fines and imprisonment. If the violation is determined to be knowingly or willfully committed the personal liability is up to $250,000 per violation, imprisonment, or fines and imprisonment.

AET270  1 CREDIT  3 PERIODS
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 instrument rating and the appropriate category and class of airplane used in the course; and Flight Instructor Certificate-Airplane. Corequisites: AET258.
AET273  2 CREDITS  2 PERIODS
Multi-Engine Flight Instructor: Airplane-Ground School

AET280  1 CREDIT  3 PERIODS
Multi-Engine Flight Instructor: Airplane-Flight Lab
Flight experience in an airplane to meet flight proficiency and aeronautical experience requirements necessary to add a multi-engine rating to an existing Flight Instructor-Airplane certificate. Prerequisites: Valid FAA Commercial Pilot Certificate, or Airline Transport Pilot Certificate with instrument rating and the appropriate category and class of airplane used in the course; and Flight Instructor Certificate-Airplane. Corequisites: AET273.

AIS - American Indian Studies
AIS105  3 CREDITS  3 PERIODS
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.

AIS110  3 CREDITS  3 PERIODS
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.

AJS - Administration of Justice Studies
AJS101  3 CREDITS  3 PERIODS
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.

AJS102  17 CREDITS  30 PERIODS
Peace Officer Certification I
Training program for limited authority peace officers, leading to certification by the Arizona Peace Officer Standards and Training Board (AzPOST - The statutory agency for certifying peace officers - all person with arrest powers - in Arizona.) Includes introduction to Law Enforcement, Law and legal matters, patrol procedures, traffic control, and police proficiency skills. Prerequisites: Student must comply with AzPOST employment standards for peace officers.

AJS109  3 CREDITS  3 PERIODS
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. Required in AJS curriculum. Prerequisites: None.

AJS113  3 CREDITS  3 PERIODS
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, defensible space, and crime prevention through defensible space. Prerequisites: None.
AJS119 3 CREDITS 4 PERIODS
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.

AJS123 3 CREDITS 3 PERIODS
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. Encourages critical thinking and value decision making in criminal justice system situations. Prerequisites: None.

AJS139 3 CREDITS 3 PERIODS
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.

AJS195 3 CREDITS 3 PERIODS
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.

AJS200 3 CREDITS 3 PERIODS
Current Issues in Criminal Justice
Examines current issues, techniques and trends in the Criminal Justice System. Prerequisites: None.

AJS202 13 CREDITS 22.5 PERIODS
Peace Officer Certification II
A continuation of the basic, entry-level training program leading to full authority peace officer certification as required by the Arizona Peace Officer Standards and Training Board I (AzPOST). Subjects to include: Patrol Procedure, Accident Investigation, Records and Report Writing, Community Relations, Criminal Investigations, and Officer Survival. Prerequisites: Grade of "C" or better in AJS/LEO102 or AzPOST Limited Authority Peace Officer certification.

AJS212 3 CREDITS 3 PERIODS
Juvenile Justice Procedures
Examines the history and development of juvenile justice theories, procedures, and institutions. Prerequisites: None.

AJS213 3 CREDITS 3 PERIODS
Evidence Technology/Fingerprints
Fingerprint identification, interpretation, and classification. The fundamentals of fingerprinting and the problems in developing latent prints, preservation of evidence and the chain of evidence. Prerequisites: None.

AJS215 3 CREDITS 3 PERIODS
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.

AJS216 3 CREDITS 3 PERIODS
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.

AJS225 3 CREDITS 3 PERIODS
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.
AJS230 3 CREDITS 3 PERIODS
The Police Function
Theories of procedures and methods of operations of public police with emphasis on discretionary powers available to the working police officer. Career opportunities and current trends in law enforcement presented. Prerequisites: None.

AJS240 3 CREDITS 3 PERIODS
The Correction Function
Examines the history and development of correctional theories and institutions. Prerequisites: None.

AJS241 3 CREDITS 3 PERIODS
Police Photography
Emphasis on proper procedure for photographing crime scenes, accident scenes, and laboratory specimens. Discussion of photographic techniques, equipment, lighting techniques, aerial photography, video and motion pictures, macro and micro photography, filters, and preparation for court presentation using selected simulations. Prerequisites: None.

AJS258 3 CREDITS 3 PERIODS
Victimology and Crisis Management
Focuses on victimology and techniques of crises intervention; and the importance of multicultural perspective. Includes coverage of sexual assault, family violence, child abuse, post-traumatic stress disorder, substance abuse, coping skills, stress management, and community resources. Prerequisites: None.

AJS260 3 CREDITS 3 PERIODS
Procedural Criminal Law
Concerned with the understanding of procedural criminal law. Examines the rationale underlying major court holdings, the procedural requirements that stem from these holdings, and their effect on the daily operations of the criminal justice system. Prerequisites: None.

AJS270 3 CREDITS 3 PERIODS
Community Relations
Examination, recognition and understanding of community problems; community action programs; methods of coping with human behavior, victimology, conflict and communication; ethnic and minority cultures and environments; the community and relationships with the criminal justice system. Prerequisites: None.

AJS275 3 CREDITS 3 PERIODS
Criminal Investigation I
Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, and basic investigative techniques. Prerequisites: None.

AMT - Aircraft Maintenance Technology

AMT124 5 CREDITS 9 PERIODS
Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations
Federal Aviation maintenance publications, forms and records. Overview of technician’s privileges and limitations. Perform aircraft weight and balance, aircraft ground operations and fuel servicing techniques. Drawings, symbols and schematic diagrams. Prerequisites: ENG071, RDG091, (MAT091 or MAT092), and permission of the Department or Division.

AMT126 9 CREDITS 12 PERIODS
Fundamentals of Mathematics and Electricity
Mathematical computation of fundamental electrical circuit parameters. Basic definitions, laws, and concepts. Schematic, wiring, and parts placement diagrams. Test and troubleshoot electrical and electronic components and circuits. Prerequisites: ENG071, RDG091, (MAT091 or MAT092), and permission of the Department or Division.

AMT128 5 CREDITS 9 PERIODS
Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittings
Basic concepts of motion, fluid dynamics, heat and sound, aerodynamics, aircraft structure and theory of flight. Fluid lines and fittings, component identification, function, inspection, and installation. Cleaning and corrosion control, materials and processes, non-destructive testing, and precision measurement techniques. Prerequisites: ENG071, RDG091, (MAT091 or MAT092), and permission of the Department or Division.
AMT220 3 CREDITS 6 PERIODS
Fundamentals of Aircraft Wood Structures, Covering and Finishing, and Bonded Structures

AMT220AA 3 CREDITS 6 PERIODS
Fundamentals of Aircraft Wood Structures, Covering and Finishing, and Bonded Structures: Part 65

AMT222 4 CREDITS 6 PERIODS
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: Admission to the program.

AMT222AA 4 CREDITS 6 PERIODS
Atmosphere Control, Fire Detection, Ice and Rain Protection Systems: Part 65
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: Permission of Program Director.

AMT224 5 CREDITS 11 PERIODS
Aircraft Sheet Metal
Inspection, fabrication, and repair techniques of aircraft structural and nonstructural components. Sheet metal heat-treating techniques. Prerequisites: Admission to the program.

AMT224AA 5 CREDITS 11 PERIODS
Aircraft Sheet Metal: Part 65
Inspection, fabrication, and repair techniques of aircraft structural and nonstructural components. Sheet metal heat-treating techniques. Prerequisites: Permission of Program Director.

AMT226 7 CREDITS 12 PERIODS
Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position and Warning Systems
Identification, inspection, repair, and troubleshooting techniques of aircraft landing gear, hydraulic, fuel, pneumatic, and position and warning system components. Prerequisites: Admission to the program.

AMT226AA 7 CREDITS 12 PERIODS
Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position and Warning Systems: Part 65
Identification, inspection, repair, and troubleshooting techniques of aircraft landing gear, hydraulic, fuel, pneumatic, and position and warning system components. Prerequisites: Permission of Program Director.

AMT228 7 CREDITS 12 PERIODS
Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication and Navigation Systems
Proper operation, inspection, servicing and troubleshooting of DC (Direct Current) and AC (Alternating Current) sources, systems, and components. Mechanical and electrical sensing and information display systems. Fuel indicator system inspections, repairs, and troubleshooting. Transmitter and receiver fundamentals. Avionics installation, inspection and testing. Prerequisites: Admission to the program.

AMT228AA 7 CREDITS 12 PERIODS
Proper operation, inspection, servicing and troubleshooting of DC (Direct Current) and AC (Alternating Current) sources, systems, and components. Mechanical and electrical sensing and information display systems. Fuel indicator system inspections, repairs, and troubleshooting. Transmitter and receiver fundamentals. Avionics installation, inspection and testing. Prerequisites: Permission of Program Director.
AMT230  6 CREDITS  11 PERIODS
Airframe Assembly, Inspection and Welding
Aircraft assembly and rigging. Flight control balancing and rigging. Airframe inspection techniques, reporting procedures, and aircraft jacking. Welding techniques, theory, and materials identification. Prerequisites: Admission to the program.

AMT230AA  6 CREDITS  11 PERIODS
Airframe Assembly, Inspection and Welding: Part 65
Aircraft assembly and rigging. Flight control balancing and rigging. Airframe inspection techniques, reporting procedures, and aircraft jacking. Welding techniques, theory, and materials identification. Prerequisites: Permission of Program Director.

AMT263  5 CREDITS  9 PERIODS
Aircraft Turbine Engines
Historical development and application of turbine engines. Theory of thrust and the design and environmental factors which influence thrust. Turbine engine troubleshooting, inspection, service, repair and overhaul. Operational characteristics and engine test techniques on the aircraft and in test cells. Prerequisites: Admission to the program.

AMT264  7 CREDITS  11 PERIODS
Aircraft Reciprocating Engines
Historical development and application of reciprocating engines, theory, design, and operations. Techniques used in troubleshooting, overhaul, inspection, and repair of opposed and radial engines. Prerequisites: Admission to the program.

AMT264AA  7 CREDITS  11 PERIODS
Aircraft Reciprocating Engines: Part 65
Historical development and application of reciprocating engines, theory, design, and operations. Techniques used in troubleshooting, overhaul, inspection, and repair of opposed and radial engines. Prerequisites: Permission of Program Director.

AMT266  6 CREDITS  9 PERIODS
Engine Fuel Systems, Fuel Metering and Induction System
Inspection, servicing, troubleshooting, overhaul, and repair of aircraft fuel systems and components, fuel metering devices, injection systems, turbochargers, and superchargers. Induction system principles of operation and design. Prerequisites: Admission to the program.

AMT268  6 CREDITS  12 PERIODS
Engine Electrical, Ignition and Starter Systems
Inspect, service, troubleshoot, overhaul, and repair of engine electrical, ignition, starter systems, and components. Prerequisites: Admission to the program.

AMT268AA  6 CREDITS  12 PERIODS
Engine Electrical, Ignition and Starter Systems: Part 65
Inspect, service, troubleshoot, overhaul, and repair of engine electrical, ignition, starter systems, and components. Prerequisites: Permission of Program Director.

AMT266  5 CREDITS  8 PERIODS
Engine Instruments, Fire Protection and Lubrication, Cooling and Exhaust Systems
Operation, maintenance, servicing, inspection, repair, and troubleshooting of engine instruments, fire detection and extinguishing, engine lubrication, cooling, and exhaust systems. Prerequisites: Admission to the program.

AMT266AA  5 CREDITS  8 PERIODS
Engine Instruments, Fire Protection and Lubrication, Cooling and Exhaust Systems: Part 65
Operation, maintenance, servicing, inspection, repair, and troubleshooting of engine instruments, fire detection and extinguishing, engine lubrication, cooling, and exhaust systems. Prerequisites: Permission of Program Director.

AMT270  4 CREDITS  8 PERIODS
Propeller Systems and Engine Inspections
Historical development, operation, disassembly, inspection, repair, and maintenance of propellers. Reciprocating and turbine engine inspection and documentation. Prerequisites: Admission to the program.

ARB - Arabic
ARB101  4 CREDITS  5 PERIODS
Elementary Arabic I
Introduction to the basic alphabet, grammar, pronunciation and vocabulary of the Arabic language. Listening, speaking, reading and writing skills. Prerequisites: None.
**ARB102**  
**4 CREDITS  5 PERIODS**  
**Elementary Arabic II**  
A continuation of ARB101. Continued study of grammar and vocabulary, with emphasis on pronunciation and speaking skills. Prerequisites: ARB101 or equivalent.

**ARH - Art Humanities**

**ARH100**  
**3 CREDITS  3 PERIODS**  
**Introduction to Art**  
Understanding and enjoyment of art through study of painting, sculpture, architecture design, photography, and decorative arts. Emphasis on contemporary topics and cultural diversity in the arts. Prerequisites: None.

**ART - Art**

**ART100**  
**1 CREDIT  2 PERIODS**  
**Introduction to Computer Graphic Art**  
Conceptualization, visualization, and production of art using the computer. Prerequisites: None.

**ART106**  
**3 CREDITS  6 PERIODS**  
**Gallery Operations**  
Operation of an art gallery. Includes organization, publicity, evaluation of artwork, selection and installation of exhibits. Prerequisites: Permission of Instructor. Course Notes: ART106 may be repeated for a total of six (6) credit hours.

**ART109**  
**3 CREDITS  3 PERIODS**  
**History of American Art**  
Development and variety of American Art. Presentation of architecture, sculpture, painting and decorative objects. Prerequisites: None.

**ART111**  
**3 CREDITS  6 PERIODS**  
**Drawing I**  
Fundamental principles of drawing. Emphasis on composition and facility in objective and expressive representation, using variety of drawing media. Prerequisites: None.

**ART112**  
**3 CREDITS  6 PERIODS**  
**Two-Dimensional Design**  
Study of fundamental elements and principles of two-dimensional design. Prerequisites: None.

**ART113**  
**3 CREDITS  6 PERIODS**  
**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.

**ART115**  
**3 CREDITS  6 PERIODS**  
**Three-Dimensional Design**  
Fundamental principles of three-dimensional design. Prerequisites: ADA/ART112.

**ART116**  
**3 CREDITS  6 PERIODS**  
**Life Drawing I**  
Use of form, structure and anatomy of draped and undraped human figure to develop basic principles of sound draftsmanship. Prerequisites: None.

**ART117**  
**3 CREDITS  6 PERIODS**  
**Life Drawing II**  
Further study of form, structure, and anatomy of the draped and undraped human figure with emphasis on composition. Prerequisites: ART116.
ART122  3 CREDITS  6 PERIODS
Drawing and Composition II
Emphasis on composition and exploration of drawing media. Prerequisites: ART111.

ART131  3 CREDITS  6 PERIODS
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. Course Note: Camera required.

ART132  3 CREDITS  6 PERIODS
Photography II
Advanced camera and darkroom techniques. Aesthetic awareness with personal expression. Prerequisites: ART131 or permission of instructor.

ART142  3 CREDITS  6 PERIODS
Introduction to Digital Photography
Fundamentals of digital photography. Includes camera operations, exposure techniques, introduction to digital output, and theory of digital photography. Prerequisites: None. Course Note: Digital camera required.

ART143  3 CREDITS  6 PERIODS
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: ART142 or permission of instructor.

ART151  3 CREDITS  6 PERIODS
Sculpture I
Exploration of sculptural form and expression in clay, plaster, stone, wood and metal. Prerequisites: or Corequisites: ADA/ART115 or permission of Instructor.

ART161  3 CREDITS  6 PERIODS
Ceramics I
Introduction to ceramic materials and techniques of hand construction, decorating, glazing and throwing on potters’ wheel. Prerequisites: None.

ART162  3 CREDITS  6 PERIODS
Ceramics II
Major emphasis on wheel throwing, glaze making and decorating techniques. Prerequisites: ART161.

ART165  3 CREDITS  6 PERIODS
Watercolor Painting I
Transparent and Gouache watercolor painting. Prerequisites: (ART111 and ART112), or permission of instructor.

ART166  3 CREDITS  6 PERIODS
Watercolor Painting II
Painting in water soluble media. Emphasis on individual techniques and design. Prerequisites: ART165.

ART167  3 CREDITS  6 PERIODS
Painting I
Exploration of technical and expressive possibilities of various painting media in easel painting. Prerequisites: (ART111 and ART112), or permission of instructor.

ART168  3 CREDITS  6 PERIODS
Painting II
Continued refinement of painting skills and investigation of new possibilities in painting. Prerequisites: ART167 or permission of instructor.

ART169  3 CREDITS  6 PERIODS
Two-Dimensional Computer Design
Generation of electronic two-dimensional images and traditional methods of visual problem solving. Understanding of computer techniques and art presentation methods. Prerequisites or Corequisites: ART100 or permission of instructor.

ART173  3 CREDITS  6 PERIODS
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: ART100, or permission of instructor.
ART177 3 CREDITS 6 PERIODS
Computer-Photographic Imaging
Introduction to the multiple elements of microcomputer-photographic imaging. Basic foundation in the use of the photographic manipulation of images using software programs. Special attention to aesthetic foundations underlying photographic composition. Prerequisites or Corequisites: ART100 or permission of instructor.

ART190 3 CREDITS 6 PERIODS
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: ART100, or permission of Instructor. CIS133DA recommended.

ART255AA 1 CREDIT 1 PERIOD
Self Promotion
Career goals, presentation of artist, communication skills, keeping files and records, developing self-promotional materials. Prerequisites: None.

ART255AB 1 CREDIT 1 PERIOD
The Portfolio
Choosing the right pieces to include, presenting art work, developing the portfolio. Prerequisites: ART182, or ART185, or ART255AA, or permission of Instructor.

ART255AC 1 CREDIT 1 PERIOD
Marketing Fine Art
Exhibitions and galleries, establishing a studio, alternative markets. Prerequisites: ART255AB or permission of Instructor.

ART270 3 CREDITS 6 PERIODS
Intermediate Computer Photographic Imaging
Intermediate microcomputer-based photographic imaging techniques. Refinement of aesthetic awareness and personal expression. Prerequisites: ART177 or (ART177AA and ART177AB).

ART274 3 CREDITS 6 PERIODS
Advanced Computer Photographic Imaging
Advanced microcomputer-based photographic imaging techniques. Advanced manipulation techniques of photographic images. Continued development of aesthetic awareness and personal expression. Prerequisites: ART270.

ART289 3 CREDITS 6 PERIODS
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 input and output devices. Prerequisites or Corequisites: ART100 or permission of instructor.

ART290AA 1 CREDIT 2 PERIODS
ART290AB 2 CREDITS 4 PERIODS
ART290AC 3 CREDITS 6 PERIODS
Studio Art
Studio course for art majors allowing continuation in a subject field. Prerequisites: Permission of instructor. Course Notes: ART290AC students must have completed advanced courses in the subject field.

ART290BC 3 CREDITS 6 PERIODS
Studio Art: Drawing
Studio course for art majors allowing continuation in a subject field. Prerequisites: ART111 or permission of Instructor. Course Notes: ART290BC may be repeated for credit.

ART290EC 3 CREDITS 6 PERIODS
Studio Art: Photography
Studio course for art majors allowing continuation in a subject field. Prerequisites: ART132 or permission of Instructor. Course Notes: ART290EC may be repeated for credit.

ART290GC 3 CREDITS 6 PERIODS
Studio Art: Ceramics
Studio course for art majors allowing continuation in a subject field. Prerequisites: ART162 or permission of Instructor. Course Notes: ART290GC may be repeated for credit.
ART290JC 3 CREDITS 6 PERIODS
Studio Art: Color
Studio course for art majors allowing continuation in a subject field. Prerequisites: ART113 or permission of Instructor. Course Notes: ART290JC may be repeated for credit.

ART290MC 3 CREDITS 6 PERIODS
Studio Art: Digital Photography
Studio course for art majors allowing continuation in a subject field. Prerequisites: ART143 or permission of Instructor. Course Notes: ART290MC may be repeated for credit.

ART290PC 3 CREDITS 6 PERIODS
Studio Art: Painting
Studio course for art majors allowing continuation in a subject field. Prerequisites: ART168 or permission of Instructor. Course Notes: ART290PC may be repeated for credit.

ART295HA 1 CREDIT 2 PERIODS
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/Division Chair.

ART295EC 3 CREDITS 6 PERIODS
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.

ART295GA 1 CREDIT 2 PERIODS
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.

ART295GB 2 CREDITS 4 PERIODS
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.

ART295LB 2 CREDITS 4 PERIODS
Art Workshop/Seminar: Glazing Techniques
Advanced level workshop seminar in art disciplines. Prerequisites: Permission of Instructor.

ART295LC 3 CREDITS 6 PERIODS
Art Workshop/Seminar: Glazing Techniques
Advanced level workshop seminar in art disciplines. Prerequisites: Permission of Instructor.

ASB - Anthropology

ASB102 3 CREDITS 3 PERIODS
Introduction to Cultural and Social Anthropology
Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture; social, political, and economic systems; religion, aesthetics and language. Prerequisites: None.

ASB211 3 CREDITS 3 PERIODS
Women in Other Cultures
Cross-cultural analysis of the economic, social, political, and religious factors that affect women’s status in traditional and modern societies. Prerequisites: None.

ASB214 3 CREDITS 3 PERIODS
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.

ASB222 3 CREDITS 3 PERIODS
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.
ASB223 3 CREDITS 3 PERIODS
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 American, Central America, and South America. Prerequisites: None.

ASB245 3 CREDITS 3 PERIODS
Indians of the Southwest
Comparative study of the cultures, including the histories and present status, of Indians of the Southwest. Prerequisites: None.

AST - Astronomy
AST111 3 CREDITS 3 PERIODS
Introduction to Solar System Astronomy
Introduction to astronomy for the non-science major. History of astronomy, properties of light, instruments, the solar system and nearby stars. Prerequisites: MAT092 or equivalent.

AST112 3 CREDITS 3 PERIODS
Introduction to Stars, Galaxies, and Cosmology
Introduction to astronomy for the non-science major. Structure and evolution of stars; star clusters; galaxies; cosmology. Prerequisites: MAT092 or equivalent.

AST113 1 CREDIT 3 PERIODS
Introduction to Solar System Astronomy Laboratory
Astronomical observations and exercises to supplement AST111. Prerequisites or Corequisites: AST111.

AST114 1 CREDIT 3 PERIODS
Introduction to Stars, Galaxies, and Cosmology Laboratory
Astronomical observations and exercises to supplement AST112. Prerequisites or Corequisites: AST112.

BIO - Biology
BIO100 4 CREDITS 6 PERIODS
Biology Concepts
A one-semester introductory course covering basic principles and concepts of biology. Methods of scientific inquiry and behavior of matter and energy in biological systems are explored. Field trips may be required at students’ expense. Prerequisites: None.

BIO105 4 CREDITS 6 PERIODS
Environmental Biology
Fundamentals of ecology and their relevance to human impact on natural ecosystems. Field trips may be required at students’ expense. Prerequisites: None.

BIO107 4 CREDITS 6 PERIODS
Introduction to Biotechnology
Introduction to biotechnology and its global impact on society. Covers applications, laboratory techniques, limitations and the international economic benefits, risks, and legal and moral issues associated with biotechnology. Prerequisites: None.

BIO108 4 CREDITS 6 PERIODS
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.

BIO109 4 CREDITS 6 PERIODS
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.

BIO156 4 CREDITS 6 PERIODS
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: Grade of "C" or better in RDG091 or eligibility for CRE101 as indicated by appropriate reading placement test score. One year high school chemistry or one semester of college-level chemistry recommended.
BIO160 4 CREDITS 6 PERIODS
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.

BIO162 2 CREDITS 3 PERIODS
Microbiology Concepts for Allied Health
Types of microorganisms. Principles of growth and reproduction for specific types of microorganisms. Chain of disease transmission and defense mechanisms. Use of compound microscope. Safe handling and culturing of specific microbes. Methods of sterilization and use of disinfectants and chemotherapeutic agents. Prerequisites: None.

BIO181 4 CREDITS 6 PERIODS
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: Grade of "C" or better in RDG091 or eligibility for CRE101 as indicated by appropriate reading placement test score. One year of high school or one semester of college-level biology and chemistry is strongly recommended.

BIO182 4 CREDITS 6 PERIODS
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.

BIO201 4 CREDITS 6 PERIODS
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: (BIO156 or BIO181 with a grade of "C" or better or one year of High School biology with a grade of "C" or better) and (a grade of "C" or better in RDG091 or eligibility for CRE101 as indicated by reading placement test score). CHM130 or higher or one year of High School chemistry suggested but not required.

BIO202 4 CREDITS 6 PERIODS
Human Anatomy and Physiology II
Continuation of structure and function of the human body. Topics include endocrine, circulatory, lymphatic, respiratory, digestive, urinaiy, and reproductive systems; and fluid and electrolyte balance. Prerequisites: A grade of "C" or better in BIO201.

BIO205 4 CREDITS 6 PERIODS
Microbiology
Study of microorganisms and their relationship to health, ecology, and related fields. Prerequisites: (BIO156 or BIO181 with a grade of "C" or better or one year of High School biology with a grade of "C" or better) and (a grade of "C" or better in RDG091 or eligibility for CRE101 as indicated by reading placement test score). CHM130 or higher or one year of High School chemistry suggested but not required.

BIO211AA 1 CREDIT 1 PERIOD
Biotechnology Seminar: Biomedical Applications
Special topics in biotechnology with an emphasis on current issues not covered in other life science courses. Prerequisites: None.

BIO211AB 1 CREDIT 1 PERIOD
Biotechnology Seminar: Laboratory Protocol
Special topics in biotechnology with an emphasis on current issues not covered in other life science courses. Prerequisites: BIO211AA or permission of Instructor. Course Notes: BIO211AB may be repeated for a total of two (2) credit hours.

BIO211AE 1 CREDIT 1 PERIOD
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.
BIO212AB 5 CREDITS 9 PERIODS
Biotechnology II
Intensive introduction to biotechnology, including protein biochemistry, techniques for handling and purifying proteins, recombinant deoxyribonucleic acid (DNA), sequencing deoxyribonucleic acid (DNA), testing deoxyribonucleic acid (DNA) for open reading frames, promoters, and homology. Prerequisites: BIO212AA.

BIO212BA 5 CREDITS 9 PERIODS
Cell Biotechnology
Introduction to industrial laboratory biotechnology with intensive focus on the recovery of heterologous proteins from cultivated cells and the subsequent purification and characterization of these proteins. Prerequisites: ENG101 and (BIO181 or BIO212AA).

BIO213 1 CREDIT 1 PERIOD
Biosafety
General laboratory safety, hazardous chemical use and disposal, biohazardous material use and disposal, biosafety procedures, and radiation safety. Prerequisites: None.

BIO215 3 CREDITS 3 PERIODS
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: Permission of Program Director and (BIO212AA, or BIO212BA, or BIO208, or BIO209). Course Notes: BIO215 requires 240 clock hours in the laboratory setting.

BIO247 4 CREDITS 6 PERIODS
Applied Biosciences: Biotechnology
Applies concepts of molecular and cellular biology of bacteria, animals, and plants to real-world problems. Prerequisites: A grade of “C” or better in BIO181. One semester of college- level chemistry or equivalent recommended.

BPC - Business-Personal Computers

BPC101AA 1 CREDIT 2 PERIODS
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.

BPC101BA 1 CREDIT 1 PERIOD
Introduction to Computers II
Computer software applications for the personal computer, including database management, computer graphics, electronic spreadsheet, and word processing, and operating system commands. Prerequisites: BPC101AA.

BPC102AD .5 CREDIT .5 PERIOD
Using Windows: Level I
Basic commands and methods associated with the Windows operating systems. Prerequisites: None.

BPC102BD .5 CREDIT .5 PERIOD
Using Windows: Level II
Advanced commands and methods of the Windows operating system. Prerequisites: BPC102AD or permission of instructor.

BPC106AH .5 CREDIT .5 PERIOD
MS Outlook: Level I
Messaging and word processing functions of a Microsoft Outlook electronic work state. Prerequisites: None.

BPC106BH .5 CREDIT .5 PERIOD
Microsoft Outlook: Level II
Microsoft Outlook features including sort, filter and group items; templates and forms; information sharing by public folders and Net Folders; share and fax contacts; and record activities in the Journal. Outlook environment customization also covered. Prerequisites: BPC106AH or permission of instructor.

BPC110 3 CREDITS 4 PERIODS
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.
BPC111AA 1 CREDIT 1.7 PERIODS
Computer Keyboarding I
Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols. Prerequisites: None.

BPC111AB 1 CREDIT 1.7 PERIODS
Computer Keyboarding II
Further development of microcomputer keyboard speed and accuracy. Emphasis on touch typing with speed and accuracy development of numerals as related to preparation and handling of documents. Prerequisites: BPC/OAS111AA or permission of instructor.

BPC115AA 1 CREDIT 2 PERIODS
Personal Finance Software: Quicken - Level I
Introduction to the basic features of Quicken, a computerized personal finances software program. Prerequisites: None.

BPC128 1 CREDIT 2 PERIODS
Introduction to Desktop Publishing
Presents basic concepts of commercially prepared software used to do desktop publishing. Incorporates a combination of narrative and pictorial/graphic creation and presentation, including set-up, text entry, graphic generation, text and graphic merging, and other computer-based functions. Prerequisites: None.

BPC128AF 1 CREDIT 2 PERIODS
Introduction to Desktop Publishing: MS Publisher
Presents basic concepts of commercially prepared software used to do desktop publishing. Incorporates a combination of narrative and pictorial/graphic creation and presentation, including set-up, text entry, graphic generation, text and graphic merging, and other computer-based functions. Prerequisites: None.

BPC130DK 1 CREDIT 2 PERIODS
Beginning Word
Using Word for Windows to create, edit, and print documents. Prerequisites: Ability to keyboard a minimum of 20 wpm or permission of instructor.

BPC131DK 1 CREDIT 1 PERIOD
Intermediate Word
Intermediate concepts in using Word for Windows. Prerequisites: BPC130DK or permission of instructor.

BPC170 3 CREDITS 4 PERIODS
Computer Maintenance: A+ Exam Prep Level I
Explore technical aspects of personal computers, including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis placed on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations. Prerequisites: BPC170 or permission of instructor.

BPC171 1 CREDIT 2 PERIODS
Recycling Used Computer Technology
Use of hardware maintenance knowledge and skills to refurbish used computers. May be repeated for a total of three (3) credits. Prerequisites or Corequisites: BPC170 or permission of instructor.

BPC270 3 CREDITS 4 PERIODS
Computer Maintenance: A+ Exam Prep Level II
Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on installation, maintenance, mobile devices, security, troubleshooting, and resolving various computer problems. Helps prepare students for the CompTIA A+ examinations. Prerequisites: BPC170 with grade of C or better, or permission of Instructor.

CAD - Computer-Aided Drafting
CAD103AA 1 CREDIT 1 PERIOD
Basic Print Reading for Manufacturing
Basic print reading knowledge and skills necessary for workers in the manufacturing field. Visualization, interpretation and analysis of common manufacturing drawings, and other design documentation. Prerequisites: None.

CFS - Child/Family Studies
CFS176 3 CREDITS 3 PERIODS
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.
CHI - Chinese

CHI101 5 CREDITS 6 PERIODS

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.

CHM - Chemistry

CHM107 3 CREDITS 3 PERIODS

Chemistry and Society
A survey of chemistry and its impact on the environment. Completion of CHM107LL required to meet the Natural Science requirement. Prerequisites: None.

CHM107LL 1 CREDIT 3 PERIODS

Chemistry and Society Laboratory
Laboratory experience in support of CHM107. Prerequisites or Corequisites: CHM107.

CHM130 3 CREDITS 3 PERIODS

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. Designed to meet needs of students in such diverse areas as agriculture, nursing, home economics, physical education and water technology. Prerequisites: Grade of "C" or better in CHM090, or MAT090, or MAT091, or MAT092, or MAT093, or MAT102, or (MAT103AA and MAT103AB), or satisfactory score on math placement exam.

CHM130LL 1 CREDIT 3 PERIODS

Fundamental Chemistry Laboratory
Laboratory experience in support of CHM130. Prerequisites or Corequisites: CHM130.

CHM138 3 CREDITS 3 PERIODS

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 MCCD. May not be applicable to other allied health programs or transferable. Prerequisites: Grade of "C" or better in CHM090; or one year of high school chemistry with a grade of "C" or better; or MAT092 or MAT102 or satisfactory score on placement exam.

CHM138LL 1 CREDIT 3 PERIODS

Chemistry for Allied Health Lab
Laboratory experience in support of CHM138, Chemistry for Allied Health. Prerequisites: None. Corequisites: CHM138.

CHM151 3 CREDITS 3 PERIODS

General Chemistry I
Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry with a grade of "C" or better taken within the last five years], and completion of MAT151 or higher level mathematics course with grade of "C" or better. Completion of all prerequisites within the last two years is recommended. Course Note: Students may receive credit for only one of the following: CHM150 or CHM151.

CHM151LL 1 CREDIT 3 PERIODS

General Chemistry I Laboratory
Laboratory experience in support of CHM151. Prerequisites: CHM130LL or permission of instructor or Corequisites: CHM150 or CHM151.

CHM152 3 CREDITS 3 PERIODS

General Chemistry II
A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Completion of CHM152LL required to meet the Natural Science requirement. Prerequisites: CHM151 and CHM151LL. Completion of CHM151 and CHM151LL within the last two years recommended.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Course Title</th>
<th>Description</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM152LL</td>
<td>1</td>
<td>3</td>
<td>General Chemistry II Laboratory</td>
<td>Laboratory experience in support of CHM152. Prerequisites: CHM151LL or equivalent.</td>
<td>CHM152.</td>
</tr>
<tr>
<td>CHM230</td>
<td>3</td>
<td>3</td>
<td>Fundamental Organic Chemistry</td>
<td>Chemistry of representative groups of organic compounds, emphasizing biological applications. Prerequisites: (CHM130 and CHM130LL), or (CHM151 and CHM151LL). Completion of (CHM130 and CHM130LL) or (CHM151 and CHM151LL) within the last two years recommended.</td>
<td>CHM230.</td>
</tr>
<tr>
<td>CHM235</td>
<td>3</td>
<td>3</td>
<td>General Organic Chemistry I</td>
<td>Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized. Prerequisites: CHM152 and CHM152LL, or CHM154 and CHM154LL. Completion of (CHM152 and CHM152LL) or (CHM154 and CHM154LL) within the last two years recommended.</td>
<td>CHM235.</td>
</tr>
<tr>
<td>CHM235LL</td>
<td>1</td>
<td>4</td>
<td>General Organic Chemistry I Laboratory</td>
<td>Laboratory experience in support of CHM235. Prerequisites: CHM152LL, or CHM154LL, or equivalent. Prerequisites or Corequisites: CHM235.</td>
<td>CHM235.</td>
</tr>
<tr>
<td>CHM236</td>
<td>3</td>
<td>3</td>
<td>General Organic Chemistry II A</td>
<td>Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Prerequisites: CHM235 and CHM235LL. Completion of CHM235 and CHM235LL within the last two years recommended.</td>
<td>CHM236.</td>
</tr>
<tr>
<td>CHM236LL</td>
<td>1</td>
<td>4</td>
<td>General Organic Chemistry II A Laboratory</td>
<td>Laboratory experience in support of CHM236. Prerequisites: CHM235LL or equivalent. Prerequisites or Corequisites: CHM236.</td>
<td>CHM236.</td>
</tr>
<tr>
<td>CHM260</td>
<td>3</td>
<td>3</td>
<td>Fundamental Biochemistry</td>
<td>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. Designed for students in agriculture, dental hygiene, home economics, nursing, and physical therapy. Prerequisites: CHM230 and CHM230LL, or CHM236 and CHM236LL, or CHM238 and CHM238LL. Completion of CHM230 and CHM230LL, or CHM236 and CHM236LL, or CHM238 and CHM238LL within the last two years recommended.</td>
<td>CHM260.</td>
</tr>
<tr>
<td>CHM260LL</td>
<td>1</td>
<td>3</td>
<td>Fundamental Biochemistry Laboratory</td>
<td>Laboratory experience in support of CHM260. Prerequisites: CHM230 and CHM230LL or permission of Instructor. Corequisites: CHM260.</td>
<td>CHM260.</td>
</tr>
<tr>
<td>CIS102</td>
<td>1</td>
<td>1</td>
<td>Interpersonal and Customer Service Skills for IT Professionals</td>
<td>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.</td>
<td>CHM230, CHM230LL, or permission of Instructor. Corequisites: CHM260.</td>
</tr>
</tbody>
</table>
CIS 105  3 CREDITS  4 PERIODS
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.

CIS 108  1 CREDIT  2 PERIODS
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: (CIS 105 or BPC 110), or permission of instructor.

CIS 1120  3 CREDITS  4 PERIODS
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.

CIS 108  3 CREDITS  4 PERIODS
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.

CIS 1120  3 CREDITS  4 PERIODS
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.

CIS 113DE  3 CREDITS  4 PERIODS
Microsoft Word: Word Processing
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.

CIS 114AE  1 CREDIT  2 PERIODS
Excel: Level I
Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, and projections. Prerequisites: None.

CIS 114BE  1 CREDIT  2 PERIODS
Excel: Level II
Additional Excel spreadsheet techniques, including macro programming, database searching, extraction, and linking to obtain prescribed reports and graphs. Prerequisites: CIS 114AE or permission of Instructor.

CIS 114CE  1 CREDIT  2 PERIODS
Excel: Level III
Additional Excel spreadsheet techniques, including complex macros, statistics, and matrix manipulation. Project design using multiple, integrated spreadsheets. Prerequisites: CIS 114BE or permission of Instructor.

CIS 117AM  1 CREDIT  2 PERIODS
Database Management: Microsoft Access - Level I
Introduction to the basic elements of a current version of the Microsoft Access database management program, for casual and beginning users. Prerequisites: None.

CIS 117BM  1 CREDIT  2 PERIODS
Database Management: Microsoft Access - Level II
Exploration of additional components of the Microsoft Access database management program. Prerequisites: BPC/CIS 117AM or permission of Instructor.

CIS 117CM  1 CREDIT  2 PERIODS
Database Management: Microsoft Access - Level III
Application of the features of the Microsoft Access program to some common database management problems. Prerequisites: BPC/CIS 117BM.

CIS 118AB  1 CREDIT  2 PERIODS
PowerPoint: Level I
Use of PowerPoint software to produce professional-quality presentation visuals. Prerequisites: None.

CIS 118BB  1 CREDIT  2 PERIODS
PowerPoint: Level II
Use of PowerPoint software add movement and sound to desktop presentations to enhance audience attention. Prerequisites: BPC/CIS 118AB.

CIS 118CB  1 CREDIT  1 PERIOD
PowerPoint: Level III
Use of PowerPoint software for advanced desktop presentation techniques, including advanced animation and sound sequences. Prerequisites: BPC/CIS 118BB.
CIS119DO 3 CREDITS 4 PERIODS
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. Prerequisites: CIS105 or permission of instructor.

CIS119DP 3 CREDITS 4 PERIODS
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: CIS119DO and (CIS126++ or CIS121++ or MST152++), or permission of Instructor.

CIS120DC 3 CREDITS 4 PERIODS
Flash: Digital Animation
Provides students with the ability to use Flash graphics software on microcomputers. Covers basic animation techniques used in the creation, manipulation, and editing of Flash animation graphics. Prerequisites: None.

CIS120DF 3 CREDITS 4 PERIODS
Computer Graphics: Adobe Photoshop
Provides students with the capability to use Adobe Photoshop graphics software on a computer. Basic foundation course in the use of electronic techniques to select, manipulate, and edit images, for graphic design and image correction. Prerequisites: None.

CIS120AF 1 CREDIT 2 PERIODS
Computer Graphics: Adobe Photoshop: Level I
Provides students with the capability to use Adobe Photoshop graphics software on a computer. Basic foundation course in the use of electronic techniques to select, manipulate, and edit images, for graphic design and image correction. Prerequisites: None.

CIS121AE 1 CREDIT 2 PERIODS
Windows Operating System: Level I
Specific topics include booting and shutting down the computer, navigating the desktop, start button features, taskbar status, and receiving on-line help support. Exploring and managing folders and files, running programs, and learning about Wordpad and Paint application programs. Prerequisites: None.

CIS121AH 3 CREDIT 4 PERIODS
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.

CIS126DL 3 CREDITS 4 PERIODS
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.

CIS131AA 1 CREDIT 1 PERIOD
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.

CIS133AA 1 CREDIT 2 PERIODS
Internet/Web Development Level I-A
Overview of the Internet and its resources. Hands-on experience with various Internet communication tools. Prerequisites: None.
CIS133BA  1 CREDIT  1 PERIOD
Internet/Web Development Level I-B
Exploration of additional Internet resources. Hands-on experience with a variety of resource discovery and information retrieval tools as well as enhancement of Web pages. Prerequisites: BPC/CIS133AA.

CIS133CA  1 CREDIT  1 PERIOD
Internet/Web Development Level I-C
Web site development using enhancement codes. Includes frames, style sheets and javascript as well as design principles and typography. Prerequisites: BPC/CIS133BA.

CIS133DA  3 CREDITS  4 PERIODS
Internet/Web Development Level I
Overview of the Internet/WWW and its resources. Hands-on experience with various Internet/WWW communication, resource discovery, and information retrieval tools. Web page development also included. Prerequisites: None

CIS150AB  3 CREDITS  4 PERIODS
Object-Oriented Programming Fundamentals
Structured and Object-Oriented design and logic tools. Use of computer problems to demonstrate and teach concepts using appropriate programming language. Prerequisites: CIS105, or permission of instructor.

CIS151  3 CREDITS  4 PERIODS
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: CIS105 or permission of Instructor.

CIS159  3 CREDITS  4 PERIODS
Visual Basic Programming I
Use of the Visual Basic programming language to solve problems using suitable examples from business or other disciplines. Prerequisites: CIS105, or permission of instructor.

CIS162AB  3 CREDITS  4 PERIODS
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: CIS105, or permission of instructor.

CIS162AD  3 CREDITS  4 PERIODS
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: CIS105, or permission of instructor.

CIS163AA  3 CREDITS  4 PERIODS
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: CIS105.

CIS164AB  3 CREDITS  4 PERIODS
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: CIS119DO, or permission of the instructor.

CIS164AC  3 CREDITS  4 PERIODS
Oracle: Developer Forms I
Building and testing interactive applications consisting of one or more Developer forms modules. Building a complete forms application using Oracle Developer. Customizing forms with graphical user input items, such as check boxes, list items and radio groups. Modifying data access by creating event-related triggers. Prerequisites: CIS164AB, or permission of instructor.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Course Title</th>
<th>Description</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS164AG</td>
<td>2</td>
<td>3</td>
<td>Oracle: Data Modeling and Relational Database Design</td>
<td>Top-down, systematic approach to developing a relational database and defining requirements as entities, attributes, and relationships. Developing an entity-relationship (ER) diagram that accurately reflects the business. Mapping the ER diagram to an initial database design. Prerequisites: CIS105 or permission of instructor.</td>
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<tr>
<td>CIS166</td>
<td>3</td>
<td>4</td>
<td>Web Scripting/Programming</td>
<td>Software development for Web sites, including client-side script and Common Gateway Interface (CGI) scripting. Covers Web-based transaction processing and use of databases in conjunction with the Web. Includes security issues. Prerequisites: CIS133CA or CIS133DA or permission of Instructor.</td>
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<tr>
<td>CIS166AA</td>
<td>3</td>
<td>4</td>
<td>Introduction to JavaScripting</td>
<td>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: CIS133CA or CIS133DA or permission of Instructor.</td>
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</tr>
<tr>
<td>CIS190</td>
<td>3</td>
<td>4</td>
<td>Introduction to Local Area Networks</td>
<td>Overview of local area networks. Emphasis on the elements of a local area network, current issues and products, and use of a local area network. Includes terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Prerequisites: CIS105, or permission of instructor.</td>
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<tr>
<td>CIS213DE</td>
<td>3</td>
<td>4</td>
<td>Advanced Microsoft Word: Word Processing</td>
<td>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: CIS113DE or (CIS113AE and CIS113BE and CIS113CE) or permission of Instructor.</td>
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<tr>
<td>CIS225AB</td>
<td>3</td>
<td>4</td>
<td>Object-Oriented Analysis and Design</td>
<td>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.</td>
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<tr>
<td>CIS233AA</td>
<td>1</td>
<td>1</td>
<td>Internet/Web Development Level II-A</td>
<td>Design and creation of pages on the Internet’s World Wide Web using hypertext markup language (HTML). Hands-on experience authoring HTML and preparing sophisticated web documents. Prerequisites: BPC/CIS133BA or permission of instructor.</td>
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<tr>
<td>CIS233BB</td>
<td>1</td>
<td>2</td>
<td>Internet Web Publishing: FrontPage Level II</td>
<td>Hands-on experience designing Web presentations using advanced markup languages, programming languages, scripts and multimedia. Prerequisites: CIS233AA or permission of instructor.</td>
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</tr>
<tr>
<td>CIS233DA</td>
<td>3</td>
<td>4</td>
<td>Internet/Web Development Level II</td>
<td>Design and create pages on the World Wide Web with a variety of markup languages, programming languages, scripts, and multimedia. Hands-on experience authoring and preparing sophisticated web documents. Exploration of best practices/issues for web design and publishing and careers in web development and e-commerce. Prerequisites: BPC/CIS133CA or BPC/CIS133DA or permission of instructor.</td>
<td></td>
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</tbody>
</table>
CIS235 3 CREDITS 4 PERIODS

**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: CIS133CA, or CIS133DA, or permission of instructor.

CIS238DL 3 CREDITS 4 PERIODS

**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 SAIR/GNU LCP and LCA certificates, CompTIA’s Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS126AL, CIS126BL and CIS126CL; or CIS126DL or Permission of instructor.

CIS239DL 3 CREDITS 4 PERIODS

**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: CIS126DL or permission of Instructor.

CIS240DL 3 CREDITS 4 PERIODS

**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 SAIR/GNU LCP and LCA certificates, CompTIA’s Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS126AL, CIS126BL and CIS126CL; or CIS126DL or permission of instructor.

CIS250 3 CREDITS 4 PERIODS

**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: CIS105.

CIS259 3 CREDITS 4 PERIODS

**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: CIS159 or permission of instructor.

CIS263AA 3 CREDITS 4 PERIODS

**Java Programming: Level II**
Intermediate Java programming. Includes features needed to construct object-oriented programming, multithreading, multimedia, files, streams and data structure. Prerequisites: CIS163AA or permission of the instructor.

CIS271DL 3 CREDITS 4 PERIODS

**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: CIS240DL or Permission of Instructor.

CIS276DA 3 CREDITS 4 PERIODS

**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: CIS105 or permission of Instructor.
CIS280 3 CREDITS 4 PERIODS
CIS280AA 1 CREDIT 2 PERIODS

Current Topics in Computing
Critical inquiry of current topics in computing. Application of industry trends to solve problems and/or investigate issues. Prerequisites: None.

CIS290AA 1 CREDIT 6 PERIODS
CIS290AB 2 CREDITS 12 PERIODS
CIS290AC 3 CREDITS 18 PERIODS

Computer Information Systems Internship
Work experience in business or industry. Prerequisites: Permission of instructor.

CIS296WA 1 CREDIT 5 PERIODS
CIS296WB 2 CREDITS 10 PERIODS
CIS296WC 3 CREDITS 15 PERIODS

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.

CNT - Cisco Network Technology
CNT140AA 4 CREDITS 6 PERIODS

Cisco Networking Fundamentals
Introduction to the computer networking field. Covers network terminology and protocols, communication fundamentals in Data networks and the Internet. Includes study of the Open Systems Interconnection (OSI) model, using a top down approach, cabling and cabling tools, basic Cisco router, configuration, Ethernet technologies, Internet Protocol (IP) addressing, and overview of Internet Protocol version 6 (IPv6), basic configuring and testing of the network, and network standards. Preparation for the Cisco Certified Network Associate (CCNA) examination. Prerequisites: None.

CNT150AA 4 CREDITS 6 PERIODS

Cisco Routing Protocols and Concepts
Knowledge of skills to install, configure, customize, maintain and troubleshoot Cisco routers utilizing Advanced Internet Protocol (IP) addressing techniques, Variable Length Subnet Masking (VLSM), distance vectored and Link State dynamic routing protocols, Routing Internet Protocol version 1 (RIPv1) and version 2 (RIPv2), Enhanced Interior Gateway Routing Protocol (EIGRP), Single-area Open Shortest Path First (OSPF), and understanding the structure and behavior of routing tables. Preparation for Cisco certification examination. Prerequisites: CNT140AA or permission of Instructor.

CNT160AA 4 CREDITS 6 PERIODS

Cisco Local Area Networking (LAN) Switching and Wireless
Comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Learn about the hierarchical network design model and how to select devices for each layer. Configure a switch for basic functionality and implement Virtual Local Area Networks (VLAN), VLAN Trunking Protocol (VTP), and Inter-VLAN routing in a converged network. Implementation of Spanning Tree Protocol (STP) in a converged network and a Wireless LAN (WLAN) in a small to medium network. Comprehensive hands-on labs. Preparation for Cisco certification examination. Prerequisites: CNT140AA or permission of instructor.

CNT170AA 4 CREDITS 6 PERIODS

Cisco Accessing the Wide-Area Network (WAN)
Wide-Area Network (WAN) technologies and network services required by converged applications in Enterprise Networks. Cisco Enterprise Composite model (ECM) to introduce integrated network services and selection of appropriate devices and technologies to meet ECM requirements. Implement and configure common data link protocols and apply WAN security concepts, principles of traffic management, access control and addressing services. Detect, troubleshoot, and correct common enterprise network implementation issues. Includes comprehensive hands-on labs. Preparation for Cisco certification examination. Prerequisites: CNT140AA, CNT150AA, and CNT160AA or permission of instructor.
CNT185  4 CREDITS  5 PERIODS
Cisco Network Security
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, firewalls and secure router design, installation, configuration and maintenance, AAA (Authentication, Authorization, and Accounting) and VPN (Virtual Private Network) implementation using firewalls and routers. Preparation for the MCNS (Managing Cisco Network Security) and CSPFA (Cisco Secure PIX Firewall Advanced) exams toward certification as a Cisco Firewall Specialist. Exams also apply to CCSP (Cisco Certified Security Professional) certification. Prerequisites: CNT170, or permission of instructor.

CNT200  4 CREDITS  6 PERIODS
CCNP ROUTE: Implementing Cisco IP Routing
Development of knowledge and skills needed to manage Internet Protocol (IP) traffic and access, understand scalable internetworks configure advanced routing protocols Border Gateway Protocol [BGP], Enhanced Interior Gateway Routing Protocol [EIGRP], Open Shortest Path First [OSPF], as well as Internet Protocol (IPv6), and configuration of secure routing solutions to support branch offices and mobile workers. Comprehensive labs emphasize hands-on learning and practice to reinforce configuration skills. Prerequisites: CNT170AA, or CCNA industry certification, or permission of Instructor. Corequisites: CNT220. Course Notes: Preparation for Cisco Certified Network Professional (CCNP) exam.

CNT202  4 CREDITS  5 PERIODS
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: CNT170 or permission of Instructor.

CNT205  4 CREDITS  6 PERIODS
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: CNT170 or CNT170AA or Certified Cisco Networking Associate (CCNA) certification or permission of Instructor.

CNT206  4 CREDITS  6 PERIODS
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: CNT170, or CNT170AA, or permission of Instructor. Course Notes: Prepares students to earn Cisco Certified Network Associate Wireless (CCNA Wireless) designation by taking the Implementing Cisco Unified Wireless Networks Essentials (IUWNE) exam.

CNT220  4 CREDITS  6 PERIODS
CCNP SWITCH: Implementing Cisco IP Switching
Development of knowledge and skills in building, monitoring, and maintaining switching in converged enterprise networks using advanced and multi-layer switching technologies. Planning, configuring, securing and verifying the implementation of complex enterprise switching solutions. Hands-on learning and practice to reinforce configuration skills. Prerequisites: CNT170AA, or CCNA industry certification, or permission of Instructor. Corequisites: CNT200. Course Notes: Preparation for Cisco Certified Network Professional (CCNP) exam.
COM - Communication

COM 095 3 CREDITS 3 PERIODS
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.

COM 100 3 CREDITS 3 PERIODS
Introduction to Human Communication
Theory and practice of communication skills in public, small group, and interpersonal settings. Includes study of the speech communication process. Prerequisites: None.

COM 110 3 CREDITS 3 PERIODS
Interpersonal Communication
Theory and practice of communication skills which affect day-to-day interactions with other persons. Topics may include using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, developing and maintaining personal and professional relationships. Prerequisites: None.

COM 207 3 CREDITS 3 PERIODS
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: ENG 101 or ENG 107 or equivalent, and COM 100 or equivalent, or permission of instructor. Course Note: Recommended for the communication major.

COM 225 3 CREDITS 3 PERIODS
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: ENG 101 or ENG 107, or equivalent.

COM 230 3 CREDITS 3 PERIODS
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.

COM 250 3 CREDITS 3 PERIODS
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.

COM 259 3 CREDITS 3 PERIODS
Communication in Business and Professions
Interpersonal, group, and public communication in business and professional organizations. Emphasis on oral communication. Prerequisites: ENG 101, or ENG 107, or equivalent.

COM 263 3 CREDITS 3 PERIODS
Elements of Intercultural Communication
Basic concepts, principles, and skills for improving oral communication between persons from different minority, racial, ethnic, and cultural backgrounds. Prerequisites: None.

COM 282AA 1 CREDIT 1 PERIOD
Service-Learning Experience in Communication
Unpaid Service-Learning (SL) experience, completed with approved community partner. Prerequisites: Permission of Instructor. Course Notes: COM 282AA may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.

COM 282AB 2 CREDITS 2 PERIODS
Service-Learning Experience in Communication
Unpaid Service-Learning (SL) experience, completed with approved community partner. Prerequisites: Permission of Instructor. Course Notes: COM 282AB may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.

COM 282AC 3 CREDITS 3 PERIODS
Service-Learning Experience in Communication
Unpaid Service-Learning (SL) experience, completed with approved community partner. Prerequisites: Permission of Instructor. Course Notes: COM 282AC may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.
COV - Covey
COV110 2 CREDITS 2 PERIODS
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.

CPD - Counseling and Personal Development
CPD101 2 CREDITS 2 PERIODS
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.

CPD102AB 2 CREDITS 2 PERIODS
Career Exploration
Designed to assist students make informed career decisions. Focuses on current occupational trends and outlook. Examines 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. Course Notes: CPD102AB may be repeated for a total of six (6) credit hours.

CPD102AF 2 CREDITS 2 PERIODS
Human Sexuality
Enables students to view their own sexuality as a normal aspect of personal development. Examination of masculine and feminine differences and/or conflicts in social roles, emotions, and physical development. Prerequisites: None.

CPD102AH 2 CREDITS 2 PERIODS
Stress Management
Reviews the sources of stress, the physiological effects and the psychological impact of stress on the individual. Provides strategies to reduce stress. Prerequisites: None.

CPD102AJ 2 CREDITS 2 PERIODS
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.

CPD103BA 2 CREDITS 2 PERIODS
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.

CPD103BH 2 CREDITS 2 PERIODS
Male-Female Communication
Designed to provide students with a better understanding of male-female characteristics and how that along with a renewed emphasis on basic communication skills will improve communication between the sexes. Prerequisites: None.

CPD104 3 CREDITS 3 PERIODS
Career and Personal Development
An overview of the process of career/life planning through self-awareness and understanding. Focus on specific skill development such as dealing with change, decision making, goal setting and understanding lifestyles. Provides opportunity to evaluate interests, skills and values. Emphasis on the development of a comprehensive career search process which includes current occupational information, specific tools for researching the job market and acquiring employment. Prerequisites: None.

CPD150 3 CREDITS 3 PERIODS
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.

CPD150AA 1 CREDIT 1 PERIOD
College Orientation & 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.
CPD150AB 1 CREDIT 1 PERIOD
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.

CPD150AC 1 CREDIT 1 PERIOD
Educational and Career Planning
Emphasis on increasing student success through educational and career planning. Prerequisites: None.

CPD160 3 CREDITS 3 PERIODS
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: ENG101, or ENG107, or permission of Instructor.

CRE - Critical Reading
CRE101 3 CREDITS 3 PERIODS
College Critical Reading
Apply critical inquiry skills to varied and challenging reading materials. Includes analysis, synthesis, and evaluation through at least two substantial writing and/or speaking tasks. Prerequisites: (A grade of C or better in ENG101 or ENG107) and (appropriate reading placement test score or grade of C or better in RDG091 or RDG095).

Also see Reading (RDG).

CRW - Creative Writing
CRW150 3 CREDITS 3 PERIODS
Introduction to Creative Writing
Introduces the student to elements and techniques of creative writing in a variety of genres; teaches terminology and concepts needed for successful participation in writing workshops; facilitates writing practice and evaluation; offers individual guidance on the student’s development as a writer. Prerequisites: None.

CRW160 3 CREDITS 3 PERIODS
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.

CRW170 3 CREDITS 3 PERIODS
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.

CRW190 3 CREDITS 3 PERIODS
Introduction to Screenwriting
Overview of screenwriting elements; introduction to screenwriting techniques. Prerequisites: None. CRW150 recommended but not required.

CRW200 1 CREDIT 1 PERIOD
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: CRW150, or permission of Instructor. Course Notes: CRW200 may be repeated for a total of six (6) credits.

CRW201 1 CREDIT 1 PERIOD
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. Course Notes: CRW201 may be repeated for a total of two (2) credit hours.
CRW270 3 CREDITS 3 PERIODS
Intermediate Fiction Writing
Writing original short stories; analysis of works of fiction; concentration on revising students’ fiction through intensive workshopping. Prerequisites: CRW170.

CRW272 3 CREDITS 3 PERIODS
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: CRW150 or permission of instructor.

CSC - Computer Science

CSC100 3 CREDITS 3 PERIODS
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: MAT120 or MAT121 or MAT122.

CSC100AA 3 CREDITS 4 PERIODS
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: MAT120 or MAT121 or MAT122.

CSC110AA 3 CREDITS 4 PERIODS
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: MAT120 or MAT121 or MAT122.

CSC120 4 CREDITS 6 PERIODS
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, ROMs, PLDs, synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: CSC100, or CSC110, or CSC181, or ELE181, or NET181, or equivalent, or permission of instructor.

CSC180AB 4 CREDITS 4 PERIODS
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.

CSC181 3 CREDITS 3 PERIODS
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.

CSC181AA 3 CREDITS 4 PERIODS
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.

CSC182AA 3 CREDITS 4 PERIODS
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.
CSC200AA 3 CREDITS 4 PERIODS
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: CSC110 or (CSC100 or equivalent) and permission of instructor.

CSC210AA 3 CREDITS 4 PERIODS
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: CSC200.

CSC220 4 CREDITS 5 PERIODS
Programming for Computer Engineering
Introduction to procedural programming (C/C++) and hardware description language (VHDL). Prerequisites: ((EEE120 or CSC120) and CSC205) or permission of Instructor.

CSC225 4 CREDITS 5 PERIODS
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: [(CSC100 or CSC110 or CSC200) and CSC/EEE120] or permission of instructor.

CSC230 4 CREDITS 5 PERIODS
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: [(CSC100 or CSC110) and CSC/EEE120], or permission of instructor.

CSC240 3 CREDITS 5 PERIODS
Introduction to Different Programming Languages
Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages. Prerequisites: CSC205 or permission of instructor.

DAH - Dance Humanities

DAH100 3 CREDITS 3 PERIODS
Introduction to Dance
Overview of the field of dance focusing on origins, historical development, and cultural characteristics of the various styles of dance. Prerequisites: None.

DAH190 1 CREDIT 1 PERIOD
Discovering Dance Careers
An overview of the professional opportunities available in dance and dance related fields. Prerequisites: None.

DAH201 3 CREDITS 3 PERIODS
World Dance Studies
Exploration, analysis, synthesis, and evaluation of the role of dance in various cultures around the world. Prerequisites: None. DAH100 strongly suggested but not required.

DAN - Dance

DAN115 1 CREDIT 3 PERIODS
Contemporary Dance Trends
Theory and practice of current social dance trends. Development of movement quality and performance skills. Prerequisites: None. Course Note: DAN115 may be repeated for credit.

DAN115AA 1 CREDIT 3 PERIODS
Contemporary Dance Trends: Hip Hop
Theory and practice of Hip Hop dance. Development of movement quality and performance skills. Prerequisites: None. Course Note: DAN115AA may be repeated for credit.

DAN120AA 1 CREDIT 3 PERIODS
World Dance: African Dance
Theory and practice of African dance. Development of movement quality and performance skills, individually or in a group setting. May include African, Caribbean or Afro-fusion dance. Prerequisites: None. Course Note: DAN120AA may be repeated for credit.
DAN120AB  1 CREDIT  3 PERIODS
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. Course Notes: DAN120AB may be repeated for credit.

DAN120AC  1 CREDIT  3 PERIODS
World Dance: Irish Dance
Theory and practice of Irish Dance. Development of movement quality and performance skills, individually or in a group setting. Prerequisites: None. Course Notes: DAN120AC may be repeated for credit.

DAN120AD  1 CREDIT  3 PERIODS
World Dance: Mexican Folkloric Dance
Theory and practice of Mexican Folkloric dance. Development of movement quality and performance skills, individually with a partner or in a group setting. Prerequisites: None. Course Notes: DAN120AD may be repeated for credit.

DAN120AE  1 CREDIT  3 PERIODS
World Dance: Middle Eastern Dance
Theory and practice of Middle Eastern dance. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AE may be repeated for credit.

DAN120AF  1 CREDIT  3 PERIODS
World Dance: Afro-Brazilian Dance
Theory and practice of Afro-Brazilian dance. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AF may be repeated for credit.

DAN120AG  1 CREDIT  3 PERIODS
World Dance: East Indian Dance
Theory and practice of East Indian dance. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AG may be repeated for credit.

DAN120AH  1 CREDIT  3 PERIODS
World Dance: Native American Dance
Theory and practice of Native American dance. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AH may be repeated for credit.

DAN120AI  1 CREDIT  3 PERIODS
World Dance: European Folk Dance
Theory and practice of European Folk dance. Development of movement quality and performance skills individually or in a group setting. Prerequisites: None. Course Notes: DAN120AI may be repeated for credit.

DAN120AJ  1 CREDIT  3 PERIODS
World Dance: Asian Dance Forms
Theory and practice of Asian Dance Forms. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AJ may be repeated for credit.

DAN120AK  1 CREDIT  3 PERIODS
World Dance: Capoeira
Theory and practice of Capoeira. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AK may be repeated for credit.

DAN125  1 CREDIT  2 PERIODS
Social Dance
Theory and practice of social dance. Development of movement quality and performance skills individually, with a partner or in a group setting. Prerequisites: None. Course Note: DAN125 may be repeated for credit.

DAN125AA  1 CREDIT  2 PERIODS
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. May include Salsa, Mambo, Cha Cha Cha, Merengue, Rumba, East Coast Swing, Lindy Hop, West Coast Swing, Foxtrot, Waltz, American Tango, International Ballroom, or Ballroom Performance. Prerequisites: None. Course Notes: DAN125AA may be repeated for credit.

DAN125AB  1 CREDIT  2 PERIODS
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. May include East Coast Swing, Lindy Hop, West Coast Swing, or Foxtrot. Prerequisites: None. Course Notes: DAN125AB may be repeated for credit.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN125AC</td>
<td>1</td>
<td>2</td>
<td>Social Dance: Latin</td>
<td>Theory and practice of Latin dance. Development of movement quality and performance skills individually, with a partner or in a group setting. May include Salsa, Mambo, Cha Cha Cha, Merengue, Rumba, Bachata, International Latin Ballroom, or Latin Ballroom Performance. Prerequisites: None. Course Notes: DAN125AC may be repeated for credit.</td>
</tr>
<tr>
<td>DAN125AD</td>
<td>1</td>
<td>2</td>
<td>Social Dance: Country</td>
<td>Theory and practice of country dance. Development of movement quality and performance skills individually, with a partner or in a group setting. May include Two-Step, Cha Cha Cha, Swing, West Coast Swing, East Coast Swing, Waltz, Rhythm Two-Step, or Night Club and Line Dance. Prerequisites: None. Course Notes: DAN125AD may be repeated for credit.</td>
</tr>
<tr>
<td>DAN125AE</td>
<td>1</td>
<td>2</td>
<td>Social Dance: Tango</td>
<td>Theory and practice of tango dance. Development of movement quality and performance skills individually, with a partner or in a group setting. May include Argentine Tango, American Tango or International Style Tango. Prerequisites: None. Course Notes: DAN125AE may be repeated for credit.</td>
</tr>
<tr>
<td>DAN129</td>
<td>1</td>
<td>3</td>
<td>Musical Theatre Dance I</td>
<td>Introduction to the theory and practice of musical theatre dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN129 may be repeated for credit.</td>
</tr>
<tr>
<td>DAN131</td>
<td>1</td>
<td>3</td>
<td>Ballet I</td>
<td>Introduction to the theory and practice of ballet at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN131 may be repeated for credit.</td>
</tr>
<tr>
<td>DAN132</td>
<td>1</td>
<td>3</td>
<td>Modern Dance I</td>
<td>Introduction to the theory and practice of modern dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN132 may be repeated for credit.</td>
</tr>
<tr>
<td>DAN133</td>
<td>1</td>
<td>3</td>
<td>Modern Jazz Dance I</td>
<td>Introduction to the theory and practice of modern jazz dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN133 may be repeated for credit.</td>
</tr>
<tr>
<td>DAN134</td>
<td>1</td>
<td>3</td>
<td>Ballet II</td>
<td>Theory and practice of ballet at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN131 or permission of Instructor. Course Notes: DAN134 may be repeated for credit.</td>
</tr>
<tr>
<td>DAN135</td>
<td>1</td>
<td>3</td>
<td>Modern Dance II</td>
<td>Theory and practice of modern dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN132 or permission of Instructor. Course Notes: DAN135 may be repeated for credit.</td>
</tr>
<tr>
<td>DAN136</td>
<td>1</td>
<td>3</td>
<td>Modern Jazz Dance II</td>
<td>Theory and practice of modern jazz dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN133 or permission of Instructor. Course Notes: DAN136 may be repeated for credit.</td>
</tr>
<tr>
<td>DAN138</td>
<td>1</td>
<td>1</td>
<td>Dance Seminar I</td>
<td>Level I scientific evaluation and in-depth discussion of the theory and practice of work done in dance technique class. Prerequisites: None. Corequisites: Any ballet, modern dance, or modern jazz dance technique course.</td>
</tr>
<tr>
<td>DAN140</td>
<td>1</td>
<td>3</td>
<td>Tap Dance I</td>
<td>An introduction to the theory and practice of tap dance. Prerequisites: None. Course Notes: DAN140 may be repeated for credit.</td>
</tr>
<tr>
<td>DAN141</td>
<td>1</td>
<td>3</td>
<td>Dance Workshop</td>
<td>An intensive experience in the process of choreography, performance, and production elements. Prerequisites: None. Course Notes: DAN141 may be repeated for credit.</td>
</tr>
</tbody>
</table>
DAN150 1 CREDIT 3 PERIODS
Dance Performance I
An introduction to the process and practice of dance performance. Prerequisites: None. Course Notes: DAN150 may be repeated for credit.

DAN155 1 CREDIT 3 PERIODS
Dance Performance II
Continued study of the process and practice of dance performance at a level II. Prerequisites: DAN150 or permission of Instructor. Course Notes: DAN155 may be repeated for credit.

DAN164 1 CREDIT 3 PERIODS
Improvisation
An introduction to and an exploration of basic improvisational dance skills. Prerequisites: None. Course Notes: DAN164 may be repeated for credit.

DAN210 3 CREDITS 3 PERIODS
Dance Production I
Introduction to the elements of light, sound, and scenery as they relate to the art of dance. Prerequisites: None.

DAN211 3 CREDITS 3 PERIODS
Dance Production II
Introduction to the theory and practice of makeup and costuming as they relate to dance. Prerequisites: None.

DAN221 2 CREDITS 3 PERIODS
Rhythmic Theory for Dance I
Exploration of the ways in which music, time, pitch, and energy work with the art of dance. Emphasis on reading and writing music notation and performing movement that correlates to the notation and vice versa. Prerequisites: None.

DAN222 2 CREDITS 3 PERIODS
Rhythmic Theory for Dance II
Study at the intermediate level of the ways in which music, time, pitch, and energy work with the art of dance with an emphasis on small group movement projects and their relationship to musical time and structure. Prerequisites: DAN221 or permission of instructor.

DAN231 1 CREDIT 3 PERIODS
Ballet III
Theory and practice of ballet at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN134 or permission of Instructor. Course Notes: DAN231 may be repeated for credit.

DAN232 1 CREDIT 3 PERIODS
Modern Dance III
Theory and practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN135 or permission of Instructor. Course Notes: DAN232 may be repeated for credit.

DAN232AA 2 CREDITS 5 PERIODS
Modern Dance III: Intensive
Theory and intensive practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN135 or permission of Instructor. Course Note: DAN232AA may be repeated for credit.

DAN233 1 CREDIT 3 PERIODS
Modern Jazz Dance III
Theory and practice of modern jazz dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN136 or permission of Instructor. Course Notes: DAN233 may be repeated for credit.

DAN234 1 CREDIT 3 PERIODS
Ballet IV
Theory and practice of ballet at the intermediate level. Development of movement quality and performance skills. Prerequisites: DAN231 or permission of Instructor. Course Notes: DAN234 may be repeated for credit.

DAN235 1 CREDIT 3 PERIODS
Modern Dance IV
Theory and practice of modern dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: DAN232 or permission of Instructor. Course Note: DAN235 may be repeated for credit.
DAN235AA  2 CREDITS  5 PERIODS  
Modern Dance IV: Intensive  
Theory and intensive practice of modern dance at the advanced intermediate level. Development of movement quality and performance skills. Prerequisites: DAN232AA or permission of Instructor. Course Notes: DAN235AA may be repeated for credit.

DAN236  1 CREDIT  3 PERIODS  
Modern Jazz Dance IV  
Theory and practice of modern jazz dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: DAN233 or permission of Instructor. Course Notes: DAN236 may be repeated for credit.

DAN238  1 CREDIT  1 PERIOD  
Dance Seminar II  
Level II scientific evaluation and in-depth discussion of the theory and practice of work done in dance technique class. Prerequisites: DAN138 or permission of instructor. Corequisites: Any ballet, modern dance, or modern jazz dance technique course.

DAN264  3 CREDITS  3 PERIODS  
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.

DAN265  3 CREDITS  3 PERIODS  
Choreography II  
Exploration of the craft of choreography at the intermediate level. Experimentation with the various approaches to contemporary choreography as established by 20th century artists. Prerequisites: DAN264.

DAN280  2 CREDITS  6 PERIODS  
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.

DAN290AA  1 CREDIT  3 PERIODS  
DAN290AB  2 CREDITS  6 PERIODS  
DAN290AC  3 CREDITS  9 PERIODS  
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. Course Notes: DAN290AA may be repeated for a total of three (3) credit hours; DAN290AB may be repeated for a total of six (6) credit hours; DAN290AC may be repeated for a total of nine (9) credit hours.

DAN291AA  1 CREDIT  3 PERIODS  
DAN291AB  2 CREDITS  6 PERIODS  
DAN291AC  3 CREDITS  9 PERIODS  
Dance Conservatory II  
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 intermediate level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills. Prerequisites: (DAN131 and DAN132) or permission of instructor. Course Notes: DAN291AA may be repeated for a total of three (3) credit hours; DAN291AB may be repeated for a total of six (6) credit hours; DAN291AC may be repeated for a total of nine (9) credit hours.

DAN292AA  1 CREDIT  3 PERIODS  
DAN292AB  2 CREDITS  6 PERIODS  
DAN292AC  3 CREDITS  9 PERIODS  
Dance Conservatory III  
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 advanced level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills. Prerequisites: (DAN134 and DAN135) or permission of instructor. Course Notes: DAN292AA may be repeated for a total of three (3) credit hours; DAN292AB may be repeated for a total of six (6) credit hours; DAN292AC may be repeated for a total of nine (9) credit hours.
ECE - Engineering Science

ECE102  2 CREDITS  4 PERIODS
SUN#  EGR 1102
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: Two years of high school algebra or MAT 122 or departmental approval. Corequisites: MAT 151 or MAT 182 or MAT 187.

ECE102AA  2 CREDITS  4 PERIODS
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: Two years of high school algebra or MAT 122 or departmental approval. Corequisites: MAT 151 or MAT 182 or MAT 187.

ECE103  2 CREDITS  4 PERIODS
SUN#  EGR 1102
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: (ECE102 or ECE102AA) and (high school physics, or PHY111, or PHY111AA).

ECE103AB  2 CREDITS  4 PERIODS
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: (ECE102 or ECE102AA) and (high school physics, or PHY111, or PHY111AA).

ECE211  3 CREDITS  5 PERIODS
Engineering Mechanics-Statics
Mathematical treatment of the basic physical principles of statics. Methods of vector algebra and vector calculus. Prerequisites: ECE103, (MAT230 or MAT231), and (PHY115 or PHY121). Corequisites: MAT241.

ECE212  3 CREDITS  5 PERIODS
Engineering Mechanics-Dynamics
Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles. Prerequisites: ECE211 and MAT241.

ECE214  4 CREDITS  6 PERIODS
Engineering Mechanics
Foundations of engineering mechanics, including force systems, resultants, equilibrium of particles and rigid bodies, centroids and centers of mass, area and mass moments of inertia, friction, internal forces in structures, kinematics and kinetics of particles, kinematics and kinetics of rigid bodies, energy and momentum principles. Prerequisites: (ECE103 or ECE103AB), (MAT230 or MAT231), and (PHY115 or PHY121). Corequisites: MAT240 or MAT241.

ECE215  3 CREDITS  5 PERIODS
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: ECE214 or (ECE211 and ECE212) and MAT262.

ECE216  2 CREDITS  2 PERIODS
Computer-Aided Engineering
Introduction to engineering graphics, including tolerancing and fasteners, as well as creation and use of engineering drawings. Prerequisites or Corequisites: ECE214 or (ECE211 and ECE212). Corequisites: ECE216LL.
ECE216LL 1 CREDITS 2 PERIODS
Computer-Aided Engineering Laboratory
Laboratory experience in support of ECE216. Prerequisites or Corequisites: ECE214 or (ECE211 and ECE212). Corequisites: ECE216.

ECH - Early Childhood Education
ECH128 3 CREDITS 3 PERIODS
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.

ECH253 3 CREDITS 3 PERIODS
National Credential Portfolio Development
Portfolio or resource file development, completion, and presentation. Self-assessment and credentialing planning, professional development, writing, and critical learning included. Prerequisites: Permission of Program Director.

ECN - Economics
ECN211 3 CREDITS 3 PERIODS
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.

ECN212 3 CREDITS 3 PERIODS
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.

ECN213 3 CREDITS 3 PERIODS
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.

ECN263 3 CREDITS 3 PERIODS
The Economics of Natural Resources, Population and the Environment
Applies economic analysis to both the causes and possible remedies of the problems of environmental deterioration and natural resource depletion. Includes discussion of the economic problems of urban communities and the relationship between population and economic growth and the depletion of natural resources and environmental pollution. Prerequisites: ECN100, or ECN211, or ECN212.

EDU - Education
EDU220 3 CREDITS 3 PERIODS
Introduction to Serving English Language Learners (ELL)
Rationale for and current educational and legal issues for serving English Language Learners (ELL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), English as a Second Language (ESL) and bilingual. Includes SEI, ESL, and bilingual strategies. Prerequisites: None.

EDU221 3 CREDITS 3 PERIODS
Introduction to Education
Overview of the historical, political, economic, social, and philosophical factors that influence education and make it so complex. Opportunity for students to assess their interest and suitability for teaching. Prerequisites: None. Course Note: Requires minimum of 30 hours of field experience in elementary or secondary classroom environment.
EDU222 3 CREDITS 3 PERIODS
Introduction to the Exceptional Learner
Overview of the exceptional learner, one who differs from the average or normal, with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mildly disabled, severely disabled, emotionally and behaviorally disordered, mentally retarded, and gifted students. Prerequisites: None. Course Note: May include approved school-based practicum.

EDU230 3 CREDITS 3 PERIODS
Cultural Diversity in Education
Examination of the relationship of cultural values to the formation of self-concept and learning styles. Examination of the role of prejudice, stereotyping and cultural incompatibilities in education. Emphasis on teacher preparation (preservice and/or inservice) to offer an equal educational opportunity to students of all cultural groups. Prerequisites: None.

EDU233 3 CREDITS 3 PERIODS
Structured English Immersion (SEI) and English as a Second Language (ESL) Teaching Methods
Methods of planning, developing, and analyzing lesson plans in all content areas using English Language Learners (ELL) Standards. Emphasis on components of curriculum content, teaching strategies, development/evaluation/adaptation of teaching materials, and the role of culture in learning. Examines the alignment of ELL Proficiency Standards to the Arizona Language Arts Academic Standards. Covers multiple assessment techniques, tracking of student progress using the state mandated English language proficiency assessment, and use of assessment results for placement and accommodation. Prerequisites: (EDU220 or EPD220 or EDU225) or permission of Department or Division. Course Notes: Approved school-based practicum required. EDU233 incorporates curricular framework for the 45-clock hour requirement for SEI endorsement through the Arizona Department of Education.

EDU236 3 CREDITS 3 PERIODS
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. Course Note: Requires a 20-hour field experience in a K-12 classroom.

EDU250 3 CREDITS 3 PERIODS
Overview of the Community Colleges
The history, functions, organization and current issues in the community/junior college with emphasis on the Arizona community colleges. Prerequisites: None.

EDU291 3 CREDITS 3 PERIODS
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.

EED - Early Education
EED205 3 CREDITS 3 PERIODS
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.

EED212 3 CREDITS 3 PERIODS
Guidance, Management and the Environment
Principles for guiding young children in early care and education environments. Exploration of guidance, management, and how the environment impacts the lives of young children. Includes observation of classrooms of children ages birth to age eight. Prerequisites: None.
EED215 | 3 CREDITS | 3 PERIODS
---
**Early Learning: Health, Safety, Nutrition and Fitness**
Consideration of public health issues and safety procedures within early childhood settings, serving young children birth to age eight. Overview of nutritional needs and issues of physical fitness and well-being in young children. Includes field experiences. Prerequisites: None.

EED220 | 3 CREDITS | 3 PERIODS
---
**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.

EED261 | 1 CREDIT | 1 PERIOD
---
**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. Course Notes: EED261 may be repeated for a total of six (6) credit hours.

EEE120 | 4 CREDITS | 6 PERIODS
---
**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, ROMs, PLDs, synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: CSC100, or CSC110 or CSC181, or ELE181, or NET181, or equivalent, or permission of instructor.

EEE202 | 5 CREDITS | 7 PERIODS
---
**Circuits and Devices**
Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks. Prerequisites: ECE103 or ECE103AB. Prerequisites or Corequisites: (MAT261 or MAT262) and (PHY116 or PHY131).

EEE220 | 4 CREDITS | 5 PERIODS
---
**Programming for Computer Engineering**
Introduction to procedural programming (C/ C++) and hardware description language (VHDL). Prerequisites: ((EEE120 or CSC120) and CSC205) or permission of Instructor.

EEE230 | 4 CREDITS | 5 PERIODS
---
**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: [(CSC100 or CSC110) and CSC/EEE120], or permission of instructor.

ELE111 | 4 CREDITS | 6 PERIODS
---
**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: ELE105 or MAT120 or MAT121 or MAT122, or equivalent.

ELT100 | 3 CREDITS | 3 PERIODS
---
**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.
ENG - English

ENG071  3 CREDITS  3 PERIODS
Language Skills: Speaking and Writing
Standard English
Emphasis on basic Standard English speaking and writing skills with a focus on essential grammar in developing effective sentence-level speaking and written strategies. Prerequisites: Appropriate writing placement test score or permission of Department or Division.

ENG081  3 CREDITS  3 PERIODS
Basic Writing Skills
Emphasis on preparation for college-level composition with a focus on foundational skills. Establishing effective writing strategies through six or more writing projects comprising at least 1500 words in total. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG071 or ESL077, or permission of Department or Division.

ENG091  3 CREDITS  3 PERIODS
Fundamentals of Writing
Emphasis on preparation for college-level composition with a focus on organizational skills. Developing effective writing strategies through five or more writing projects comprising at least 2000 words in total. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG081 or ESL087, or permission of Department or Division.

ENG101  3 CREDITS  3 PERIODS
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 five or more writing projects comprising at least 3000 words in total. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG091 or ESL097.

ENG210  3 CREDITS  3 PERIODS
Creative Writing
Skills and techniques used in the production of marketable materials for contemporary publications that buy prose fiction, poetry, and expository articles. May be repeated for a total of six (6) credit hours with departmental approval. Prerequisites: ENG102 with a grade of "C", or better, or permission of department.

ENG102  3 CREDITS  3 PERIODS
First-Year Composition
SUN# ENG1102
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 4000 words in total. Prerequisites: Grade of C or better in ENG101.

ENG107  3 CREDITS  3 PERIODS
First-Year Composition for ESL
Description: Equivalent of ENG 101 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 3000 words in total. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG091 or ESL097.

ENG108  3 CREDITS  3 PERIODS
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 4000 words in total. Prerequisites: Grade of C or better in ENG107.

ENG111  3 CREDITS  3 PERIODS
Technical Writing
Analysis, planning, organization, research, and writing of technical reports and oral presentations for specific job-related audiences. Preparation of recommendation and feasibility reports, proposals, and applications of graphics in documents and oral presentations. Prerequisites: ENG101 with a grade of "C", or better, or permission of instructor.
ENG216 3 CREDITS 3 PERIODS
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: ENG102.

ENG217 3 CREDITS 3 PERIODS
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: ENG101 or ENG107 or equivalent.

ENG270 3 CREDITS 3 PERIODS
Workplace Writing
Emphasizes rhetoric and composition with a focus on adapting writing to meet the needs of very specific workplace objectives and audiences. Uses primary and secondary research practices to investigate a variety of workplace discourse communities. Prerequisites: Grade of C or better in ENG102 or ENG108. Course Notes: Develop advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total.

ENH - English Humanities
ENH110 3 CREDITS 3 PERIODS
Introduction to Literature
Introduction to international literature through various forms of literary expression; e.g., poetry, drama, essay, biography, autobiography, 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.

ENH114 3 CREDITS 3 PERIODS
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.

ENH201 3 CREDITS 3 PERIODS
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.

ENH202 3 CREDITS 3 PERIODS
World Literature After the Renaissance
Includes a selection of the world’s literary masterpieces from the Renaissance to modern times. Prerequisites: None.

ENH206 3 CREDITS 3 PERIODS
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.

ENH221 3 CREDITS 3 PERIODS
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: (ENG101 or ENG107) or equivalent.

ENH222 3 CREDITS 3 PERIODS
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: (ENG101 or ENG107) or equivalent.

ENH241 3 CREDITS 3 PERIODS
American Literature Before 1860
Includes literature written prior to 1860 in the United States. Prerequisites: None.

ENH242 3 CREDITS 3 PERIODS
American Literature After 1860
Includes literature written after 1860 in the United States. Prerequisites: None.
ENH251  3 CREDITS  3 PERIODS
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.

ENH253  3 CREDITS  3 PERIODS
Contemporary Global Literature and Film
Characteristics of literary and cinematic mediums. Challenges of adapting literature to film. Global examination of historical, religious, socio-economic, 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: ENG101.

ENH254  3 CREDITS  3 PERIODS
Literature and Film
Presents works of literature and their film versions and analyzes distinguishing techniques of each medium. Prerequisites: ENG101, or ENG107, or equivalent.

ENH255  3 CREDITS  3 PERIODS
Contemporary U.S. Literature and Film
Strengths and weaknesses of literature and film. Challenges of adapting literature to film. Addressing racial, ethnic, gender, class and religious differences between cultures and mediums. Use of narrative in each medium and how it translates various cultural values and assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film. Prerequisites: ENG101.

ENH259  3 CREDITS  3 PERIODS
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.

ENH260  3 CREDITS  3 PERIODS
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.

ENH284  3 CREDITS  3 PERIODS
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.

ENH285  3 CREDITS  3 PERIODS
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.

ENH291  3 CREDITS  3 PERIODS
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.

ENH295  3 CREDITS  3 PERIODS
Banned Books and Censorship
EQS - Equine Science

EQS105 3 CREDITS 3 PERIODS
Principles of Equine Science
Breeds, colors and markings; horse selection; basic conformation; form to function; structures of the hoof; footfall sequences; vision, managed health program; nutrition principles and management practices. Prerequisites: (RDG091 with a C or better or equivalent as indicated by placement), and ((MAT081, or MAT082, or MAT083) with a C or better or equivalent as indicated by placement), and (ENG091 with a C or better or equivalent as indicated by placement).

EQS120 4 CREDITS 4 PERIODS
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: EQS105 or permission of Department or Division.

EQS130 3 CREDITS 3 PERIODS
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: (RDG091 with a C or better or equivalent as indicated by placement), and ((MAT081, or MAT082, or MAT083) with a C or better or equivalent as indicated by placement), and (ENG091 with a C or better or equivalent as indicated by placement).

EQS145 3 CREDITS 6 PERIODS
Basic Horsemanship
Rudimentary knowledge concerning horse handling safety, basic riding equipment, grooming techniques, saddling, bridling, mounting, dismounting, and basic control of the horse at the walk and trot. English or western equipment used. Emphasis on position of rider as it relates to basic control of the horse. Prerequisites: None.

EQS160 3 CREDITS 3 PERIODS
English Horsemanship I
Basic ground work and safety procedures; control of the horse at the walk, trot, and canter; rider position and use of fundamental aids. Prerequisites: None.

EQS165 3 CREDITS 3 PERIODS
Western Horsemanship I
Basic ground work and safety procedures; control of the horse at the walk, jog, and lope; rider position and use of fundamental aids. Prerequisites: None.

EQS215 3 CREDITS 3 PERIODS
Feeding Programs for Production and Performance
Explores the feeding and care of the equine in various stages of production, growth and performance. Identifies specific nutritional needs of each class of equine and formulates feeding programs based on these specific needs. Prerequisites: EQS200 or permission of department.

EQS220 3 CREDITS 3 PERIODS
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: EQS105, EQS120 or permission of department.

EQS225 3 CREDITS 3 PERIODS
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: (EQS105 and EQS120) or department approval.

EQS264 4 CREDITS 4 PERIODS
Equine Management
Hands-on practice sessions devoted to good horsekeeping skills. Includes assessment of vital signs, methods of restraint, intramuscular injections, oral medications, leg wraps, leg sweats and poultice applications, body clipping and fitting sheets and blankets. Prerequisites: (EQS120, EQS140, and EQS162) or permission of Department or Division.
ESL - English as a Second Language

ESL001  6 CREDITS  6 PERIODS
Basic English as a Second Language I
Listening, speaking, reading, and writing in English at a basic level. Focus on survival skills related to life in the United States. Introduction to elementary grammatical patterns. Prerequisites: None.

ESL001BA  2 CREDITS  2 PERIODS
Basic ESL I: Personal Health & Safety
Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to personal health and safety when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: None.

ESL001BB  2 CREDITS  2 PERIODS
Basic ESL I: Services & Employment
Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to services and employment when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: ESL001BA or permission of instructor.

ESL001BC  2 CREDITS  2 PERIODS
Basic ESL I: Shopping & Everyday Life
Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to shopping and everyday life when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: ESL001BB or permission of instructor.

ESL010  3 CREDITS  3 PERIODS
English as a Second Language I: Grammar
First level of English as a Second Language (ESL). Emphasis on basic conversational skills, pronunciation, vocabulary building and grammar. Some reading and sentence level writing. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score.

ESL011  3 CREDITS  3 PERIODS
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. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score or ESL002.

ESL013  1 CREDIT  1 PERIOD
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. Course Notes: ESL013 may be repeated for a maximum of two (2) credits.

ESL020  3 CREDITS  3 PERIODS
English as a Second Language II: Grammar
Second level of English as a Second Language (ESL). Continued emphasis on conversational skills, pronunciation, vocabulary building and grammar with some reading and sentence level writing. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score, or a grade of "P" or "C" or better in ESL010, or (ESL010AA, ESL010AB, and ESL010AC).

ESL021  3 CREDITS  3 PERIODS
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 ESL010 or ESL011 or ESL012 or RDG/ESL016. Course Notes: ESL021 may be repeated for a maximum of six (6) credits.

ESL022  3 CREDITS  3 PERIODS
ESL II-Writing with Oral Practice
Emphasis on basic writing skills, accompanied by recitation of short writings. Sentence patterns and introduction of paragraph writing. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL012, or permission of instructor.
ESL030 3 CREDITS 3 PERIODS
English as a Second Language III: Grammar
Third-level of English as a Second Language (ESL). Emphasis on sentence structure and paragraph building. Extensive grammar study and writing practice. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score, or a grade of "P" or "C" or better in ESL020, or (ESL020AA, ESL020AB, and ESL020AC).

ESL031 3 CREDITS 3 PERIODS
English as a Second Language III - Listening and Speaking
Emphasis on listening and speaking skills related primarily to academic environment. Asking questions, working in small groups, using college resources, informal oral presentation. Prerequisites: Appropriate ESL placement test score or ESL020 or ESL021 or ESL022 or RDG/ESL026. Course Notes: ESL031 may be repeated for a total of six (6) credit hours.

ESL032 3 CREDITS 3 PERIODS
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. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL022, or permission of instructor.

ESL040 3 CREDITS 3 PERIODS
English as a Second Language IV: Grammar
Fourth-level of English as a Second Language (ESL). Continued emphasis on sentence structure and paragraph building. Extensive grammar study and writing practice. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score, or a grade of "P" or "C" or better in ESL030, or (ESL030AA, ESL030AB, and ESL030AC).

ESL041 3 CREDITS 3 PERIODS
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 ESL030 or ESL031 or ESL032 or RDG/ESL036. Course Notes: ESL041 may be repeated for a maximum of six (6) credits.

ESL042 3 CREDITS 3 PERIODS
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. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL032, or permission of instructor.

ESL050 3 CREDITS 3 PERIODS
Review Grammar For ESL
Review of grammatical concepts 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. May be repeated for a total of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of "C" or better in ESL040, or permission of instructor.

ESL051 3 CREDITS 3 PERIODS
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 RDG/ESL026), or permission of instructor. Course Notes: ESL051 may be repeated for a total of six (6) credits.

ESL054 3 CREDITS 3 PERIODS
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 (ESL040AA, ESL040AB, and ESL040AC), or RDG/ESL046, or permission of instructor.
### ESL071 3 CREDITS 3 PERIODS

**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.

### ESL087 3 CREDITS 3 PERIODS

**Basic Writing Skills for English Language Learners**

Emphasis on basic writing skills using Standard English in sentences and short paragraphs incorporating correct, clear, and idiomatic English in preparation for college-level composition. Establish effective writing strategies through six or more writing projects. Prerequisites: Appropriate writing placement test score, or grade of C or better in ESL077 or ENG071, or permission of Department or Division.

### EUT - Electric Utility Technology

#### EUT110 2 CREDITS 2 PERIODS

**Line Work I**

Overview of line work industry including its history, technological developments and current practices. Examines industry equipment and tools. Focuses on safety practices and procedures used in utility line work industry. Prerequisites: None.

#### EUT111 4 CREDITS 4 PERIODS

**Meter Technology I**

Provide students an entry level explanation of the fundamentals of meter technology as it relates to electrical metering. Prerequisites: None. Corequisites: EUT116.

#### EUT112 4 CREDITS 4 PERIODS

**Basic Electricity: AC and DC**

Reviews the basic principles of Alternating Current (AC) and Direct Current (DC) electricity. Examines the structure and function of AC and DC circuits including series, parallel and series-parallel circuits. Includes an overview of electric systems and their applications in the utility industry. Prerequisites: None. Corequisites: EUT110 and EUT115.

#### EUT115 6 CREDITS 18 PERIODS

**Field Training I**

Practice in the basics of climbing and working on utility poles. Focuses on apparatus and equipment, using ropes and rigging equipment, installations of single and double cross arms, pole framing and setting, use of hand line and building single-phase lines. Prerequisites: None. Corequisites: EUT110, EUT112.

#### EUT116 6 CREDITS 18 PERIODS

**Meter Technology Lab I**

Provide students an entry level explanation of the fundamentals of meter technology as it relates to electrical metering. Introduction to basic installation, safety procedures, preventative maintenance, and testing of the self-contained watt-hour meter. Prerequisites: None. Corequisites: EUT111.

#### EUT210 2 CREDITS 2 PERIODS

**Line Work II**

Overview of line work industry including its history, technological developments and current practices. Examines industry equipment and tools. Focuses on hot sticking, tag out and lock out procedures with emphasis on industry safety practices and procedures. Prerequisites: EUT110.

#### EUT211 4 CREDITS 4 PERIODS

**Electrical Apparatus**

Overview of transformers and how they operate. Reviews single and three-phase theory. Focuses on construction and hook-up of single-phase, three-phase, open Y and Delta transformer connections. Presents an overview of surge arresters, including applications and installation. Prerequisites: EUT110, EUT112 and EUT115. Corequisites: EUT215.

#### EUT212 4 CREDITS 4 PERIODS

**Meter Technology II**

Provide students an in depth level of understanding the fundamentals of meter technology as it relates to installation, testing, troubleshooting and maintenance of electrical metering. Prerequisites: EUT110, EUT111, and EUT115. Corequisites: EUT210 and EUT216.
EUT215  6 CREDITS  18 PERIODS
Field Training II
Practice in the installation of electrical lines including transformers, reclosers, and service loops. Teaches rubber gloving, hot sticking techniques, and trenching of underground lines. Practice in the safe set-up and operation of equipment used in the line industry with a focus on the development of entry-level skills as drivers and operators. Includes procedures and practice in pole-top and bucket-truck rescues. Prerequisites: EUT110, EUT112, and EUT115. Corequisites: EUT211.

EUT216  6 CREDITS  18 PERIODS
Meter Technology Lab II
Advanced procedures in the physical aspects of the watt-hour and poly phase meters as used in the test lab. Installation, safety procedures, preventative maintenance, testing, troubleshooting procedures and repairs of the self-contained watt-hour meter. Prerequisites EUT110, EUT111, and EUT116. Corequisites: EUT210 and EUT212.

EXS - Exercise Science
EXS101  3 CREDITS  3 PERIODS
Introduction to Exercise Science, Kinesiology, and Physical Education
Introductory course that will provide the student with a general overview of the disciplines and professions associated with the fields of Exercise Science, Kinesiology and Physical Education. Basic history, philosophy, and theory of each discipline will be examined as well as relevant career potential and options. Prerequisites: None.

EXS112  3 CREDITS  3 PERIODS
Professional Applications of Fitness Principles
Basic principles of fitness for the prospective fitness professional and characteristics of quality communication and fitness leadership. Topics include behavior modification, enhancing motivation components of fitness, fitness assessment, risk stratification, exercise programming and modifications. Prerequisites: None.

EXS125  3 CREDITS  3 PERIODS
Introduction to Exercise Physiology
Principles of exercise science applied to teaching fitness/aerobics. Major factors related to the function of the human body. Emphasis on anatomy/physiology, exercise physiology, and biomechanics. Prerequisites: None. BIO160 recommended but not required.

EXS130  3 CREDITS  4.5 PERIODS
Strength Fitness-Physiological Principles and Training Techniques
Principles and techniques of strength training including strength physiology, performance factors, training recommendations, exercise techniques, and program design and management. Prerequisites: None.

EXS132  3 CREDITS  3 PERIODS
Cardiovascular Fitness: Physiological Principles and Training Techniques
Covers principles and techniques of aerobic training and the application of these to the development of aerobic training programs. Includes instructional techniques and safety, and stresses injury prevention. Prerequisites: None.

EXS145  3 CREDITS  4.5 PERIODS
Guidelines for Exercise Testing and Prescription
Follows the current ACSM guidelines for health appraisal, risk assessment, safety of exercise, exercise testing, and exercise prescription. Prerequisites: None.

EXS214  2 CREDITS  3 PERIODS
Instructional Competency: Flexibility and Mind-Body Exercises
Fundamental methods of instructing and leading fitness activities including flexibility activities. Core competencies identified by professional certification agencies. Prerequisites: None.
EXS215  3 CREDITS  3 PERIODS
Fitness for Life
Lifetime health and skill-related components of
fitness to achieve total wellness. Topics include
health and skill-related components of fitness,
guidelines for health and fitness assessment, exercise
safety and precautions, nutrition, weight control,
cardiovascular risk reduction, psychology of fitness
and wellness, consumerism, and overall self-
management of personal health and lifestyle habits
to achieve the highest potential for well-being.
Prerequisites: None.

EXS216  2 CREDITS  3 PERIODS
Instructional Competency: Muscular Strength
and Conditioning
Fundamental methods of instructing and leading
fitness activities including strength and conditioning
activities. Core competencies identified by
professional certification agencies. Prerequisites:
None.

EXS218  2 CREDITS  3 PERIODS
Instructional Competency: Cardiorespiratory
Exercises and Activities
Fundamental methods of instructing and leading
fitness activities including cardiorespiratory exercises
and activities. Core competencies identified by
professional certification agencies. Prerequisites:
None.

EXS230  3 CREDITS  3 PERIODS
Introduction to Research Methods in Health
and Exercise Science
Introduction to the general nature of research with
specific application to accessing, reading, evaluating,
and reporting research in health and exercise science.
Introduce students to select, data-based literature in
order to engender an appreciation for and ability to
critically evaluate health/exercise science research.
Prerequisites: (ENG101 or ENG107) and MAT082
or permission of Instructor.

EXS239  3 CREDITS  5.4 PERIODS
Practical Applications of Personal Training
Skills and Techniques Internship
Work experience in a fitness or health related
facility. Eighty (80) hours of designated work per
credit. Prerequisites: EXS220, or HES154 within
the past two years, or current CPR certification,
or permission of Department or Division. Course
Notes: CPR certification must be current through
the duration of the internship. EXS239 may be
repeated for a maximum of six (6) credits.

EXS285  3 CREDITS  3 PERIODS
Exercise Program Design and Instruction
Business aspects of the fitness profession such as
program administration, quality assurance, and
effective communication skills for the professional
personal trainer and/or strength and conditioning
coach. Implementation of behavioral strategies,
progression of program planning, and development
of programs for populations with special physical/
medical needs. Designing exercise programs in
an internship setting. Prerequisites: EXS145 or
permission of instructor.

FON - Food and Nutrition
FON100  3 CREDITS  3 PERIODS
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.
FON100AD 1 CREDIT 1 PERIOD
Nutrition Sports and Physical Activity
Principles of nutrition applied to fitness, exercise, and sports. Dietary fundamentals as applied to body fuels, hydration, and other unique needs for exercise and sports. Includes dietary guidelines for weight or endurance training, glycogen loading, the pregame meal, and glycogen recovery. Emphasis on maximizing fitness, performance, and safety. Prerequisites: FON100AA, or equivalent, or permission of instructor.

FON100BD 1 CREDIT 1 PERIOD
Weight Control
Principles of and participation in weight management. Emphasis on low-fat eating, nutrition, exercise, and evaluation of weight management programs. Prerequisites: None.

FON104 1 CREDIT 1 PERIOD
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.

FON105 1 CREDIT 1 PERIOD
Introduction to the Dietetics Profession
Introduction to professions in nutrition and dietetics, including history, current practice, and future trends. Emphasis on the integration of nutrition and dietetics within health care systems and public policy. Highlights professional ethics, standards of practice, education requirements and areas of practice. Prerequisites: None.

FON125 1 CREDIT 1 PERIOD
Introduction to Professions in Nutrition and Dietetics
Introduction to professions in nutrition and dietetics, including history, current practice, and future trends. Emphasis on the integration of nutrition and dietetics within health care systems and public policy. Highlights professional ethics, standards of practice, education requirements and areas of practice. Prerequisites: None.

FON137 2 CREDITS 2 PERIODS
Nutrition Supplements
Discussion of supplements and their effects on metabolic enhancement. The course will be divided into three major sections: anabolic, catabolic, and energy-producing agents. Addresses current supplements on the market in order to advise the general public. Prerequisites: FON100 or permission of instructor.

FON140BD 1 CREDIT 1 PERIOD
Weight Control
Principles of and participation in weight management. Emphasis on low-fat eating, nutrition, exercise, and evaluation of weight management programs. Prerequisites: None.

FON142AB 3 CREDITS 5 PERIODS
Applied Food Principles
Exploration and applications of scientific principles involved in food preparation; experiences with basic cooking methods; emphasis on the rationale of cooking techniques. Prerequisites: None.

FON143 3 CREDITS 3 PERIODS
Food and Culture
Understanding diet in the context of culture. Historical, religious, and socio-cultural 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 and serving of foods from many cultures. Prerequisites: None.

FON207 3 CREDITS 3 PERIODS
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: MAT092 or equivalent, or satisfactory score on district placement exam.

FON225 3 CREDITS 3 PERIODS
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: MAT092 or equivalent, or satisfactory score on district placement exam.
FON230 3 CREDITS 3 PERIODS

Nutrition for Special Populations
Managing and understanding the nutrition needs of special populations. These populations include people who are diagnosed with heart disease, diabetes, women who are pregnant, children who are suffering from obesity, and senior adults. Prerequisites: FON100 or permission of instructor.

FON241 3 CREDITS 3 PERIODS

Principles of Human Nutrition
Scientific principles of human nutrition. Emphasis on health promotion and concepts for conveying accurate nutrition information in a professional setting. Addresses therapeutic nutrition principles for treatment of common health conditions. Includes exploration of food sources of nutrients, basic metabolism of nutrients in the human body, relationship between diet and other lifestyle factors, use of supplements, current recommendations for food selection throughout the life cycle, and use of nutrition tools for planning food intake or assessment of nutritional status. Prerequisites or Corequisites: One year high school chemistry with grade of C or better, or CHM130 and CHM130LL, or approval of instructor.

FON241LL 1 CREDIT 3 PERIODS

Principles of Human Nutrition Laboratory
Self-evaluative laboratory experience to complement FON241, Principles of Human Nutrition using anthropometric, biochemical, and dietary analysis. Includes the use of qualitative and quantitative methodology to determine nutritional status and evaluate methodological applications. Prerequisites or Corequisites: FON241.

FON242 3 CREDITS 3 PERIODS

Introduction to Medical Nutrition Therapy
Introduction to fundamental principles of medical nutrition therapy. Emphasis on development and analysis of diets that fit an individual’s personal and therapeutic needs. Includes strategies to promote dietary adherence and the development of educational programs for a diverse adult population. Prerequisites: FON241.

FON244AA 2 CREDITS 2 PERIODS

Practicum I: Food Service Management Lecture
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. Competencies in the classroom met prior to their application in supervised practice settings during the practicum lab (FON245AB). Prerequisites: FON125, FON242, HCE103 or equivalent, and MAT092 or equivalent, or satisfactory score on district placement exam. Corequisite: FON245AB.

FON244AB 2.5 CREDITS 10 PERIODS

Practicum I: Food Service Management Lab
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: FON104, FON125, FON142AB, FON207 and FON242. Corequisites: FON244AA.

FON245AA 2 CREDITS 2 PERIODS

Practicum II: Medical Nutrition Therapy
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: FON125, FON242, HCE103 or equivalent, and MAT092 or equivalent, or satisfactory score on district placement exam. Corequisites: FON245AB.
FON245AB  2.5 CREDITS  10 PERIODS

Practicum II: Medical Nutrition Therapy Lab
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: FON125, FON242, HCC145AA, and MAT092 or equivalent, or satisfactory score on district placement exam. Corequisites: FON245AA.

FON246AA  2 CREDITS  2 PERIODS

Practicum III: Community Nutrition Lecture
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. Competencies in the classroom met prior to their application in supervised practice settings during the practicum lab (FON246AB). Prerequisites: FON125 and FON242. Corequisite: FON246AB.

FON246AB  2 CREDITS  10 PERIODS

Practicum III: Community Nutrition Lab
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: FON125 and FON242. Corequisite: FON246AA.

FON247  3 CREDITS  3 PERIODS

Weight Management Theory
Comprehensive study of genetic, physiological, psychological, metabolic, and environmental influences on body weight. In-depth study of the theories of body weight with emphasis on distinguishing between behavioral and biological approaches. Focus on discovering successful healthful long-term weight management strategies. Prerequisites: FON100 or FON241 or permission of instructor.

FRE - French

FRE101  4 CREDITS  4 PERIODS

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.

FRE102  4 CREDITS  4 PERIODS

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: FRE101 or equivalent.

FRE201  4 CREDITS  4 PERIODS

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: FRE102 with a grade of "C" or better, two years of high school French with an average of "C" or better, or departmental approval.

FRE202  4 CREDITS  4 PERIODS

Intermediate French II
Review of grammar, continued development of French language skills, and continued study of the French culture. Prerequisites: FRE201 with a grade of "C" or better or three years of high school French with an average of "C" or better.
FSC - Fire Science Technology

EMT/FSC104 9 CREDITS 11.4 PERIODS
Emergency Medical Technology
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, and medical operations. IV monitoring, Sudden Infant Death Syndrome (SIDS), patient-assisted medication administration, automated external defibrillators (AEDs), and blood-glucose monitoring. Includes participation in an eight-hour rotation consisting of patient assessment through clinical, vehicular, and or scenario-based education at a local emergency department outside normal class hours. Requires personal pocket mask, stethoscope, pen light, and trauma scissors. Prerequisites: Must be at least 18 years of age prior to applying to the BLS (Basic Life Support) Training Program per Arizona Revised Statutes, and must have a current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer. Minimum ninth grade level reading proficiency on the Nelson-Denney Examination or appropriate Reading course placement score. Proof of: TB testing or chest x-ray with a negative result within 6 months prior to registration; Immunity to rubella (German measles) and rubeola.

FSC108 3 CREDITS 3 PERIODS
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.

FSC113 3 CREDITS 3 PERIODS
Introduction to Fire Suppression
Characteristics and behavior of fire, fire hazard properties of ordinary materials, extinguishing agents, fire suppression organization and equipment, basic fire fighting tactics, and public relations as affected by fire suppression. Prerequisites: None.

FSC117 3 CREDITS 3 PERIODS
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.

FSC118 3 CREDITS 3 PERIODS
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.

FSC119 3 CREDITS 3 PERIODS
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.

FSC134 3 CREDITS 4.6 PERIODS
Fitness & Conditioning/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.
FSC148  3 CREDITS  3 PERIODS
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.

FSC202  3 CREDITS  3 PERIODS
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.

FSC204  3 CREDITS  3 PERIODS
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: FSC113, or permission of instructor, or equivalent.

FSC208  3 CREDITS  3 PERIODS
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: FSC113, or permission of instructor, or equivalent.

FSC215  3 CREDITS  3 PERIODS
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.

GBS131  3 CREDITS  3 PERIODS
Business Calculations
Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups. Prerequisites: None.

GBS132  3 CREDITS  3 PERIODS
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.

GBS151  3 CREDITS  3 PERIODS
Introduction to Business
Characteristics and activities of current local, national, and international business. An overview of economics, marketing, management and finance. Prerequisites: None.

GBS205  3 CREDITS  3 PERIODS
Legal, Ethical, and Regulatory Issues in Business
Legal theories, ethical issues and regulatory climate affecting business policies and decisions. Prerequisites: None.

GBS220  3 CREDITS  3 PERIODS
Quantitative Methods in Business
Business applications of quantitative optimization methods in operations management decisions. Prerequisites: (Grade of "C" or better in MAT150, or MAT151, or MAT152) or equivalent, or satisfactory score on district placement exam.

GBS221  3 CREDITS  3 PERIODS
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: Grade of C or better in GBS220.
GBS233 3 CREDITS 3 PERIODS

**Business Communication**

Internal and external business communications, including verbal and nonverbal techniques.

Prerequisites: ENG101 or ENG107 with grade of "C" or better, or permission of department/division.

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GLG - Geology

GLG101 3 CREDITS 3 PERIODS

**Introduction to Geology I - Physical Lecture**

A study of the kind and arrangement of materials composing the earth’s crust and the geological processes at work on and within the earth’s surface.

Prerequisites: None.

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GLG102 3 CREDITS 3 PERIODS

**Introduction to Geology II - Historical Lecture**

Outlines the origin and history of the earth with emphasis on North America--its dynamic, geographic, and climatic changes; animals and plants of the past; the evolution of life.

Prerequisites: None.

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GLG103 1 CREDIT 3 PERIODS

**Introduction to Geology I - Physical Lab**

May accompany GLG101. Study of common rock-forming minerals, rocks, and maps.

Prerequisites: None.

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GLG104 1 CREDIT 3 PERIODS

**Introduction to Geology II - Historical Lab**

May accompany GLG102. Study of geological structures and rocks, fossils, and geologic maps. May require field trips.

Prerequisites: None.

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GLG111 1 CREDIT 3 PERIODS

**Geological Disasters and the Environment Lab**


Prerequisites: None.

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GLG229AA 1 CREDIT 5 PERIODS

**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.

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GLG230AA 1 CREDIT 5 PERIODS

**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.

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GPH - Physical Geography

GPH111 4 CREDITS 6 PERIODS

**Introduction to Physical Geography**

Spatial and functional relationships among climates, landforms, soils, water, and plants.

Prerequisites: None.

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GPH212 3 CREDITS 3 PERIODS

**Introduction to Meteorology I**

Atmospheric processes and elements. General and local circulation, heat exchange and atmospheric moisture.

Prerequisites: None.

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GPH214 1 CREDIT 3 PERIODS

**Introduction to Meteorology Laboratory I**

Basic meteorological and climatological measurements.

Prerequisites: None. Corequisites: GPH212.
HCC - Health Core Curriculum

HCC130 3 CREDITS 3 PERIODS
Fundamentals in Health Care Delivery
Overview of current 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 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.

HCC145AA 1 CREDIT 1 PERIOD
Medical Terminology for Health Care Workers 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 terms using basic word parts. Selected medical abbreviations and symbols and term spelling. Prerequisites: None.

HCC145AB 1 CREDIT 1 PERIOD
Medical Terminology for Health Care Workers II
Additional 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 terms using standard word parts. Common abbreviations and symbols and term spelling. Prerequisites: HCC145AA.

HCR - Health Care Related

HCR210 3 CREDITS 3 PERIODS
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: ENG102.

HCR220 3 CREDITS 3 PERIODS
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: Grade of "C" or better in ENG102 or ENG108.

HCR230 3 CREDITS 3 PERIODS
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.

HCR240 4 CREDITS 4 PERIODS
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: BIO202 or BIO205 or equivalent.

HES - Health Science

HES100 3 CREDITS 3 PERIODS
Healthful Living
Health and wellness and their application to an optimal life style. Explores current topics of interest such as stress management, nutrition, fitness, and environmental health. Evaluates common risk factors associated with modern lifestyles. Prerequisites: None.
HES210  3 CREDITS  3 PERIODS  
Cultural Aspects of Health and Illness  
Examines how culture influences health and illness, health care practices, barriers to health care, interactions with health care professionals, and health disparities in the U.S. Prerequisites: None.

HES271  3 CREDITS  3 PERIODS  
Prevention and Treatment of Athletic Injuries  
Prevention and care of athletic injuries, emphasizing use of modern training techniques and support materials. Utilization of preventive taping, strapping, bandaging, cardiopulmonary resuscitation, massage, cryotherapy, hydrotherapy, and practical application of muscle reconditioning. Prerequisites: None.

HIS - History  

HIS103  3 CREDITS  3 PERIODS  
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.

HIS104  3 CREDITS  3 PERIODS  
United States History 1865 to Present  
The political, economic, and social development of United States from 1865 to the present time. Prerequisites: None.

HIS106  3 CREDITS  3 PERIODS  
Southwest History  
Survey of Hispanic, Anglo, African-American and Native cultures of the peoples who have settled the American Southwest. Emphasis on cattle, mining, fur trade and transportation industries and role development of the region. Prerequisites: None.

HIS108  3 CREDITS  3 PERIODS  
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.

HIS109  3 CREDITS  3 PERIODS  
Mexican-American History and Culture  
Examination of origins and development of Spanish-American and Mexican-American peoples and their contribution to culture, history and development of United States. Emphasis on Mexican-American War and its impact on educational, social, and economic conditions of the Mexican-Americans of the southwest. Prerequisites: None.

HIS110  3 CREDITS  3 PERIODS  
World History to 1500  
Survey of the economic, social, cultural, and political elements of world history from the beginning of human civilization to 1500. Prerequisites: None.

HIS111  3 CREDITS  3 PERIODS  
World History 1500 to the Present  
Survey of the economic, social, cultural, and political elements of world history from 1500 to the present. Prerequisites: None.

HIS113  3 CREDITS  3 PERIODS  
History of Eastern Civilizations to 1850  
An examination of the characteristics and development of civilizations, religions and philosophies of the Middle East, India, Far East, and Southeast Asia. From ancient times to the mid-nineteenth century. Prerequisites: None.

HIS140  3 CREDITS  3 PERIODS  
American Indian History  
Survey of American Indian history with emphasis on the last 200 years including developments in the 20th century. Focuses on selected groups such as the Cherokee, Iroquois Confederation, Navajo, Sioux and Indians of the Southwest in relation to cultural, economic, political and social continuity and changes. Topics include development and influence of federal policies, past and present issues confronting Native Americans and how Native American individuals and communities maintain their identities as they confront social changes. Prerequisites: None.

HIS201  3 CREDITS  3 PERIODS  
History of Women in America  
Introduction to women’s history from the colonial period to the present. Deals chronologically with changes and developments which have influenced the lives of women. Prerequisites: None.
HIS242 3 CREDITS 3 PERIODS
Latin American Civilization in the Post-Colonial Period
A survey of the political, economic, and social forces which molded Latin American civilization in the period of the development of Republics. Prerequisites: None.

HIS273 3 CREDITS 3 PERIODS
US Experience in Vietnam 1945 - 1975
Survey of the US experience in Vietnam, 1945-1975, in view of political, economic, and social forces of the Cold War. Prerequisites: None.

HIS277 3 CREDITS 3 PERIODS
The Modern Middle East
Survey of the political and economic development of the Middle East since 1500. Emphasis on the decline of the Moslem empire, the resurgence of contemporary Pan-Arabian, the Palestinian-Israeli question and the impact of oil production on the region and the rest of the world. Prerequisites: None.

HUM - Humanities
HUM101 3 CREDITS 3 PERIODS
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.

HUM107 3 CREDITS 3 PERIODS
Humanities Through the Arts
Introduction to humanities including film, drama, music, literature, painting, sculpture, and architecture. Prerequisites: None.

HUM108 3 CREDITS 3 PERIODS
Contemporary Humanities
An exploration of human expression in contemporary arts and sciences. Prerequisites: None.

HUM120 3 CREDITS 3 PERIODS
Cultural Viewpoints in the Arts
Introduction to the influence of culture and ethnicity on the artist, including factors such as race, religion, gender, class, sexual preference, age, and region. Lecture and discussion on various art forms, including literature, visual arts, music, dance, film, and theater. Prerequisites: None.

HUM201 3 CREDITS 3 PERIODS
Humanities: Universal Themes
Origins and creation myths, the materials world, and the spiritual world as themes in the humanities. Prerequisites: None.

HUM205 3 CREDITS 3 PERIODS
Introduction to Cinema
Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.

HUM209 3 CREDITS 3 PERIODS
Women and Films
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None

HUM250 3 CREDITS 3 PERIODS
Ideas and Values in the Humanities
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: ENG101.

HUM251 3 CREDITS 3 PERIODS
Ideas and Values in the Humanities
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: ENG101.
IBS - International Business

IBS101 3 CREDITS 3 PERIODS
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.

IBS109 3 CREDITS 3 PERIODS
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.

ITS - Information Technology Security

ITS100 1 CREDIT 2 PERIODS
Information Security Awareness
Computer and network security topics, including network communication. Includes security policy, implementation of basic security measures, the importance of backups and the value of protecting intellectual property. Real-life examples and practical projects to reinforce the need for computer security. Prerequisites: None.

ITS110 4 CREDITS 5 PERIODS
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 MS Windows and Linux Administration. Prerequisites: ITS110 or permission of instructor.

ITS120 3 CREDITS 3 PERIODS
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: ITS110 or permission of instructor.

ITS130 3 CREDITS 4 PERIODS
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: ITS110 or permission of instructor.

ITS140 3 CREDITS 4 PERIODS
Network Security
Examination of techniques used to defend network security. Design and implementation of devices including firewalls and Intrusion Detection Systems (IDSs) and Virtual Private Networks (VPNs). Risk analysis and security policies methodologies. 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: ITS110 and ITS130 or permission of instructor.
ITS150  3 CREDITS  4 PERIODS
Building Trusted Networks in the Enterprise
Design of a trusted network to secure electronic transactions. Techniques to secure electronic transactions to include cryptography, digital signatures, digital certificates and strong authentication. Computer forensics techniques and legislative issues. 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: ITS110, ITS130 and ITS140, or permission of instructor.

ITS170  1 CREDIT  1 PERIOD
Information Security Policy Development
Components required to plan, develop and write information security policies. Policy development processes and the relationship between security and policy directions. Emphasis on writing effective information security policies in a governmental or corporate setting. Prerequisites: None.

ITS172  1 CREDIT  2 PERIODS
Viruses and Other Malicious Software
Spyware, adware, viruses, worms and trojans. Available tools for identifying and removing malicious software. Techniques for analyzing the behavior of malicious software. Methods of infection and prevention of infection. Prerequisites: None.

ITS231  1 CREDIT  2 PERIODS
Router Hardening
The role of routers in communication networks. Device specific threats and vulnerabilities. Strategies to harden routers to protect networks. Includes standards-based and proprietary protocols. Prerequisites: CNT150 or permission of the instructor.

JPN - Japanese
JPN101  5 CREDITS  6 PERIODS
Elementary Japanese I
Basic grammar, pronunciation, and vocabulary of Japanese. Study of Japanese culture. Development of speaking, listening, reading and writing skills. Prerequisites: None.

JPN102  5 CREDITS  6 PERIODS
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: JPN101 or permission of Department or Division.

JRN - Journalism
JRN201  3 CREDITS  5 PERIODS
News Writing
Writing news for the print media. Composing at the computer keyboard. Associated Press editing style, writing skills, and organizational structure for news. Prerequisites: ENG101, ENG107, or equivalent.

MAT - Mathematics
MAT065  1 CREDIT  1 PERIOD
Graphing Calculator
Computations, graphing, matrices, and elementary programming using a graphing calculator. Prerequisites: None.

MAT081  4 CREDITS  4 PERIODS
Basic Arithmetic
Primary emphasis placed on fundamental operations with whole numbers, fractions, decimals, integers, and rational numbers; proportions, and percentages. Other topics include representations of data, geometric figures, and measurement. Prerequisites: Satisfactory score on district placement exam. Course Notes: Students may receive credit for only one of the following: MAT081, MAT082, or MAT083.

MAT082  3 CREDITS  3 PERIODS
Basic Arithmetic
Primary emphasis placed on fundamental operations with whole numbers, fractions, decimals, integers, and rational numbers; proportions, and percentages. Other topics include representations of data, geometric figures, and measurement. Prerequisites: Satisfactory score on district placement exam. Course Notes: Students may receive credit for only one of the following: MAT081, MAT082, or MAT083.
MAT089 1 CREDIT 1 PERIOD
Basic Mathematics for Nursing
Primary emphasis placed on fundamental operations with whole numbers, fractions, decimals, integers, rational numbers and percentages. Other topics include solving linear equations and unit analysis. Prerequisites: None.

MAT091 4 CREDITS 4 PERIODS
Introductory Algebra
Linear behavior; linear equations and inequalities in one and two variables; graphs; systems of equations in two variables; function notation, graphs, and data tables; operations on polynomials; properties of exponents; applications. Prerequisites: Grade of "C" or better in MAT082, or MAT102, or equivalent or satisfactory score on District placement exam.
Course Note: May receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093.

MAT092 3 CREDITS 3 PERIODS
Introductory Algebra
Linear behavior; linear equations and inequalities in one and two variables; graphs; systems of equations in two variables; function notation, graphs, and data tables; operations on polynomials; properties of exponents; applications. Prerequisites: Grade of "C" or better in MAT082, or MAT102, or equivalent, or satisfactory score on District Placement exam.
Course Note: May receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093.

MAT102 3 CREDITS 3 PERIODS
Mathematical Concepts/Applications
A problem solving approach to mathematics as it applies to life and the world of work. Development, demonstration, and communication of mathematical concepts and formulas that relate to measurement, percentage, statistics, and geometry. Prerequisites: Grade of "C" or better in MAT082, or equivalent, or satisfactory score on District placement exam.

MAT108AA 1 CREDIT 1 PERIOD
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: MAT072, or MAT081, or MAT082, or MAT083, or MAT090, or MAT091, or MAT092, or MAT093, or MAT120, or MAT121, or MAT122, or MAT140, or MAT141, or MAT142, or MAT150, or MAT151, or MAT152, or permission of Department Chair.
Course Notes: MAT108AA may be repeated for a total of ten (10) credit hours.

MAT121 4 CREDITS 4 PERIODS
Intermediate Algebra
Quadratic, rational, radical, exponential, and logarithmic functions and equations; graphs of quadratic, exponential, and logarithmic functions; equations quadratic in form; operations on rational expressions, radical expressions, and complex numbers; rational exponents; applications. Prerequisites: Grade of "C" or better in MAT090, MAT091, MAT092, MAT093, or equivalent, or a satisfactory score on the District placement exam.
Course Note: May receive credit for only one of the following: MAT120, MAT121, or MAT122.

MAT122 3 CREDITS 3 PERIODS
Intermediate Algebra
Quadratic, rational, radical, exponential, and logarithmic functions and equations; graphs of quadratic, exponential, and logarithmic functions; equations quadratic in form; operations on rational expressions, radical expressions, and complex numbers; rational exponents; applications. Prerequisites: Grade of "B" or better in MAT090, MAT091, MAT092, MAT093, or equivalent, or a satisfactory score on the District placement exam.
Course Note: May receive credit for only one of the following: MAT120, MAT121, or MAT122.
MAT141 4 CREDITS 4 PERIODS
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 set theory, probability, statistics, finance, and geometry. Prerequisites: Grade of "C" or better in MAT120, or MAT121, or MAT122 or equivalent, or satisfactory score on District placement exam. Course Note: Appropriate for the student whose major does not require college algebra or precalculus.

MAT142 3 CREDITS 3 PERIODS
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 set theory, probability, statistics, finance, and geometry. Prerequisites: Grade of "C" or better in MAT120, or MAT121, or MAT122 or equivalent, or satisfactory score on District placement exam.

MAT151 4 CREDITS 4 PERIODS
College Algebra/Functions
Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics. Prerequisites: Grade of "C" or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on District placement exam.

MAT152 3 CREDITS 3 PERIODS
College Algebra/Functions
Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics. Prerequisites: Grade of "B" or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on District placement exam. Course Note: May receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187.

MAT156 3 CREDITS 3 PERIODS
Mathematics for Elementary Teachers I
Focuses on numbers and operations. Algebraic reasoning and problem solving integrated throughout the course. Prerequisites: Grade of "C" or better in MAT142 or MAT150 or MAT151 or MAT152 or equivalent, or satisfactory score on District placement exam.

MAT157 3 CREDITS 3 PERIODS
Mathematics for Elementary Teachers II
Focuses on measurement, geometry, probability and data analysis. Appropriate technologies, problem solving, reasoning, and proof are integrated throughout the course. Prerequisite: MAT156 or equivalent.

MAT182 3 CREDITS 3 PERIODS
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: Grade of "C" or better in MAT150, or MAT151, or MAT152, or equivalent, or concurrent registration in MAT150, or MAT151, MAT152, or satisfactory score on District placement exam.

MAT187 5 CREDITS 5 PERIODS
Precalculus
A precalculus course combining topics from college algebra and trigonometry. Preparation for analytic geometry and calculus. May receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187. Prerequisites: Grade of "B" or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on a placement test. Course Notes: Strongly recommended that students have some knowledge of trigonometry.

MAT206 3 CREDITS 3 PERIODS
Elements of Statistics
Basic concepts and applications of statistics, including data description, estimation and hypothesis tests. Prerequisites: (A grade of "C" or better in MAT140 or MAT141 or MAT142) or (A grade of "C" or better in MAT150 or MAT151 or MAT152) or equivalent, or satisfactory score on District placement exam.
MAT212  3 CREDITS  3 PERIODS
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: Grade of "C" or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.

MAT213  4 CREDITS  4 PERIODS
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: Grade of "C" or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.

MAT217  3 CREDITS  3 PERIODS
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: Grade of C or better in MAT212 or MAT213.

MAT218  4 CREDITS  4 PERIODS
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: Grade of C or better in MAT212 or MAT213.

MAT220  5 CREDITS  5 PERIODS
SUN# MAT220
Calculus with Analytic Geometry I
Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: Grade of "C" or better in [MAT182 and (MAT150, MAT151 or MAT152)], or MAT187, or appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT220 or MAT221.

MAT221  4 CREDITS  4 PERIODS
Calculus with Analytic Geometry I
Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: Grade of “C” or better in [MAT182 and (MAT150, MAT151 or MAT152)], or MAT187, or appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT220 or MAT221.

MAT225  3 CREDITS  3 PERIODS
Elementary Linear Algebra
Introduction to matrices, systems of linear equations, determinants, vector spaces, linear transformations and eigenvalues. Emphasizes the development of computational skills. Prerequisites: Grade of "C" or better in MAT212 or MAT220, or MAT221, or equivalent.

MAT227  3 CREDITS  3 PERIODS
Discrete Mathematical Structures
Introduction to lattices, graphs, Boolean algebras, and groups. Emphasis on topics relevant to computer science. Prerequisites: Grade of "C" or better in CSC100 and (MAT220, or MAT221, or equivalent) or permission of instructor.

MAT230  5 CREDITS  5 PERIODS
SUN# MAT2230
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: Grade of “C” or better in MAT220 or MAT221 or equivalent. Course Note: Student may receive credit for only one of the following: MAT230 or MAT231.

MAT231  4 CREDITS  4 PERIODS
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: Grade of "C" or better in MAT220, or MAT221, or equivalent. Course Notes: MAT231 students may receive credit for only one of the following: MAT230 or MAT231.
MAT240 5 CREDITS 5 PERIODS
Calculus with Analytic Geometry III
Multivariate calculus including vectors, vector-valued functions, partial differentiation, multiple integration, and an introduction to vector fields. Prerequisites: Grade of "C" or better in MAT230 or MAT231. Course Note: Student may receive credit for only one of the following: MAT240 or MAT241.

MAT241 4 CREDITS 4 PERIODS
Calculus with Analytic Geometry III
Multivariate calculus including vectors, vector-valued functions, partial differentiation, multiple integration and an introduction to vector fields. Prerequisites: Grade of "C" or better in MAT230 or MAT231. Course Note: Student may receive credit for only one of the following: MAT240 or MAT241.

MAT276 4 CREDITS 4 PERIODS
Modern Differential Equations
Introduces differential equations, theoretical and practical solution techniques with applications. Problem solving using MATLAB. Prerequisites: Grade of "C" or better in MAT230, or MAT231, or permission of Department or Division. Course Notes: Students may receive credit for only one of the following: MAT276 or MAT277.

MAT282AA 1 CREDIT 1 PERIOD
MAT282AB 2 CREDITS 2 PERIODS
MAT282AC 3 CREDITS 3 PERIODS
Volunteerism for Mathematics: A Service Learning Experience
Service learning field experience within private/public agencies, educational institutions, and citizen volunteer groups. Prerequisites: Permission of instructor. Course Note: May be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.

MGT - Management

MGT101 3 CREDITS 3 PERIODS
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.

MGT175 3 CREDITS 3 PERIODS
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.

MGT229 3 CREDITS 3 PERIODS
Management and Leadership I
Covers management concepts and applications for business, industry, and government organizations. Prerequisites: None.

MGT251 3 CREDITS 3 PERIODS
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.

MGT253 3 CREDITS 3 PERIODS
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.

MGT276 3 CREDITS 3 PERIODS
Personnel/Human Resources Management
Human resource planning, staffing, training, compensating, and appraising employees in labor management relationships. Prerequisites: None. MGT101, or MGT175, or MGT229 suggested but not required.
MHL - Music: History/Literature

MHL140 3 CREDITS 3 PERIODS
Survey of Music History
Study of composers, compositions, styles, and periods in music history. Prerequisites: None.

MHL143 3 CREDITS 3 PERIODS
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.

MHL145 3 CREDITS 3 PERIODS
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.

MHL146 3 CREDITS 3 PERIODS
Survey of Broadway Musicals
Survey of Broadway musicals traced from their origins to the present viewed in their cultural, political, and socio-economic contexts. Emphasis on stylistic periods, composers, lyricists, directors, and choreographers. Prerequisites: None.

MHL153 3 CREDITS 3 PERIODS
Rock Music and Culture
History of Rock music and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: None.

MHL155 3 CREDITS 3 PERIODS
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.

MHL156 3 CREDITS 3 PERIODS
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.

MHL241 3 CREDITS 3 PERIODS
Music History and Literature to 1750
In-depth study of music history from the primitive era through the Baroque period. Prerequisites or Corequisites: MTC155 and MTC156, or permission of Instructor.

MHL242 3 CREDITS 3 PERIODS
Music History and Literature 1750 to Present
In-depth study of music history from the Classical period through the Contemporary period. Prerequisites: MHL241 or permission of instructor.

MKT - Marketing

MKT263 3 CREDITS 3 PERIODS
Advertising Principles
Introduces the advertising function within business, including media study, creative strategies, and advertising campaigns. Prerequisites: None. MKT271 suggested, but not required.

MKT268 3 CREDITS 3 PERIODS
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.

MKT271 3 CREDITS 3 PERIODS
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.
MST - Microsoft Technology

MST141 3 CREDITS 4 PERIODS
Enterprise Desktop Support Technician
Troubleshooting and repairing problems with Microsoft Windows desktop operating systems. Basic knowledge of system architecture and security as needed to provide skills required to support users. Preparation for Microsoft Certified IT Professional: Enterprise Desktop Support Technician 7 (MCITP) certification examination. Prerequisites or Corequisites: CIS102 and CIS105, or permission of Instructor. Prerequisites: 2 years of experience with Microsoft Windows or permission of Instructor.

MST150 3 CREDITS 4 PERIODS
Microsoft Windows Professional
Knowledge and skills necessary to perform day-to-day administration tasks in a Microsoft Windows-based network. Preparation for Microsoft certification examination.

MST150VI 3 CREDITS 4 PERIODS
Microsoft Windows Vista Administration
Knowledge and skills necessary to perform day-to-day workstation administration tasks of Microsoft Windows Vista. Preparation for Microsoft certification examination. Prerequisites: None. CIS190, or CNT140, or MST140 suggested but not required.

MST150XP 3 CREDITS 4 PERIODS
Microsoft Windows XP Professional
Knowledge and skills necessary to perform day-to-day administration tasks of Microsoft Windows XP Professional. Preparation for Microsoft certification examination.

MST152 4 CREDITS 5 PERIODS
Microsoft Windows Server
Knowledge and skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Windows Server. Preparation for Microsoft certification examination. Prerequisites: Any MST150 course or permission of instructor.

MST152DA 4 CREDITS 6 PERIODS
Microsoft Windows 2000 Server
Knowledge and skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Microsoft Windows 2000 Server. Preparation for Microsoft certification examination. Prerequisites or Corequisites: Any MST150 course or permission of instructor.

MST152DB 4 CREDITS 5 PERIODS
Microsoft Windows 2003 Server
Knowledge and skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Microsoft Windows 2003 Server. Preparation for Microsoft certification examination. Prerequisites or Corequisites: Any MST150 course or permission of instructor.

MST155 3 CREDITS 4 PERIODS
Implementing Windows Network Infrastructure
Knowledge and skills to install, configure, maintain, and support a Microsoft Windows network infrastructure. Prerequisites or Corequisites: MST150, or any MST150++ course, or permission of Instructor. Course Notes: Preparation for Microsoft certification examination.

MST157 3 CREDITS 4 PERIODS
Implementing Windows Directory Services
Knowledge and skills to install, configure, and administer Microsoft Windows Active Directory directory services. Prerequisites: Any MST+++ or any MST+++++ Microsoft Technology course, or permission of Instructor. Course Notes: Preparation for Microsoft certification examination.

MST170 4 CREDITS 5 PERIODS
Visual Basic Desktop Application Development
Use of Visual Basic programming language to create database applications using Visual Data Access tools, ActiveX Controls, Component Objects, and Structured Query Language (SQL) Server database. Prerequisites: CIS159 or permission of instructor.
MST172  4 CREDITS  5 PERIODS
Visual Basic .NET Web Application Development
Knowledge and skills to develop and implement Web-based applications using ASP.NET, Web forms, and the Microsoft .NET Framework with Visual Basic. Preparation for Microsoft Certified Applications Developer (MCAD) certification examination. Prerequisites: (BPC/CIS133DA, or BPC/CIS133AA and BPC/CIS133BA and BPC/CIS133CA) and CIS259, or permission of instructor.

MST176  3 CREDITS  4 PERIODS
Visual Basic .NET XML Web Services Development
Knowledge and skills required to develop XML Web Services and Server components with Microsoft .NET Framework with Visual Basic. Preparation for the MCAD (Microsoft Certified Applications Developer) certification examination. Prerequisites: CIS259 or permission of the instructor.

MST242  4 CREDITS  5 PERIODS
Microsoft Exchange Server
Knowledge and skills required to plan, implement, and administer Microsoft Exchange Server. Preparation for Microsoft certification examination. Prerequisites: Any MST152 course or permission of instructor.

MST244  3 CREDITS  4 PERIODS
Microsoft SQL Server Administration
Knowledge and skills required to install, configure, and administer Microsoft SQL server. Prerequisites: Any MST15+ course, or MST 15+++ course, or permission of Instructor. Course Notes: Preparation for Microsoft certification examination.

MST246  2 CREDITS  3 PERIODS
Implementing Microsoft Internet Explorer
Strong foundation in the architecture and key features of Microsoft Internet Explorer. Set up, configure, use, and deploy Internet Explorer in a network environment, with particular emphasis on intranet use. Prerequisites: Any MST152 course or permission of instructor. Knowledge of HTML suggested but not required.

MST254  3 CREDITS  4 PERIODS
Microsoft SQL Server Design and Implementation
Knowledge and skills required to design and implement databases using Microsoft SQL server. Preparation for Microsoft certification examination. Prerequisites: CIS259, or any MST152 course, or permission of instructor.

MST259  3 CREDITS  4 PERIODS
Designing Windows Network Security
Knowledge and skills to analyze business requirements and processes to design a security solution for a Microsoft Windows network. Prerequisites: or Corequisites: MST157, or any MST157++ course, or permission of Instructor. Course Notes: Preparation for Microsoft certification examination

MST270  3 CREDITS  4 PERIODS
Microsoft Solution Architectures
Knowledge and skills to analyze business requirements in a given scenario and define technical solution architectures to optimize business results using Microsoft development tools. Prerequisites: (ACC230 or GBS151) and MST170, or permission of instructor.

MTC - Music: Theory/Composition

MTC100  2 CREDITS  3 PERIODS
Fundamentals of Music
Introduction to music notation and theory. Emphasis on fundamental concepts, including meter, rhythm, scales, keys, intervals and triads. Designed for the nonmusic major, but may be advised for music majors. Prerequisites: None.

MTC101  3 CREDITS  3 PERIODS
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.

MTC103  1 CREDIT  2 PERIODS
Introduction to Aural Perception
An introduction to the aural skills necessary to hear relationships of intervals, rhythms, melody, and harmony in music. Prerequisites: None. Course Notes: MTC103 may be repeated for a total of two (2) credit hours.
MTC105 3 CREDITS 3 PERIODS
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: MTC100, or MTC101, or permission of instructor. Corequisites: MTC106.

MTC106 1 CREDIT 2 PERIODS
Aural Perception I
The development of listening and performing skills through dictation, sight singing and keyboard harmony. Prerequisites: None. Corequisites: MTC105.

MTC130 3 CREDITS 3 PERIODS
Jazz Theory
Develop written and aural theory skills necessary in the jazz idiom. Prerequisites: (MTC101 and MTC103), or permission of Instructor. Course Notes: MTC130 is recommended for students taking jazz improvisation, jazz composition and jazz combo.

MTC155 3 CREDITS 3 PERIODS
Music Theory II
A continuation of Music Theory I with emphasis on harmony and part-writing procedures. Prerequisites: MTC105. Corequisites: MTC156.

MTC156 1 CREDIT 2 PERIODS
Aural Perception II
A continuation of Aural Perception I, including harmonic practices. Prerequisites: None. Corequisites: MTC155.

MTC205 3 CREDITS 3 PERIODS
Music Theory III
The study of chromatic harmony and melody, modulation techniques and expanded chords. The analysis of formal structure. Prerequisites: MTC155. Corequisites: MTC206.

MTC206 1 CREDIT 2 PERIODS
Aural Perception III
A development of listening and performing skills, including an introduction of chromatic harmonic techniques and concepts of style. Prerequisites: None. Corequisites: MTC205.

MTC240 3 CREDITS .6 PERIODS
Composition
Introduction to the basics of music composition, stressing techniques and procedures for developing original ideas. May be repeated for total of twelve (12) credit hours. Prerequisites: (MTC105 and MTC106, or equivalent) , and permission of instructor.

MTC255 3 CREDITS 3 PERIODS
Music Theory IV
A continuation of Music Theory III, including 20th century theories and techniques. Prerequisites: MTC205. Corequisites: MTC256.

MTC256 1 CREDIT 2 PERIODS
Aural Perception IV
A continuation of Aural Perception III, including extended chords. Prerequisites: None. Corequisites: MTC255.

MUC - Music: Commercial/ Business

MUC109 3 CREDITS 3 PERIODS
Music Business: Merchandising and the Law
Operation, scope, and career opportunities in the music business. Focuses on music in the marketplace, songwriting, publishing, copyright procedures, and business affairs, agents, artist management, and concert production. Prerequisites: None.

MUC110 3 CREDITS 3 PERIODS
Music Business: Recording and Mass Media
The operation, scope, and career opportunities in the music business. Focuses on the record industry; environmental music; uses of music in radio, telecommunications, and film; and career options. Prerequisites: None.

MUC111 3 CREDITS 5 PERIODS
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. Prerequisites: MUC195, or MUC195AA, or TCM/VPT105, or permission of Instructor.
MUC112 3 CREDITS 5 PERIODS
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: MUC111, and (MUC195 or MUC195AA).

MUC195 3 CREDITS 5 PERIODS
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.

MUC196 3 CREDITS 5 PERIODS
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: MUC195 or MUC195AA.

MUC295AA 1 CREDIT 1 PERIOD
Self Promotion for Music
Career goal development. Includes self-presentation and communication skills, keeping files and records, and developing self-promotional materials. Prerequisites: None.

MUP - Music: Performance

MUP101 1 CREDIT .6 PERIOD
MUP151 1 CREDIT .6 PERIOD
MUP201 1 CREDIT .6 PERIOD
MUP251 1 CREDIT .6 PERIOD

Private Instruction
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. May be repeated for credit. Prerequisites: None.

MUP102 2 CREDITS 1.2 PERIODS
MUP152 2 CREDITS 1.2 PERIODS
MUP202 2 CREDITS 1.2 PERIODS
MUP252 2 CREDITS 1.2 PERIODS

Private Instruction
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. May be repeated for credit. Prerequisites: None.

MUP131 2 CREDITS 3 PERIODS
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.

MUP132 2 CREDITS 3 PERIODS
Class Piano II
Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading. Prerequisites: MUP131 or permission of instructor.
MUP133 2 CREDITS 3 PERIODS
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.

MUP134 2 CREDITS 3 PERIODS
Class Voice II
Continuation of Class Voice I including the elements of stage presence and diction. Prerequisites: MUP133 or permission of instructor.

MUP150 1 CREDIT 3 PERIODS
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. May be repeated for credit. Prerequisites: None.

MUP153 2 CREDITS 5 PERIODS
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. Course Notes: Auditions may be required. MUP153 may be repeated for credit.

MUP154AA 1 CREDIT 3 PERIODS
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. Course Note: May be repeated for up to three (3) credits.

MUP159 1 CREDIT 3 PERIODS
Community Orchestra
Emphasis on college/community participation and the preparation of orchestral literature for public performance. Auditions may be required. May be repeated for credit. Prerequisites: None.

MUP161 1 CREDIT 3 PERIODS
Community Band
Emphasis on college/community participation and the preparation of band literature for public performance. Auditions may be required. May be repeated for credit. Prerequisites: None.

MUP163 1 CREDIT 3 PERIODS
Jazz Ensemble
Practical and performance experience in various jazz styles. Open to all students on the basis of auditions. May be repeated for credit. Prerequisites: None.

MUP164 2 CREDITS 3 PERIODS
Jazz Improvisation I
Theoretical and performance skills in many styles of jazz improvisation. May be repeated for a total of six (6) credit hours. Prerequisites: None.

MUP181 1 CREDIT 2 PERIODS
Chamber Music Ensembles
Practical and performance experience in instrumental, vocal, and mixed ensembles. May be repeated for credit. Prerequisites: None.

MUP182 1 CREDIT 3 PERIODS
Chamber Singers
Practical and performance experience in various styles of vocal music. Open to all students on the basis of auditions. May be repeated for credit. Prerequisites: None.

MUP209 2 CREDITS 2 PERIODS
Elements of Conducting
Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles. Prerequisites: None.

MUP217 2 CREDITS 3 PERIODS
Music Theatre: Broadway Solos
Study and in-class performance of scenes and solos from Broadway musical literature. Prerequisites: None. Course Notes: MUP217 may be repeated for credit.

MUP225 2 CREDITS 3 PERIODS
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.

MUP226 2 CREDITS 3 PERIODS
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: MUP225 or permission of instructor.
### MUP227  2 CREDITS  3 PERIODS
**Class Guitar III**
Additional fingerboard positions. Ensemble techniques and performance. Prerequisites: MUP226 or permission of instructor.

### MUP228  2 CREDITS  3 PERIODS
**Class Guitar IV**
Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques. Prerequisites: MUP227 or permission of instructor.

### MUP231  2 CREDITS  3 PERIODS
**Class Piano III**
Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants. Prerequisites: MUP132 or permission of instructor.

### MUP232  2 CREDITS  3 PERIODS
**Class Piano IV**
Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature. Prerequisites: MUP231 or permission of instructor.

### MUP233  2 CREDITS  3 PERIODS
**Class Voice III**
Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications. Prerequisites: MUP134.

### MUP234  2 CREDITS  3 PERIODS
**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: MUP233 or permission of instructor.

### MUP270  2 CREDITS  5 PERIODS
**Musical Theatre Workshop**
Workshop in the study and performance of Musical Theatre repertoire. Including audition techniques, talent evaluation criticism, rehearsal techniques, vocal acting styles, stage movement, and performance. May be repeated for credit. Prerequisites: None.

### NCE - Nursing Continuing Education

#### NCE214MI  .5 CREDITS  .5 PERIODS
**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.

### NUR - Nursing Science: Basic

#### NUR104AB  1 CREDIT  1 PERIOD
**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. Course Note: Course offered as Credit (P) No credit (Z) basis. May be repeated for a total of six (6) credit hours.

#### NUR151  10 CREDITS  20 PERIODS
**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.
NUR171 8 CREDITS 16 PERIODS  
**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: NUR151 or permission of Nursing Department Chairperson.

NUR251 8 CREDITS 16 PERIODS  
**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: BIO202, BIO205, and NUR171 or permission of Nursing Department Chairperson.

NUR271 7 CREDITS 13 PERIODS  
**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: NUR251 or permission of Nursing Department Chairperson.

NUR291 2 CREDITS 6 PERIODS  
**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: NUR271 or permission of Nursing Department Chairperson.

OAS - Office Automation Systems  
OAS108 3 CREDITS 3 PERIODS  
**Business English**  
Comprehensive coverage of correct use of English grammar including spelling, punctuation, capitalization, and number style mechanics in a business context. Prerequisites: None.

PED - Physical Education  
PED101 1 CREDIT 2 PERIODS  
**Physical Activities: Basic**  
Individual, dual, or team sports activities at the basic level. Prerequisites: None. Course Notes: PED101 may be repeated for credit.

PED102 1 CREDIT 2 PERIODS  
**Physical Activities: Intermediate**  
Individual, dual, or team sports activities at the intermediate level. Prerequisites: None. Prior experience recommended.

PED103 .5 CREDITS 1 PERIOD  
**Physical Activities: Basic**  
Individual, dual, or team sports activities at the basic level. Prerequisites: None. Course Notes: PED103 may be repeated for credit.

PED115 2 CREDITS 4 PERIODS  
**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. Course Note: PED115 may be repeated for a total of eight (8) credit hours.
PED117  2 CREDITS  4 PERIODS  
**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. Course Notes: PED117 may be repeated for a maximum of eight (8) credits.

PED120AF  2 CREDITS  4 PERIODS  
**Special Emphasis Activities: Weight Training**
Intensive experience in weight training. May be repeated for a total of 8 credits. Prerequisites: None.

PED121  1 CREDIT  2 PERIODS  
**Physical Conditioning for Massage Therapists**
Physical fitness necessary for current and prospective massage therapists. Includes physical fitness and workout techniques as related to performing massage therapy; individual conditioning strategies, and basic nutritional guidelines. Prerequisites: None.

PED124  2 CREDITS  4 PERIODS  
**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. Course Notes: PED124 may be repeated for a total of eight (8) credit hours.

PED125  2 CREDITS  4 PERIODS  
**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: PED124. Course Notes: PED125 may be repeated for a total of eight (8) credit hours.

PED133  2 CREDITS  4 PERIODS  
**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.

PED201  1 CREDIT  2 PERIODS  
**Physical Activities: Advanced**
Individual, dual, or team sports activities at the advanced level. Prerequisites: None. Prior experience at competitive level recommended. Course Notes: PED201 may be repeated for credit.

PED224  2 CREDITS  4 PERIODS  
**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: PED124 and PED125. Course Notes: PED224 may be repeated for a total of eight (8) credit hours.

PED225  2 CREDITS  4 PERIODS  
**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: PED124, PED125, and PED224. Course Notes: PED225 may be repeated for a total of eight (8) credit hours.
PHI - Philosophy

PHI101 3 CREDITS 3 PERIODS
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.

PHI103 3 CREDITS 3 PERIODS
Introduction to Logic
Informal logic, logical fallacies, elementary symbolic logic, analysis of argument forms, and construction of proofs for validity. Prerequisites: ENG101 or ENG107 or equivalent.

PHI104 3 CREDITS 3 PERIODS
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.

PHI105 3 CREDITS 3 PERIODS
Introduction to Ethics
A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories. Prerequisites: None.

PHS - Physical Science

PHS110 4 CREDITS 6 PERIODS
Fundamentals of Physical Science
Survey of the principles of physics and chemistry. Prerequisites: Grade of “C” or better in MAT090, or MAT091, or MAT092, or MAT093, or equivalent, or satisfactory score on Math placement exam.

PHY - Physics

PHY101 4 CREDITS 6 PERIODS
Introduction to Physics
A survey of physics emphasizing applications of physics to modern life. Prerequisites: Grade of “C” or better in MAT090, or MAT091, or MAT092, or MAT093, or equivalent, or satisfactory score on Math Placement exam.

PHY111 4 CREDITS 6 PERIODS
General Physics I
Includes motion, energy, and properties of matter. Prerequisites: MAT182 or MAT187 or one year high school Trigonometry with a grade of C or better or permission of Department or Division. Course Notes: PHY111 is recommended for preprofessional and suggested for certain other majors. Students may receive credit for only one of the following: PHY111 or PHY111AA.

PHY112 4 CREDITS 6 PERIODS
General Physics II
Includes electricity, electromagnetism, and modern physics. Prerequisites: PHY105 or PHY111.

PHY121 4 CREDITS 6 PERIODS
University Physics I: Mechanics
Kinematics, Newton’s laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound. Prerequisites: MAT220, or MAT221, or permission of Department or Division. One year of High School physics or PHY111 and PHY112 suggested but not required.
PHY131  4 CREDITS  6 PERIODS  

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: MAT230 or MAT231 or permission of Department or Division and PHY121 Corequisites: MAT241 or permission of Department or Division.

POS - Political Science

POS100  3 CREDITS  3 PERIODS

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.

POS110  3 CREDITS  3 PERIODS  

American National Government

Study of the historical backgrounds, governing principles, and institutions, of the national government of the United States. Prerequisites: None.

POS120  3 CREDITS  3 PERIODS  

World Politics

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.

POS180  3 CREDITS  3 PERIODS

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.

POS200  3 CREDITS  3 PERIODS

U.S. and Arizona Constitution

Examination of the United States Constitution and the constitution and government of the State of Arizona. Prerequisites: None.

POS221  1 CREDIT  1 PERIOD

Arizona Constitution

Examination of the Constitution of the State of Arizona. Equivalent to the second part of POS220. May not enroll in POS220 and POS221 concurrently. Prerequisites: None.

POS222  2 CREDITS  2 PERIODS

U.S. Constitution

Examination of the United States Constitution. Equivalent to the first part of POS220. May not enroll in POS220 and POS222 concurrently. Prerequisites: None.

POS223  3 CREDITS  3 PERIODS

Civil Rights

The historic background and current status of major civil rights issues in the United States. Prerequisites: None.

POS285  3 CREDITS  3 PERIODS

Political Issues and Public Policy

Introduction to public policy, how policy is made, and how public policy decisions are affected. Prerequisites: None.

PSY - Psychology

PSY101  3 CREDITS  3 PERIODS

Introduction to Psychology

To acquaint the student with basic principles, methods and fields of psychology such as learning, memory, emotion, perception, physiological, developmental, intelligence, social and abnormal. Prerequisites: None.

PSY123  3 CREDITS  3 PERIODS

Psychology of Parenting

The demonstration and application of psychological principles to the development and guidance of children and adolescents. Prerequisites: None.
PSY132 3 CREDITS 3 PERIODS
Psychology and Culture
Presents current knowledge about human diversity in behavior and culture using examples from a variety of contexts and nations. Highlights topics in cross-cultural psychology, such as intergroup relations, ethnocentrism, gender, personality, emotion, language, communication, work and health. Emphasis on applications of behavioral and cognitive principles to enhance interactions in a multicultural world. Prerequisites: None.

PSY210 3 CREDITS 3 PERIODS
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: PSY101 with a grade of “C” or better or permission of instructor.

PSY215 3 CREDITS 3 PERIODS
Introduction to Sport 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: PSY101 with a grade of “C” or better or permission of instructor.

PSY230 3 CREDITS 3 PERIODS
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: PSY101 with a grade of “C” or better and MAT092 or equivalent, or permission of instructor.

PSY231 1 CREDIT 2 PERIODS
Laboratory for Statistics
Applications of inferential and descriptive statistics to computers in the field of psychology. Prerequisites: None. Corequisites: PSY230.

PSY235 3 CREDITS 3 PERIODS
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: PSY101 with a grade of “C” or better or permission of instructor.

PSY240 3 CREDITS 3 PERIODS
Developmental Psychology
Human development from conception through adulthood. Includes: physical, cognitive, emotional and social capacities that develop at various ages. Recommended for students majoring in nursing, education, pre-med, and psychology. Prerequisites: PSY101 with a grade of “C” or better or permission of the instructor.

PSY241 3 CREDITS 3 PERIODS
Understanding and Changing Behavior
Theory and methods for observing, analyzing, and modifying behavior. Prerequisites: PSY101 with grade of “C” or better or permission of Instructor.

PSY242 1 CREDIT 2 PERIODS
Understanding and Changing Behavior Lab
Designed to apply the principles of behavior modification. Application of behavior modification principles, techniques, and treatment(s) to modify self-behavior or the behavior of others. Exposure to the “hands-on” application of behavioral programming, including the identification, development, implementation, assessment, and modification of a behavioral program. Prerequisites: PSY101. Prerequisites or Corequisites: PSY241.

PSY266 3 CREDITS 3 PERIODS
Abnormal Psychology
Distinguishes between normal behavior and psychological disorders. Subjects may include stress disorders, problems with anxiety and depression, unusual and abnormal sexual behavior, schizophrenia and addictive behaviors. Causes and treatments of psychological problems and disorders are discussed. Prerequisites: PSY101 with a grade of "C" or better, or permission of instructor.
PSY267 3 CREDITS 3 PERIODS
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: PSY101.

PSY270 3 CREDITS 3 PERIODS
Personal & Social Adjustment
Surveys the basic mental health principles as they relate to coping with stress, interpersonal relationships, sex, marriage, and working. Emphasis on learning to become a more competent and effective person. Prerequisites: PSY101 with a grade of "C" or better or permission of the instructor.

RDG026 3 CREDITS 3 PERIODS
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 grade of "C" or better in ESL/RDG016, or permission of Instructor.

RDG036 3 CREDITS 3 PERIODS
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 grade of "C" or better in ESL/RDG026, or permission of Instructor.

RDG046 3 CREDITS 3 PERIODS
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 grade of "C" or better in ESL/RDG036, or permission of Instructor.

RDG081 3 CREDITS 3 PERIODS
Reading Improvement
Designed to improve basic reading skills. Includes word recognition, prediction of contents of reading selections, and development of basic vocabulary. Emphasis on identifying main ideas and related details. Reviews following directions and the understanding of graphic materials. Prerequisites: Placement test scores, or permission of instructor.

RDG091 3 CREDITS 3 PERIODS
College Preparatory Reading
Designed to improve basic reading and study skills, vocabulary and comprehension skills. Recommended to all students whose placement test scores indicate a need for reading instruction. Prerequisites: Appropriate reading placement test score, or grade of C or better in RDG081.
REL243 3 CREDITS 3 PERIODS
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.

REL270 3 CREDITS 3 PERIODS
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.

REC120 3 CREDITS 3 PERIODS
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.

REC120A 1 CREDIT 2 PERIODS
Outdoor Living 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. Course Note: Course may be repeated for a total of four (4) credits.

REC150AB 3 CREDITS 3 PERIODS
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.

REC250 3 CREDITS 3 PERIODS
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.

REL - Religious Studies
REL205 3 CREDITS 3 PERIODS
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: ENG101, or ENG107, or equivalent.

SBS - Small Business Management
SBS213 1 CREDIT 1 PERIODS
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.

SBS214 1 CREDIT 1 PERIODS
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.
SLG102  4 CREDITS  4 PERIODS  
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: SLG101, with a grade of "C" or better, or permission of department/division.

SLG103  1 CREDIT  1 PERIOD  
Introduction to Deafness
History and development of American Sign Language (A.S.L.) 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.

SLG110  2 CREDITS  2 PERIODS  
Fingerspelling I
Introduction to basic fingerspelling techniques. Concentration on receptive and expressive skills including manual alphabet production and numbers. Focus on methods, theory, and applications. Prerequisites: SLG101, or permission of department/division.

SLG120  2 CREDITS  2 PERIODS  
Fingerspelling II
Continued skill development including speed, dexterity, clarity, and loan signs. Advanced use of numbers, prefixes, suffixes, and polysyllabic words. Prerequisites: SLG102, SLG110 with a grade of "C" or better, or permission of department/division.

SLG201  4 CREDITS  4 PERIODS  
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: SLG102, with a grade of "C" or better, or permission of department/division. Suggested but not required: (ENG101 or ENG107) and, (CRE101 or CRE111 or exemption by score on the reading placement test (ASSET)).
SLG202  4 CREDITS  4 PERIODS
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: SLG103 and SLG201 with a grade of "C" or better, or permission of department/division. Suggested but not required: ENG101, SLG200, and CRE101 or CRE111 or exemption by score on the reading placement test (ASSET).

SOC - Sociology

SOC101  3 CREDITS  3 PERIODS
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.

SOC130  3 CREDITS  3 PERIODS
Human Sexuality
Examination of the physical, social, cultural, and institutional contributions to human sexuality. Examination of facts and myths, literature, and changing mores regarding human sexuality to acquire knowledge about cultural and social events and processes. Explores the sexuality of males and females in contemporary society. Prerequisites: Student must be 18 years or older.

SOC140  3 CREDITS  3 PERIODS
Racial & Ethnic Minorities
Contemporary/Historical racial and ethnic intergroup relations emphasizing cultural origins, developments, and problems of minority groups in the United States. Prerequisites: None.

SOC157  3 CREDITS  3 PERIODS
Sociology of Marriage & Family
The study of courtship, marriage, and family patterns, their historical development, their adaptation to a changing culture, and their impact on individuals. Prerequisites: None.

SOC180  3 CREDITS  3 PERIODS
Social Implications of Technology
Effects of development and implementation of technology on society. Historical and multi-cultural comparisons of this process, current concerns addressed, and prospects for the future analyzed. Prerequisites: None.

SOC266  3 CREDITS  3 PERIODS
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.

SPA - Spanish

SPA055  1 CREDIT  1 PERIOD
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.

SPA101  4 CREDITS  4 PERIODS
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.

SPA102  4 CREDITS  4 PERIODS
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.

SPA115  3 CREDITS  3 PERIODS
Beginning Spanish Conversation I
Conversational Spanish. Basic sentence structure, pronunciation and vocabulary necessary to develop speaking ability in Spanish. Designed for students seeking speaking and listening abilities with little emphasis on grammar. Prerequisites: None.
SPA116 3 CREDITS 3 PERIODS
Beginning Spanish Conversation II
Continued development of speaking and listening skills for effective communication in Spanish. Prerequisites: SPA115 or departmental approval.

SPA117 3 CREDITS 3 PERIODS
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.

SPA118 3 CREDITS 3 PERIODS
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: SPA117 or (SPA117AA and SPA117AB and SPA117AC), or permission of department.

SPA201 4 CREDITS 4 PERIODS
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: Grade of "C" or better in SPA102, or SPA111, or permission of Department or Division.

SPA202 4 CREDITS 4 PERIODS
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.

SPA225 3 CREDITS 3 PERIODS
Intermediate Spanish Conversation I
Continued development of skills in conversational Spanish. A review of the major grammatical and pronunciation problems. Prerequisites: SPA116, or SPA102 or departmental approval.

SPA226 3 CREDITS 3 PERIODS
Intermediate Spanish Conversation II
Continued development of skills in conversational Spanish with a review of grammatical problems. Prerequisites: SPA225, two years Spanish or the equivalent or departmental approval.

SPA235 3 CREDITS 3 PERIODS
Advanced Spanish Conversation I
Continued development of skills in conversational fluency. Class conducted completely in Spanish. Prerequisites: SPA226 or equivalent or departmental approval.

SPA236 3 CREDITS 3 PERIODS
Advanced Spanish Conversation II
Further development of skills in conversational fluency. Grammar presented only to clarify student errors. Prerequisites: SPA235, or equivalent, or departmental approval.

SPA265 3 CREDITS 3 PERIODS
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: SPA202 or departmental approval.

SPA266 3 CREDITS 3 PERIODS
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: SPA265 or departmental approval.

SSH - Sustainability/Social Sciences and Humanities

SSH111 3 CREDITS 3 PERIODS
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.
SUS - Sustainability/Natural Sciences

SUS110 3 CREDITS 3 PERIODS  
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.

THE - Theatre

THE111 3 CREDITS 3 PERIODS  
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.

THE118 3 CREDITS 3 PERIODS  
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.

THE205 3 CREDITS 3 PERIODS  
Introduction to Cinema  
Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.

THE206 3 CREDITS 3 PERIODS  
Introduction to Television Arts  
History and development of electronic media and its impact on popular arts. Prerequisites: None.

THE220 3 CREDITS 3 PERIODS  
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: ENG101 or ENG107 or equivalent.

THE260 3 CREDITS 3 PERIODS  
Film Analysis  
Understanding and enjoyment of film and its correlation to literature, art, music, and other disciplines. Prerequisites: None.

THP - Theatre Performance/Production

THP112 3 CREDITS 4 PERIODS  
Acting I  
Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization. Prerequisites: None.

THP115 3 CREDITS 4 PERIODS  
Theatre Makeup  
Purposes, materials, and techniques of theatrical makeup. Prerequisites: None.

THP201AA 1 CREDIT 2 PERIODS  
Theatre Production I  
Designed to give college credit to the cast and technical production crews of college theatre productions. May be repeated for up to a maximum of four (4) credits. Prerequisites: None.

THP201AB 2 CREDITS 4 PERIODS  
Theatre Production II  
Designed to give college credit to the cast and technical production crews of college theatre productions. May be repeated for up to a maximum of four (4) credits. Prerequisites: None.

THP205 3 CREDITS 3 PERIODS  
Introduction to Cinema  
Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.

THP212 3 CREDITS 4 PERIODS  
Acting II  
Fundamental techniques of acting through script analysis, rehearsal, and performance. Prerequisites: THP112 or departmental approval.
THP213 3 CREDITS 5 PERIODS
Introduction to Technical Theatre
Procedures of technical theatre production and demonstration. Topics include design and construction of scenery; lighting and properties. Prerequisites: None.

THP216 3 CREDITS 4 PERIODS
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: THP213 or permission of instructor.

WED144 3 CREDITS 5 PERIODS
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.

WED151 3 CREDITS 3 PERIODS
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.

WED156 1 CREDIT 1 PERIOD
Humor and Play
Physiological, psychological, emotional, and intellectual effects of humor and play; suggestions for planning periods of play and incorporating it into one's life. Prerequisites: None.

WED151 3 CREDITS 3 PERIODS
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.

WED162 1 CREDIT 1 PERIOD
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.

WED165 2 CREDITS 2 PERIODS
Overview of Massage Therapy
History of massage; overview of bodywork systems; benefits and indications of massage; legal requirements for practice in Arizona. Prerequisites: None.

WED170 1 CREDIT 1 PERIOD
Principles of Homeopathy
Origins of homeopathy; key concepts; perceptions of disease; schools of homeopathy; scientific studies; preparation of remedies; case taking. Prerequisites: None.

WED172 1 CREDIT 1 PERIOD
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.
WED176  1 CREDIT  1 PERIOD

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.

WED182  2 CREDITS  2 PERIODS

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.

WED210  2 CREDITS  3 PERIODS

Sports Massage
Purpose, benefits, and contraindications of sports massage; principles of sports physiology; massage techniques, applications, and procedures; treatment of injuries. Prerequisites: WED165 and WED230, or permission of Program Director.

WED215  2 CREDITS  5 PERIODS

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.

WED218  1 CREDIT  1 PERIOD

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.

WED230  6 CREDITS  9 PERIODS

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: (BIO160 and WED165) or permission of Program Director.

WED231  6 CREDITS  9 PERIODS

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: WED230.

WED232  6 CREDITS  10 PERIODS

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: WED231. Corequisite: WED250, or permission of Program Director.

WED250  3 CREDITS  6 PERIODS

Clinical Practicum
Application of fundamental massage techniques. Prerequisites: WED231. Corequisites: WED232, and permission of Program Director.

WED262  2 CREDITS  3 PERIODS

Acupressure/Shiatsu I
Overview of the principles of Traditional Chinese Medicine and the Meridian System; history, purpose, benefits, indications, and contraindications of Acupressure/Shiatsu. Therapeutic techniques and applications of Acupressure/Shiatsu; pre and post evaluations of intervention procedures. Prerequisites: WED250, and permission of instructor.

WED264  2 CREDITS  3 PERIODS

Acupressure/Shiatsu II
Therapeutic techniques and applications for Anma massage used to disperse heat and stagnant “Ki;” hands-on techniques to balance Kyo and Jitsu energy; meridian rebalancing stretches and visualizations for release of acute/chronic muscle tension. Prerequisites: WED262, or permission of instructor.
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.

Intrinsic Coach™ Development
Development of intrinsic thinking skills, enabling intrinsic strategizing, and building on intrinsic resources to create a link between information about wellness and information enacted through healthy behavior change. Emphasis is on application of Intrinsic Coaching™ methodology. Prerequisites: None. Course Note: Course is designed for health and wellness professionals. Under the terms and conditions specified in the licensing agreement with Totally Coached, Inc., and the Maricopa Community College District, only those persons licensed and approved by Totally Coached, Inc., are qualified to teach Intrinsic Coach™ courses or other Totally Coached, Inc., courses. These facilitators must be identified within the terms of the agreement between Totally Coached, Inc., and the Maricopa Community College District.

Women's Studies

WST100 3 CREDITS 3 PERIODS
Introduction to Women's and Gender Studies
Introduction to critical issues in women's studies. Prerequisites: None.

WST209 3 CREDITS 3 PERIODS
Women and Films
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.

WST290 3 CREDITS 3 PERIODS
Women and World Religion
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.

Information Regarding Special Courses Not Listed in the College Catalog

Cooperative Education (courses numbered 296)
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: Permission of Program Director or instructor. Corequisites: Must be concurrently enrolled in at least one class related to job/co-op subject area; must maintain an enrollment ratio of two (2) hours of credit in other courses for every one (1) hour of Cooperative Education credit (excluding radio and television); a maximum of sixteen (16) hours of Cooperative Education credit is allowable in a college program.

Special Projects (courses numbered 298)
Organized and tailored around the interests and needs of 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.

Shared Unique Number (SUN) System

The Shared Unique Number (SUN) System helps students identify courses that will directly transfer among Arizona's community colleges and three public universities. Using the SUN System, students can easily search for and enroll in courses that offer direct equivalency at other Arizona colleges and universities. SUN courses have their own unique course number and prefix listed alongside each college's course number.

Additional information about SUN System can be found at www.azsunsystem.com