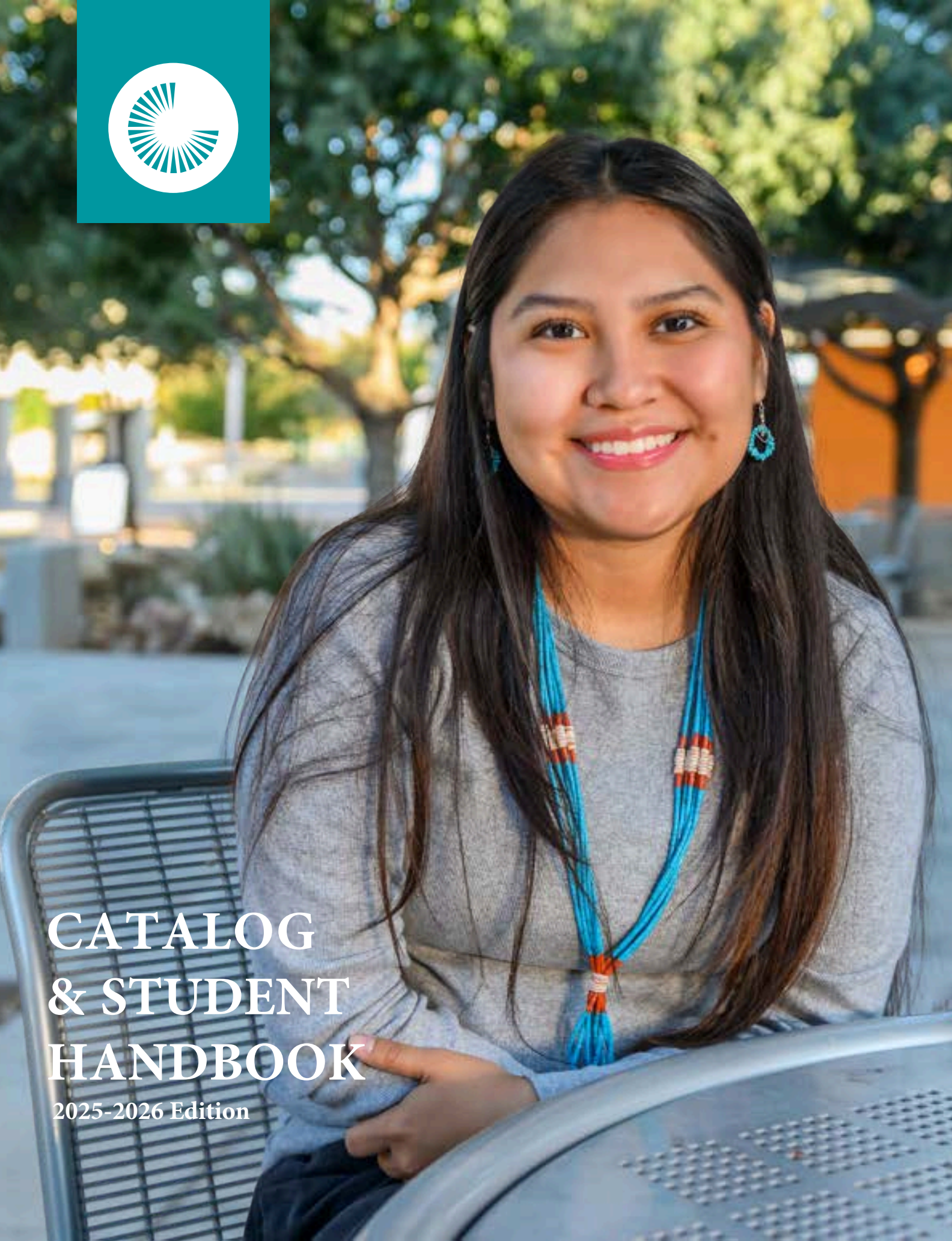

CATALOG & STUDENT HANDBOOK

2025-2026 Edition

TABLE OF CONTENTS

Home 5
Academic Calendar 6
Disclaimers 8
General Information 9
General Education Student Learning Outcomes and Indicators 9
Partnerships 10
Affiliations & Associations 11
Pecos Campus 11
Williams Campus 11
Sun Lakes Center 11
Communiversity at Queen Creek 11
Student Development Philosophy 13
College Services & Regulations 14
Academic Advisement 14
Admissions, Records, and Registration 14
Athletics 14
Bookstore 15
Career and Technical Education 15
Career Services 15
College Police Regulations 15
Computer Labs/Testing Services 16
Counseling 16
Course Placement 17
Dual Enrollment 17
Early College 17
Electronic Resources 17
Enrollment Services 17
Facilities Services 18
Financial Aid and Scholarships 18
Food Services 18
Information Technology (IT) 18
Institutional Research 19
International Education Program 19
Learning Center (Tutoring) 19
Library 19
Maricopa Community College Police Department 19
Mathematics and Science Tutoring 20
New Student Orientation 20
Office of Student Recruitment 20
Online and Hybrid Courses 20
Parking 20
Practical Instruction 21
Student Business Services 21
Student Dress Code 21
Student Housing 21
Student ID/Library Cards 21
Student Identification Cards 21
Student Immunization 21
Student Life and Leadership 21
Student Support and Disability Resources & Services 23
Student Tools 23
Travel by Students 23
Travel Reduction Program 23
Veterans Services 23
Writing Center 25
Maricopa County Community College District Common Policies 26
Degree Requirements 27
General Academic Policies for Associate Degrees Designed for University Transfer 27
Arizona General Education Curriculum (AGEC) – A, B, S 29
Associate in Arts (AA) Degree 35
Associate in Arts, Elementary Education Degree (AAEE) 38
Associate in Arts, Fine Arts (AAFA) 42
Associate in Science, (AS) Degree 45
Associate in Business, General Requirements (ABUS-GR) Degree 49
Associate in Business, Special Requirements (ABUS-SR) Degree 52
Associate in General Studies (AGS) Degree and General Education Requirements 54
Associate in Applied Science (AAS) Degree and General Education Requirements 75
Academic Certificate (AC) 84
Bachelor of Science (BS) Degree 86
Educational Programs 86
Aviation & Applied Technology 87
Aircraft Maintenance Technology, Associate in Applied Science 91
Aircraft Maintenance Technology, Certificate of Completion 93
Aircraft Maintenance Technology - Airframe, Associate in Applied Science 94
Aircraft Maintenance Technology - Airframe, Certificate of Completion 95

Aircraft Maintenance Technology - Powerplant, Associate in Applied Science 96

Aircraft Maintenance Technology - Powerplant, Certificate of Completion 97

Airway Science Technology - Flight Emphasis, Associate in Applied Science 98

Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion 100

Industrial Technology for Semiconductor .....

Biological Sciences 101

Sustainability, Academic Certificate 103

Business & Computing Studies 104

Accounting, Associate in Applied Science 117

Accounting, Certificate of Completion 118

Adobe Foundations: Animation and Graphics Production, Certificate of Completion 119

Amazon Web Services Cloud Associate, Certificate of Completion 119

Amazon Web Services Cloud Practitioner, Certificate of Completion 120

Amazon Web Services Cloud Specialist, Certificate of Completion 120

Cisco Network Administration and Security, Certificate of Completion 121

Cisco Network Administration: CCNA, Certificate of Completion 122

Computer System Configuration and Support, Certificate of Completion 122

Computer System Configuration and Support, Linux, Certificate of Completion 123

Computer System Configuration and Support, Network, Certificate of Completion 123

Computer System Configuration and Support, Security, Certificate of Completion 124

Cyber Engineering, Certificate of Completion 125

Cyber Operations, Certificate of Completion 126

Cybersecurity Fundamentals, Certificate of Completion 127

Cybersecurity, Associate in Applied Science 127

Data Analytics, Associate in Applied Science 130

Data Analytics, Certificate of Completion 131

Desktop Support, Certificate of Completion 132

Financial Services: Pre-licensure, Certificate of Completion ... 133

General Business, Associate in Applied Science 133

General Business, Certificate of Completion 134

Information Technology, Associate in Applied Science 135

Linux Associate, Certificate of Completion 145

Management, Associate in Applied Science 146

Microsoft Office Professional, Certificate of Completion 147

Microsoft Office Specialist, Certificate of Completion 148

Network and Systems Administration, Associate in Applied Science 149

Organizational Leadership, Certificate of Completion 152

Organizational Management, Associate in Applied Science ... 153

Programming and Systems Analysis Level I, Certificate of Completion 154

Programming and Systems Analysis Level II, Certificate of Completion 155

Programming and Systems Analysis, Associate in Applied Science 156

Python Applications, Certificate of Completion 158

Small Business Management Level I, Certificate of Completion 159

Social Media Marketing, Certificate of Completion 159

Web App Development, Certificate of Completion 160

Web Design, Certificate of Completion 160

Web Design/Development, Associate in Applied Science 161

Web Development, Certificate of Completion 163

Web Foundations, Certificate of Completion 164

Communication & Fine Arts 165

Illustration, Certificate of Completion 191

Illustration and Sequential Art, Associate in Applied Science 192

Photography, Associate in Applied Science 193

Sequential Art, Certificate of Completion 196

Composition, Creative Writing & Literature 196

Health Sciences, Public Service, & Counseling 202

Administration of Justice Studies, Associate in Applied Science 209

Administration of Justice, Certificate of Completion 211

Corrections, Certificate of Completion 212

Crime Scene Investigation, Certificate of Completion 212

Emergency Medical Technology, Certificate of Completion 213

Emergency Medical Technology Comprehensive, Certificate of Completion 214

Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science 214

Fingerprint Identification and Photography, Certificate of Completion 217

Forensic Science, Associate in Applied Science 217

Homeland Security, Certificate of Completion 219

Law Enforcement, Certificate of Completion 219

Law Enforcement Training, Associate in Applied Science 220
Law Enforcement Training Academy, Certificate of Completion 221
Legal Studies, Certificate of Completion 221
Mortuary Science, Associate in Applied Science 222
Personal Training, Certificate of Completion 223
Personal Training: Advanced, Certificate of Completion 224
Victimology, Certificate of Completion 225
Languages, Humanities, & Information Studies 226
Chicana and Chicano Studies, Academic Certificate 232
Language Studies, Academic Certificate 233
Spanish Language and Culture, Academic Certificate 234
Women and Gender Studies, Academic Certificate 235
Mathematics 235
Nursing 239
Registered Nurse Pathway, Associate in Applied Science 242
Physical Sciences & Engineering 244
Artificial Intelligence and Machine Learning, Associate in Applied Science 252
Artificial Intelligence and Machine Learning, Bachelor of Science 254
Artificial Intelligence and Machine Learning, Certificate of Completion 259
Engineering Technology, Associate of Applied Science 260
Social & Behavioral Sciences 262
Early Childhood Education, Associate in Applied Science 269
Early Childhood Education, Certificate of Completion 271
Foundations of Early Childhood Education, Certificate of Completion 273
Special Programs 274
Enhancement Programs 274
Enrichment Programs 274
Course Descriptions 276
Accounting (ACC) 278
Administration of Justice Studies (AJS) 278
Aeronautics (AET) 280
African American Studies (AFR) 282
Aircraft/Maintenance Technology (AMT) 282
American Indian Studies (AIS) 284
American Sign Language (ASL) 284
Anthropology (Science/Math) (ASM) 285
Anthropology (Soc/Behv. Science) (ASB) 285
Art (ART) 286
Art Humanities (ARH) 287
Art and Visual Communication (AVC) 288
Artificial Intelligence and Machine Learning (AIM) 289
Astronomy (AST) 290
Automated Industrial Technology (AIT) 290
Baccalaureate Artificial Intelligence Machine Learning (BAM) 291
Biology (BIO) 291
Business-Personal Computers (BPC) 292
Chemistry (CHM) 293
Chicana and Chicano Studies (CCS) 295
Child/Family Studies (CFS) 295
Cisco Network Technology (CNT) 295
Cloud Computing (CLD) 296
Communication (COM) 296
Computer Information Systems (CIS) 296
Computer Science (CSC) 302
Counseling and Applied Psychology (CAP) 304
Counseling and Personal Development (CPD) 304
Creative Writing (CRW) 304
Critical Reading (CRE) 305
Dance (DAN) 305
Dance Humanities (DAH) 308
Early Education (EED) 308
Economics (ECN) 309
Education (EDU) 309
Electrical Engineering (EEE) 310
Emergency Medical Technology (EMT) 310
Engineering Science (ECE) 311
English (ENG) 312
English Humanities (ENH) 313
Environmental Sciences (ENV) 314
Exercise Science (EXS) 314
First Year Experience (FYE) 316
Food and Nutrition (FON) 316
Game Studies (GST) 316
General Business (GBS) 316
Geology (GLG) 317
Health Care Related (HCR) 318
Health Core Curriculum (HCC) 318
Health Science (HES) 318
History (HIS) 319
Honors (HON) 320

Humanities (HUM) 320
Information Studies (IFS) 321
Information Technology Security (ITS) 321
International Business (IBS) 322
Journalism (JRN) 322
Law Enforcement Training (LET) 322
Management (MGT) 322
Marketing (MKT) 323
Mass Communications (MCO) 323
Mathematics (MAT) 324
Microsoft Technology (MST) 326
Mortuary Science Program (MSP) 327
Music: Commercial/Business (MUC) 328
Music: History/Literature (MHL) 328
Music: Performance (MUP) 329
Music: Theory/Composition (MTC) 345
Nursing Science: Basic (NUR) 345
Philosophy (PHI) 346
Physical Education (PED) 346
Physical Geography (GPH) 347
Physics (PHY) 347
Political Science (POS) 348
Psychology (PSY) 349
Reading (RDG) 350
Recreation (REC) 350
Religious Studies (REL) 350
Small Business Management (SBS) 350
Society and Business (SBU) 351
Sociology (SOC) 351
Spanish (SPA) 351
Spanish Humanities (SPH) 352
Storytelling (STO) 352
Sustainability/Natural Sciences (SUS) 352
Sustainability/Social Sciences and Humanities (SSH) 353
Theatre (THE) 353
Theatre and Film (THF) 353
Theatre Occupational (THO) 353
Theatre Performance/Production (THP) 353
Unmanned Aircraft Systems (UAS) 354
Wellness Education (WED) 354
Women's Studies (WST) 355
Writing Across Curriculum (WAC) 355
District/College Administration 356
Glossary of College Terminology 359
Programs A-Z 362
Search Courses 368
Index 369

HOME

2025-2026 Catalog & Student Handbook

CJ Wurster, President

Congratulations on your decision to pursue your education at Chandler-Gilbert Community College (CGCC)!

Whether you plan on earning a degree or a certificate, are preparing to transfer to a four-year university or simply looking to further develop in your career/personal life, CGCC can provide a path for you to reach your goals. With more than 70 associate degree and certificate programs, as well as transfer partnerships with over 40 universities—including Arizona State University, Northern Arizona University, and the University of Arizona—you'll find your fit at CGCC. This Fall we are also excited to start our very first Bachelor's Degree in Artificial Intelligence and Machine Learning offered right here at CGCC.

Since its founding in 1992, CGCC has served thousands of students in the East Valley. We pride ourselves on the excellence of our innovative faculty and staff, state-of-the-art facilities, broad array of campus life and events, and our commitment to serve our communities.

The Catalog & Student Handbook is an important resource, containing the information you need to begin your college experience. I recommend that you check out the 2025-2026 Academic Calendar, the Educational Programs, and the Student Rights and Responsibilities sections. Please feel free to contact me and any of our faculty and staff if there is anything we can do to help you. I look forward to seeing you on campus!

Welcome to Chandler-Gilbert Community College!

CJ Wurster, Ed.D.

President

ACADEMIC CALENDAR

2025-2026 Academic Calendar

Colleges may modify start dates in order to meet special needs. Dates listed below, which are directly related to instruction, refer to the traditional academic year model. Some courses may be offered over time periods for which these dates are not applicable. Dates are subject to change.

See the official Maricopa County Community Colleges Academic Calendar (https://district.maricopa.edu/regulations/admin-regs/section-2/academic-calendars) for more information.

Summer Semester 2025

Note: Subject to the 2025-2026 Catalog

Date	Event
Mon, May 19	Tuition due for Summer 2025 Semester
Mon, May 26	Memorial Day (Colleges Closed)
Tue, May 27	Summer Semester Begins
Thu, Jun 19	Juneteenth National Independence Day (Colleges Closed)
Thu, Jul 3	Independence Day (Colleges Closed)
Thu, Jul 31	Summer Semester Ends
Mon, Aug 4	Final Grades Due for Summer 2025 Semester

Fall Semester 2025

Date	Event
Wed, Aug 13	Tuition Due for Fall 2025 Semester
Fri, Aug 15	First Day of Faculty Accountability
Sat, Aug 23	Classes Begin
Mon, Sep 1	Labor Day (Colleges Closed)
Mon, Sep 22	Find a Class Opens for Spring 2026
Mon, Oct 6	Spring 2026 Priority Registration for Currently Enrolled Students
Sat+, Oct 11	Last Day for Withdrawal without Instructor's Signature
Mon++, Oct 13	Student Withdrawal with Instructor's Signature Begins
Mon, Oct 13	Spring 2026 Open Registration Begins
	Application for December 2025 Graduation*
Tue, Nov 11	Veterans Day (Colleges Closed)
Thu-Sun, Nov 27-30	Thanksgiving Day Holiday (Colleges Closed)
Sun, Dec 14	Last Day of Regular Classes
Mon-Fri**, Dec 15-19	Final Exams Week
Fri, Dec 19	Fall Semester Ends (Last Day of Faculty Accountability)
Sat, Dec 20	Mid-Year Recess Begins for Students
Mon, Dec 22	Final Grades Due for Fall 2025 Semester
Thu-Thu, Dec 25-Jan 1	Mid-Year Recess (Colleges Closed)

* For specific information concerning the last day to apply for graduation, individual class start dates, and final exams, consult the college of enrollment.

** Any classes meeting on Friday, Saturday or Sunday will have final examinations during their regular class time.

\+ Through the 7th week of 16-week classes, students may initiate an official withdrawal from course(s) without instructor signature (see Administrative Regulation 2.3.6 in Catalog Common Pages (https://district.maricopa.edu/administrative-regulations/common-pages/student-regulations)).

++ After the 7th week of 16-week classes, student must initiate an official withdrawal request from instructor and obtain their signature (see Administrative Regulation 2.3.6 in Catalog Common Pages (https://district.maricopa.edu/administrative-regulations/common-pages/student-regulations)).

Spring Semester 2026

Date	Event
Fri, Jan 2	Employees Return
Wed, Jan 7	Tuition Due for Spring 2026 Semester
Mon, Jan 12	First Day of Faculty Accountability
Sat, Jan 17	Classes Begin
Mon, Jan 19	Martin Luther King, Jr. Day (Colleges Closed)
Mon, Feb 16	Presidents' Day (Colleges Closed)
Tue, Feb 17	Find a Class Opens for Summer/Fall 2026
Mon, Mar 2	Summer/Fall 2026 Priority Registration for Currently Enrolled Students
	Application for May 2026 Graduation*
Sat+, Mar 7	Last Day for Withdrawal without Instructor's Signature
Mon++, Mar 9	Student Withdrawal with Instructor's Signature Begins
Mon-Sun, Mar 16-22	Spring Break (Colleges Closed)
Mon, Mar 23	Summer/Fall 2026 Open Registration Begins
Sun, May 10	Last Day of Regular Classes
Mon-Fri**, May 11-15	Final Exams Week
Fri, May 15	Commencement
Fri, May 15	Spring Semester Ends (Last day of Faculty Accountability)
Mon, May 18	Final Grades Due for Spring 2026 Semester

* For specific information concerning the last day to apply for graduation, individual class start dates, and final exams, consult the college of enrollment.

** Any classes meeting on Friday, Saturday or Sunday will have final examinations during their regular class time.

\+ Through the 7th week of 16-week classes, students may initiate an official withdrawal from course(s) without instructor signature (see Administrative Regulation 2.3.6 in Catalog Common Pages (https://district.maricopa.edu/administrative-regulations/common-pages/student-regulations)).

++ After the 7th week of 16-week classes, student must initiate an official withdrawal request from instructor and obtain their signature (see Administrative Regulation 2.3.6 in Catalog Common Pages (https://district.maricopa.edu/administrative-regulations/common-pages/student-regulations)).

Summer Semester 2026

NOTE: SUBJECT TO THE 2026-2027 CATALOG

Date	Event
Mon, May 18	Tuition Due for Summer 2026 Semester
Mon, May 25	Memorial Day (Colleges Closed)
Tues, May 26	Summer Semester Begins
Thu, Jun 18	Juneteenth National Independence Day (Colleges Closed)
Thu, Jul 2	Observance of Independence Day (Colleges Closed)
Thu, Jul 30	Summer Semester Ends
Mon, Aug 3	Final Grades Due for Summer 2026 Semester

DISCLAIMERS

Courses, programs, and requirements described in this catalog may be suspended, deleted, restricted, supplemented, or changed in any other manner at any time at the sole discretion of the college and the Maricopa Community College District Governing Board. This catalog does not establish a contractual relationship, but summarizes total requirements that the student must presently meet before qualifying for a faculty recommendation to the Governing Board to award a degree or certificate.

The Maricopa Community College District reserves the right to change, without notice, any of the materials—information, requirements, regulations—published in the catalog.

The Maricopa County Community College District (MCCCD) is an EEO/AA institution and an equal opportunity employer of protected veterans and individuals with disabilities. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, age, or national origin. A lack of English language skills will not be a barrier to admission and participation in the career and technical education programs of the District.

The Maricopa County Community College District does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities. For Title IX/504 concerns, call the following number to reach the appointed coordinator: 480-731-8499. For additional information, as well as a listing of all coordinators within the Maricopa College system, visit www.maricopa.edu/non-discrimination (https://district.maricopa.edu/consumer-information/non-discrimination-statements)

GENERAL INFORMATION

Vision

Chandler-Gilbert Community College will be the preferred college in the South East Valley as we deliver impactful innovative learning pathways that keep our local communities thriving.

Mission

CGCC empowers every student to unlock their full potential for growth and innovation through learning opportunities and community engagement.

Values

Collaboration- CGCC leverages the expertise of our internal and external communities, seeks shared, interest-based solutions, and brings our partners and students together as we create impactful strategies and systems that serve the targeted needs of those we serve.

Advocacy- CGCC commits to opportunities, spaces and systems that empower our faculty, staff and students to advocate for themselves, our communities and the fulfillment of our mission.

Excellence - CGCC strives for excellence in all we do with a focus on quality and continuous improvement as we find solutions, plan, implement efforts, assess outcomes, and make impactful changes to improve the success of our students, faculty, staff, and communities.

General Education Student Learning Outcomes and Indicators

Chandler-Gilbert Community College's General Education Student Learning Outcomes (SLOs) express a shared, college-wide articulation of expectations for all degree and certificate recipients. The SLOs represent a profile of our students at completion of their credential, and as such, also represent a promise to our students, their families, and our community.

Students acquire knowledge, attitudes, and skills through their coursework and in co-curricular activities. When students graduate with a degree or certificate, transfer to a university, or enter the workforce, they should have met the four Student Learning Outcomes presented below. The learning outcomes are intended to be student-centered and flexible enough to be measured using multiple forms of assessment across multiple fields of study and student experiences, both curricular and co-curricular.

In accordance with CGCC's mission and vision for student learning and development, it is the expectation that all academic disciplines will teach and assess the General Education Student Learning Outcomes in a manner appropriate to their field of study.

The assessment of student learning in all academic programs at Chandler-Gilbert Community College is a cornerstone measure of institutional effectiveness. The intent of the Student Learning Outcomes Assessment process is to evaluate the effectiveness of the General Education Program, and General Education courses, in developing the broad-based academic skills and values that exemplify a degree in higher education. Assessment planning and reporting is an essential component of CGCC's process for measuring student learning in all of its course modalities. This process aligns with the Higher Learning Commission Criterion 3 by which CGCC is measured on a routine basis.

Student Learning Outcomes directly describe what a student is expected to learn as a result of participating in academic activities or experiences at the College. They focus on knowledge gained, skills and abilities acquired and demonstrated, and attitudes or values changed. Our Student Learning Outcome assessment approach is embedded in a larger practice of continuous improvement that values authentic and meaningful evidence in planning and implementing instructional changes with the ultimate goal of improving student learning.

In general, the Student Learning Outcomes Assessment process consists of three major components:

- Defining the most important goals for students to achieve as a result of participating in an academic experience (outcomes).
- Evaluating how well students are actually achieving those goals (assessment).
- Applying the results to improve the academic experience (closing the loop).

The faculty of CGCC have identified four General Education Student Learning Outcomes:

Critical Thinking

Critical thinking is the process of appropriately analyzing, evaluating, applying and synthesizing information. It is characterized by reflection, connection of new information to existing knowledge and reasoned judgment.

Indicators

- CT.1: Application
  - Students can apply knowledge and skills in a different context or situation or task.
- CT.2: Analysis
  - Students can organize information into its component parts.
  - Students can identify relationships within information and its component parts.
- CT.3: Synthesis
  - Students can assemble parts or components to create a whole.
  - Students can originate through the use of parts or components.
- CT.4: Evaluation
  - Students can assess the relative value of ideas and information.
  - Students can justify their conclusions.

Oral Communication

Effective speech communication is the purposeful development, expression, and reception of a message through oral and nonverbal means.

Indicators

- OC.1: Message Delivery
  - Adapt the delivery of the message in context.
  - How thorough and with what completion have students adapted the delivery of the message in context?
- OC.2: Audience Analysis

    - Adapt the message for an audience.
    - How effectively have students adapted the message for an audience?
- OC.3 Message Purpose
    - Adapt the message to meet the purpose(s)
    - How effectively and consistently have students adapted the message to meet the purpose(s)?
- OC.4: Verbal Interaction
    - Adapt effective language in the conveyance of ideas and information.
    - How effectively and with what quality have students adapted language in the conveyance of ideas and information?
- OC.5: Non-Verbal Interaction
    - Utilize Paralanguage (tone, rate, volume, inflection, etc.).
    - Utilize Kinesics (facial expression, gestures, and overall movement).
    - How well can students apply Paralanguage and Kinesics?
- OC.6: Presentation Graphics Support
    - Apply graphics to support presentation.
    - How effectively do students apply graphics support to the presentation?

Information Literacy

Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.

Indicators

- Inquiry Process
    - IL.1.A: Adapt the delivery of the message in context.
    - IL.1.B: How thorough and with what completion have students adapted the delivery of the message in context?
    - IL.1.C: Formulate questions for research based on gaps or on reexamination of conflicting information.
    - IL.1.D: Determine an appropriate scope of investigation.
    - IL.1.E: Organize information in meaningful ways.
    - IL.1.F: Determine the initial scope of the task required to meet their information needs.
    - IL.1.G: Match information needs and search strategies to appropriate search tools.
- Contextual Authority
    - IL.2.A: Monitor gathered information and assess for gaps or weaknesses or multiple perspectives.
    - IL.2.B: Analyze materials for audience, context, and purpose.
    - IL.2.C: Determine the credibility of sources based on author, content, format, assignment need, etc.
- Creation Process
    - IL.3.A: Contribute to scholarly conversation at an appropriate level.
    - IL.3.B: Synthesize ideas gathered from multiple sources.
    - IL.3.C: Draw reasonable conclusions founded on the analysis of information.
    - IL.3.D: Develop an understanding that their own choices impact the purpose for which the information product will be used and the message it conveys.
- Ethical Use
    - IL.4.A: Give credit to ideas of others through proper citation and attribution.

Personal Development

Personal development involves engaging in life-long learning processes resulting in behaviors promoting student success as well as contributing to building a more equitable, empowered community and society in general through informed decision-making and responsible actions.

For proficiency, students will demonstrate the following as appropriate to discipline, course, or level of engagement:

Indicators

- PD.1: Recognizing learning as part of a process that includes continued development while identifying lessons learned and strategies for improvement.
- PD.2: Setting and monitoring short term and long-term goals.
- PD.3: Recognizing the role of behaviors, emotions, attitudes, and relationships in personal, academic, and community success and well-being.
- PD.4: Engaging in reciprocal process(es) that lead to identifying and seeking deeper understandings of community needs and stakeholders.
- PD.5: Contributing to the building/shaping of a more equitable, empowered community and society by developing positive relationships based on mutual respect and understanding.
- PD.6: Collaborating with community stakeholders identifying/creating plan(s) of action responding to identified needs based on informed decision-making.
- PD.7: Identifying actions taken to better one's self, community, and society based on informed decision-making.
- PD.8: Engaging in ethical and responsible actions that are mutually beneficial to all stakeholders.

Each of the Student Learning Outcomes are operationalized by a series of outcome indicators. Student performance on these indicators is measured to determine achievement of Student Learning Outcomes. Residential faculty members in each discipline have selected the outcome(s) and indicators for each of our courses in accordance with their Division Academic Assessment Plans. As courses are assessed at CGCC, its Dual Enrollment counterparts must also be assessed. Additionally, faculty have projected course assessment "cycles" for coming semesters and academic years.

Partnerships

The Maricopa Community Colleges have partnerships with the Arizona public universities (Arizona State University, Northern Arizona University, and the University of Arizona), and more than 40 other institutions — nationally and internationally. These transfer partnerships assist students in making a smooth transition from one institution to the next by maximizing your Maricopa credits. In addition, many university partners offer Maricopa graduates dedicated advisement as well as financial incentives such as tuition and transfer scholarships, waiver of application fees, textbook waivers, and special tuition incentives for military personnel. Visit Chandler-Gilbert's Transfer Page (https://www.cgc.edu/admissions/international-students/transfer-university) for more details.

Affiliations & Associations

Accreditation

At Chandler-Gilbert Community College, we've worked hard to ensure our certificate and degree programs meet the highest educational standards. We are proud to be accredited by the Higher Learning Commission (HLC), an independent corporation aimed at advancing the quality of higher learning in the United States. The HLC is one of two commission members of the North Central Association of Colleges and Schools, which is one of six regional accreditors in the U.S.

The Higher Learning Commission

230 S. LaSalle Street, Suite 7-500
Chicago, IL 60604
inquiry@hlcommission.org
800-621-7440

Program Accreditation

Many of CGCC's individual degrees and certificates are accredited or approved by their respective authoritative agencies. For questions about their accreditation process, contact these organizations directly.

Accreditation Commission for Education in Nursing
3343 Peachtree Road NE, Suite 850
Atlanta, GA 30326
www.acenursing.org (http://www.acenursing.org/)
404-975-5000

American Board of Funeral Service Education
992 Mantua Pike, Suite 108
Woodbury Heights, NJ 08097
www.abfse.org (http://www.abfse.org/)
816-233-3747

Arizona Peace Officer Standards and Training Board
2643 E. University Drive
Phoenix, AZ 85034
post.az.gov (http://post.az.gov/)
602-223-2514

Arizona State Board of Nursing
4747 N. 7th Street, Suite 200
Phoenix, AZ 85014
www.azbn.gov (http://www.azbn.gov/)
602-771-7800

Federal Aviation Administration
800 Independence Avenue SW
Washington, DC 20591
www.faa.gov (http://www.faa.gov/)
866-835-5322

Pecos Campus

2626 East Pecos Road
Chandler, AZ 85225-2499
480-732-7000

Located on Pecos Road between Cooper and Gilbert Roads in Chandler, the Pecos campus sits on 132 acres of land with 21 buildings including the Arnette Scott Ward Performing Arts Center, a bustling student center, and the Coyote's athletics sports fields. The Pecos campus is home to numerous associate degrees, university transfer, general studies, occupational, and special interest courses and programs. In addition the Pecos campus has partnerships and/or lease agreements with Grand Canyon University, Arizona State University, and Northern Arizona University, all of which have a physical presence on site.

Pecos Campus Map (https://www.cgc.edu/locations/pecos-campus)

Directions: The Pecos Campus is located just north of the San Tan freeway (Loop 202 south) between the Cooper and Gilbert road exits.

Williams Campus

7360 East Tahoe Avenue
Mesa, AZ 85212-0908
480-988-8000

Opened in 1995 on the former Williams Air Force Base, the Williams Campus is situated on 55 acres at the Phoenix-Mesa Gateway Airport. The Williams Campus is home to career and technical education fields - including the FAA-certified Aviation Maintenance Technology Program and offers associate degrees, certificates and a wide array of general studies and university transfer courses. In addition the Williams Campus offers CGCC's Bachelor's degree in Artificial Intelligence and Machine Learning.

Williams Campus Map (https://www.cgc.edu/locations/williams-campus)

Directions: The Williams Campus is located south of the Loop 202 San Tan Freeway, just west of the Phoenix-Mesa Gateway Airport between Power and Sossaman roads.

Sun Lakes Center

25105 South Alma School Road
Sun Lakes, AZ 85248-6101
480-857-5500

Serving the needs of mature learners with credit and non-credit classes, the Sun Lakes Center, through New Adventures in Learning (NAILs) offers a variety of classes covering a wide range of topics. For more information on NAILs: https://www.cgc.edu/community/lifelong-learning/about-new-adventures

Sun Lake Center Map (https://www.cgc.edu/locations/sun-lakes-center)

The Sun Lakes Center of CGCC is located at the northeast corner of Alma School and Riggs in Sun Lakes.

Communiversity at Queen Creek

21740 South Ellsworth Road

Queen Creek, AZ 85142
480-384-9301

The Communiversity at Queen Creek serves as a regional hub for East Valley communities and employers, providing accessible, flexible, and affordable higher education to meet the needs of today's students.

Communiversity Map (https://www.cgc.edu/locations/communiversity-queen-creek)

Chandler-Gilbert Community College at Queen Creek is located at the intersection of Ocotillo and Ellsworth roads next to the Queen Creek Library. Students can enroll, receive advisement, register for any CGCC class and attend classes at this downtown location.

STUDENT DEVELOPMENT PHILOSOPHY

The goal of Chandler-Gilbert Community College is to assure student success. Success is defined as the accomplishment of, or the continued opportunity to accomplish, students' individual goals. The success of our students will be determined not only by their acquisition of knowledge and skills, but also by their personal growth and development. This would include intellectual development, multicultural awareness, aesthetic appreciation, physical wellness, emotional well-being, community responsibility, and values clarification.

Chandler-Gilbert Community College will provide the environment in which students can identify and pursue their goals. The following general institutional practices are necessary to ensure student success:

1. To provide programs that assure student competence in specified academic and skill areas;
2. To provide a full range and schedule of services to permit students to benefit from college programs;
3. To provide simplified and clearly defined processes for admitting students, monitoring their progress and maintaining accurate academic records;
4. To provide activities that encourage students to effectively interrelate with others in their college and communities;
5. To provide opportunities for the development of self-esteem, personal identity, independence and self-direction;
6. To provide coordination with secondary and postsecondary schools, and business and industry;
7. To provide delivery of instructional services through alternative systems which prepare students to function in an increasingly technological and informational-based society; and
8. To develop and implement a comprehensive staff development program to educate the staff in student development philosophy and practices.

Chandler-Gilbert Community College will assist students in initiating their own paths to success. The college recognizes that all students are unique and capable adults, responsible for directing their own development throughout life, and that the major responsibility for a student's development rests with the student. All faculty, administrators and staff members of CGCC will support and contribute to the implementation of this student development philosophy.

COLLEGE SERVICES & REGULATIONS

- Academic Advisement (p. 14)
- Admissions, Records, and Registration (p. 14)
- Athletics (p. 14)
- Bookstore (p. 15)
- Career and Technical Education (p. 15)
- Career Services (p. 15)
- College Police Regulations (p. 15)
- Computer Labs/Testing Services (p. 16)
- Counseling (p. 16)
- Course Placement (p. 17)
- Dual Enrollment (p. 17)
- Early College (p. 17)
- Electronic Resources (p. 17)
- Enrollment Services (p. 17)
- Facilities Services (p. 18)
- Financial Aid and Scholarships (p. 18)
- Food Services (p. 18)
- Information Technology (IT) (p. 18)
- Institutional Research (p. 19)
- International Education Program (p. 19)
- Learning Center (Tutoring) (p. 19)
- Library (p. 19)
- Maricopa Community College Police Department (p. 19)
- Mathematics and Science Tutoring (p. 20)
- New Student Orientation (p. 20)
- Office of Student Recruitment (p. 20)
- Online and Hybrid Courses (p. 20)
- Parking (p. 20)
- Practical Instruction (p. 21)
- Student Business Services (p. 21)
- Student Dress Code (p. 21)
- Student Housing (p. 21)
- Student ID/Library Cards (p. 21)
- Student Identification Cards (p. 21)
- Student Immunization (p. 21)
- Student Life and Leadership (p. 21)
- Student Support and Disability Resources & Services (p. 23)
- Student Tools (p. 23)
- Travel by Students (p. 23)
- Travel Reduction Program (p. 23)
- Veterans Services (p. 23)
- Writing Center (p. 25)

Academic Advisement

Identify, plan, and achieve your career and academic goals with support from Academic Advising Services. Academic Advising Services provides students guidance and support in choosing a program of study that best aligns with their future aspirations.

Advisors assist students with academic planning and goal setting, to ensure a clear pathway to graduation. When obstacles occur, academic advisors can connect you to student support services and other campus resources to get you back on track.

New-to-college students can seek academic advisement by following our college's Enrollment Steps. As part of our Enrollment Steps, new students complete Coyote Kickoff which is a self-paced online pre-advisement-workshop, followed by an initial advising appointment with an academic advisor. Advisors will review program requirements and class placement, then recommend your first-semester classes to enroll in.

If you are not a first-time college student, you are encouraged to make a virtual appointment with an academic advisor aligned with your program of study. Students must be currently admitted to the college in order to make a scheduled appointment with an advisor via the college's Advisement website. It is recommended that all prior credit has officially been transferred and evaluated before making an appointment.

Academic Advising Services are available by appointment and virtually at cgc.edu/advisement (https://www.cgc.edu/student-resources/academic-advisement). We are located in the Coyote Center Building, on the Pecos campus, and Bluford Hall, on the Williams campus. We also can be reached by emailing advisement@cgc.edu.

Admissions, Records, and Registration

Admissions, Records, and Registration services are located in the Coyote Center at the Pecos Campus and in Bluford Hall at the Williams Campus. The office provides the following services:

- Assists with information about accessing the maricopa.edu/students (https://www.maricopa.edu/students) Online Student Center
- Processes admissions forms, class registrations, and withdrawals
- Evaluates transfer credit and other credit from prior learning
- Verifies credits for graduation
- Determines residency for tuition purposes
- Verifies athletic eligibility
- Processes official transcripts and enrollment verification requests
- Review Admissions and Standards appeals, including refund issues (requests must be in writing)

For additional information, visit admissions or call 480#732#7320.

Athletics

Chandler-Gilbert would like to welcome students to the Coyote athletic programs. CGCC is looking forward to another successful season of intercollegiate competition in the Arizona Community College Athletic Conference. CGCC student athletes not only distinguish themselves on the athletic fields, but also in the classroom, setting high standards for future CGCC athletes.

Volleyball and basketball games are played at the CGCC Coyote Center. Softball and baseball games and soccer matches are played on fields at the Pecos Campus.

For more information, visit athletics (https://www.cgccathletics.com/) or call:

Contact	Phone Number
Women's Volleyball	480-732-7363
Men's Baseball	480-732-7177
Men's & Women's Golf	480-732-7073
Men's & Women's Soccer	480-732-7073
Women's Basketball	480-732-7357
Men's Basketball	480-726-4230
Softball	480-732-7365
Athletic Trainer	480-732-7003
Athletic Director	480-732-7364
Strength Coach	480-732-7366

Bookstore

Students are able to purchase books and supplies in person at the bookstore on the Pecos Campus.

The Pecos Campus bookstore building is located northwest of the Student Center (Building SC).

Students may also purchase textbooks online and have them shipped directly to their homes at chandler.bkstr.com (http://chandler.bkstr.com/)

In addition to books and supplies, the bookstores also carry gifts, clothing, book bags, bus passes, graduation supplies, and other items.

The Bookstore allows students to pay with cash, check, or major credit cards. Complete payment and refund policies are posted at the Pecos Campus Bookstore and on the website https://www.bkstr.com/chandler-gilbertccstore/help-faq/return-policy

Call 480-732-7352 for more information about the Pecos Campus Bookstore.

Career and Technical Education

Career and Technical Education (CTE) works collaboratively and responsively with our community to meet the needs of our diverse student population in preparing them for life, work, and careers. We provide quality resources and support to educators and students that enhance classroom learning. Additionally, we support campus and community activities that enhance academic achievement, technical skills, and productive citizenship to build stronger communities. To find more information on how this area can assist you, please visit https://www.cgc.edu/academics/specialty-programs.

Career Services

Career Services offers support to students in career planning, goal setting, and job seeking strategies for the workforce. Career Services helps students prepare for their careers through career advising appointments, workshops, events, and connecting students to employers and work-based experiences.

Website: cgc.edu/careers (http://cgc.edu/careers)

Email: Career.Advisor@cgc.edu

Career Advising Appointments

Career Services offers two types of appointments:

1.
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Appointments that assist students in aligning their career
goals to a major or academic program.  Appointments include:
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- Choosing a Major
- Exploring Careers

2. Appointments that help students with job seeking skills. Appointments include:

- Resume & Cover Letter Writing Help
- Finding Jobs
- Interview Preparation
- Internships & Work-based Experiences
- On-Campus Employment/Federal Work-Study Assistance

Events

Career Services offers in-person and virtual events throughout the year including:

- Career Fairs
- Networking Events
- Career Readiness Workshops
- Job Shadowing Opportunities
- Internship Opportunities
- And more

Students can also match to jobs and internships based on their skills and interests using Maricopa Pipeline AZ, MCCCD's integrated virtual platform.

To schedule an appointment, see the calendar of events, or review Career Services resources, go to cgc.edu/careers (http://cgc.edu/careers).

College Police Regulations

Identification

College Police personnel are authorized to ask any person on campus for proper identification, should the need arise. Students failing or refusing to identify themselves properly will be:

- Asked to leave the campus (if conduct or behavior warrants such action), and
- Reported to the Vice President of Student Affairs.

Weapons

All firearms, explosives, knives, or instruments that can be construed as dangerous weapons are prohibited on campus. All persons bringing firearms or other weapons for classroom demonstrations or any other academic reason are required to bring them to the Public Safety Department for examination.

Motor Vehicles

College regulations governing motor vehicles operated by CGCC students shall be under the jurisdiction of the college administration.

Vehicle Damage or Loss

Chandler-Gilbert Community College assumes no responsibility for damage to motor vehicles, or for any loss while vehicles are parked or operated on or near the campus.

Vehicle Registration

Williams campus students and all employees who drive motor vehicles on any CGCC campus are required to register the vehicles that may be used on college property with Enrollment Services. Individuals who subsequently purchase or trade their registered vehicles must register the new vehicles. Parking in Employee, Disabled, Carpool or other specially designated stalls requires the appropriate decal and or indicator be displayed. Violators will be subject to citations and associated fines. Designated Visitor parking is available to non-affiliates of the college who are conducting temporary business on college property.

College Traffic Regulations

The following college traffic regulations are applicable to all members of the college community, including students, faculty, staff, and visitors:

1. Maximum speed limit on campus is 15 m.p.h.
2. Students and employees who have been issued parking permit decals following vehicle registration with the Public Safety Department must display the decals in accordance with current regulations.
3. Drivers must observe and comply with stop signs, pavement arrows, right-turn-only signs, and other traffic control devices. All vehicles must stop at marked crosswalks to yield to pedestrian traffic within the crosswalks.
4. Persons driving on campus must follow directions given by Public Safety officers and furnish student or other identification when so required.
5. Students may park in any parking space except those marked Visitors, Handicapped, Maintenance, Employees, No Parking, or any area with a red or yellow curb.
6. Persons having a Handicapped designation on their vehicle may use any marked space on the campus, including those marked Handicapped, except those areas with red or yellow curbs.
7. No vehicle other than an emergency vehicle may be parked along red curbs or in striped areas. These are fire-hazard and safety zones, and violators will be towed away without warning at the owner's expense.
8. No vehicle may be parked in driveways, where signs indicate No Parking, or in areas not specifically marked for parking.
9. Visitors may use student zones on a temporary basis. Visitor permits may be obtained from the Public Safety Department.
10. In angled parking spaces, no vehicle may be parked in a direction opposite the normal direction of traffic.
11. Parking of motorcycles, mopeds and bicycles:
    - Students are urged to exercise care in securing their personal property, including motor vehicles, bicycles, mopeds, and motorcycles.
    - Motorcycles and mopeds may be parked only on crossbars. Bicycles must be parked in existing bike racks only. Mopeds, bicycles, and/or motorcycles that are found chained or affixed to trees, buildings, or light posts are subject to having their chains cut and being removed to the Public Safety Department. Owners will be responsible for the cost of the lock or cut chain.

Computer Labs/Testing Services

Currently enrolled students who require computer resources have access to open Computer Labs located on the Pecos Campus in Bradshaw Hall, room BRD123, and on the Williams Campus in Bridget Hall. Open Computer Labs feature self-paced learning environments where students may study course materials, complete assignments, research information, and access scanners and printers. Computer Lab technicians, learning associates, and student assistants are available for general questions and support. Students who need assistance with assignments or materials related to a specific class should contact their instructors. Access to Computer Lab equipment is on a first-come, first-served basis and remote/virtual assistance is also provided during regular Computer Lab hours via Discord. Students requiring access to testing services may do so at the Pecos Lab where services include the ability to book appointments for make up exams and schedule HESI (for those attending the Nursing program), EC-Council, and Pearson VUE testing sessions. Our Pecos lab is also an active Certiport site where students may obtain either a Microsoft Office Specialist (MOS) or Quickbooks Certifications. Please note that hours of operation may vary each semester. Students should call 480-732-7221 or visit www.cgc.edu/cic (http://www.cgc.edu/cic) for additional information.

Counseling

Counseling is a comprehensive academic and service program designed to promote student success and personal development at Chandler-Gilbert Community College. As a professional discipline, Counseling is based on values that include respecting the dignity of all people, celebrating the dimensions of personal identity that make us unique, recognizing and building on one's strengths and abilities, and empowering individuals to identify and pursue their own life goals. We appreciate that each student enters college with different life experiences, whether entering directly from high school or returning to school after years of work or military service. It is our goal to help students to overcome challenges they may be facing and help them achieve success in their academic, career, and personal goals.

On the Pecos campus, Counseling is located in Bradshaw Hall, room BRD101. At Williams, we are located in Bluford Hall, room BLUF141. Find us online at www.cgc.edu/counseling (http://www.cgc.edu/counseling) for information about hours, maps, and current program offerings.

Associate of Arts, Emphasis in Counseling and Applied Psychological Science (CAP)

To support the next generation of counseling and other human services professionals, CGCC offers an Associate of Arts, Emphasis in Counseling and Applied Psychological Science (CAP). These courses include CAP120 Introduction to Counseling, CAP220 The Counselor in a Multicultural Society, CAP240 Introduction to Counseling Skills, and CAP260 Career and Professional Preparation for the Helping Professions. Learn more at www.cgc.edu/degrees-certificates/counseling (http://www.cgc.edu/degrees-certificates/counseling).

Individual Student Support

Counseling faculty also provide counseling support services to currently enrolled students, and assist with overcoming difficulties, problem-solving, and decision-making processes related to academic, career, and personal goal achievement. Come see us for:

Academic Counseling

- Balancing life, work, and school demands
- Organization skills and study strategies
- Time management
- Overcoming procrastination
- Test anxiety
- Navigating college, transitions, and next steps

Career Counseling

- Researching and selecting fields of interest, majors, and career pathways
- Exploring interests, values, and skills related to the world of work
- Goal setting and decision-making related to academic/career direction
- Interpretation of career assessments

Personal Support

- Solution-focused problem solving
- Support in managing emotional, social, and physical distress
- Stress management and coping skills

Crisis Support

- Supporting students, faculty, and staff to promote the safety and well-being of the campus community

Referrals

- Provide referral information for students seeking clinical mental health services, psychological assessments, and other community resources

Online Resources

- To help students manage and overcome life obstacles, we have gathered valuable resources both at CGCC and within the community.

These are located at https://www.cgc.edu/student-resources/counseling/counseling-resources. They include the following areas and more: Suicide/Crisis Support, Food & Basic Need Assistance, Domestic & Dating Violence, and Mental Health Resources. For more information, or to schedule an appointment, please refer to our website at www.cgc.edu/counseling (http://www.cgc.edu/counseling), or call 480-732-7158 during normal business hours.

Course Placement

Our colleges now use multiple placement options to determine college course placement for students. Students planning to take English, Reading, and/or Math will be advised to register for the appropriate course(s) within the first two years of enrollment based on District-approved placement methods. You can find more information regarding placement at: https://www.maricopa.edu/future-students/assessment-placement

Dual Enrollment

Dual Enrollment provides an opportunity for eligible high school students to take college level courses at their high school. These courses allow students to earn both high school and college credit for the same class. Classes meet at the high school during the regular school day and are taught by college certified instructors using approved curriculum and texts. The credits earned may be used towards a certificate or Associate's degree, and most can transfer to universities. Dual Enrollment courses let students begin their college career in a convenient and affordable way. These courses enhance learning and promote higher level cognitive skills. Best of all, transition from high school to college begins early and occurs in a familiar and comfortable environment.

To learn more about Dual Enrollment offerings with our partner school districts please visit www.cgc.edu/dual (http://www.cgc.edu/dual) or call 480-732-7006.

Early College

The Office of Early College provides programs for 9-12 students. The office oversees the following programs:

ACE Program

The ACE Program (Achieving a College Education) is an early college, two-year tuition scholarship college preparation program for high school students. The mission of the ACE Program is to increase the college success rate of underrepresented, financially disadvantaged, and/or first-generation college-bound students. Students must demonstrate evidence of commitment to completing the program while attending high school. Application for the ACE Program is made available each year in September and closes in December. Students may apply directly by visiting the ACE website (https://www.cgc.edu/admissions/high-school-students/achieving-college-education-ace). For me information about the ACE Program, please send an email to myaceadvisor@cgc.edu.

Hoop of Learning (Native American Students)

The Hoop of Learning program at CGCC is designed to provide educational opportunities for Native American students in high school grades 9 through 12 to earn college credits. Native American high school students can apply to the Hoop of Learning Program by visiting the Hoop website (https://www.cgc.edu/admissions/high-school-students/hoop-learning). The Hoop of Learning application is available each year in September and closes in December. For more information, please email the Early College Program at myaceadvisor@cgc.edu.

Electronic Resources

Students, faculty, and staff use their MEID and associated password to access the Library's electronic resources from off campus.

Enrollment Services

Enrollment services are available at the Pecos Campus in the Coyote Center and at Bluford Hall on the Williams campus. These services encompass Academic Advisement, Admissions, Records and Registration, Financial Aid and Scholarships, International Education, Veteran Services, Early College programs (including Achieving a College Education (ACE), Hoop of Learning, and Dual Enrollment), Career Services, and Coyote Kickoff: Pre-Advising Workshop. These departments help ensure student access and success by facilitating advisement, registration and retention of students.

Facilities Services

Facilities Services is responsible for the maintenance and operation of Chandler-Gilbert Community College's physical infrastructure at the Pecos Campus, Williams Campus, and the Sun Lakes Center. Facilities is responsible for grounds maintenance, preventive maintenance, workplace safety maintenance, custodial services, central plant operations, and for providing other skilled craft services to the college.

Facilities hours of operation are Monday - Friday, from 7AM to 5PM, with limited evening and weekend personnel. Facilities can be reached by calling 480-732-7285.

Financial Aid and Scholarships

The Financial Aid Office, located in Coyote Center at the Pecos Campus and in Bluford Hall at the Williams Campus, is responsible for the following student services functions:

- Financial aid
- Scholarships
- Federal Work-Study

Financial Aid Answer Center telephone number is 480-731-8900 and available 24 hours/7 days a week.

Financial Aid

CGCC is committed to providing support to students with financial need. However, students are expected to share in the expenses of attending college. The purpose of the CGCC Financial Aid Office is to assist with this responsibility by determining students' financial need and awarding assistance to eligible students. This is accomplished by evaluating all aid applications through the use of a standard financial needs analysis system that determines how much students and/or their families can afford to contribute toward the college costs. Several types of federal financial aid are available. These include:

- Pell Grant
- Supplemental Education Opportunity Grant (SEOG)
- Direct Parent Loan (PLUS)
- Work-Study – part-time employment on campus

Students must apply and qualify for financial aid each academic year. In order to be considered for assistance, students need to complete the Free Application for Federal Student Aid (FAFSA). Once the financial aid application has been completed and you are admitted to CGCC, your financial aid eligibility will be evaluated.

Some funds are awarded on a first-come, first-serve basis, so it is best to apply as early as possible before the semester of attendance. Students should complete an application online at https://studentaid.gov/h/apply-for-aid/fafsa as soon as possible each year in order to be considered for all available fund programs. Students must be making satisfactory academic progress in order to receive financial aid. Contact the Financial Aid Office for specific details: 480-731-8900 or visit the Financial Aid website at https://www.cgc.edu/admissions/financial-aid.

Scholarships for Students

Scholarships are available for prospective students as well as currently enrolled students. Because the applications and deadlines vary for each scholarship, applying early is critical. Completion of the federal financial aid application may be required for some scholarships. Visit https://www.cgc.edu/admissions/financial-aid/scholarships or contact the Financial Aid Office for applications and information.

Federal Work-Study

Federal Work-Study positions are coordinated through the Financial Aid Office and Career Services on the Pecos Campus. Visit https://www.cgc.edu/admissions/financial-aid/types-financial-aid/federal-work-study for more information.

Food Services

CGCC has a full-service dining option at the Pecos Campus: The Coyote Cafe is located in Bradshaw Hall, Room BRD133. They are open Monday-Friday from 8AM to 1:30PM during the Academic Year, and Monday - Thursday from 8AM to 1:30PM during Summer Session. The Coyote Cafe also provides catering for special events, banquets, and meetings. For questions, comments or if you need catering assistance, please call 480-732-7362.

At the Williams Campus, there is a Student Snack Area in Bridget Hall (BRID 138). This area is open and available during CGCC business hours year round. Students have access to a coffee machine featuring cold and hot brew options, tea and hot chocolate; a kiosk with cold foods such as freshly prepared sandwiches, salads, yogurts, parfaits, and frozen dinners that can be heated up; and a hot food kiosk with eight (8) different options for breakfast or lunch that can be heated in about 60-90 seconds. There are also microwaves for student use and vending machines with snacks and cold drinks. Cash, credit, and debit cards are accepted. Food kiosks can accept pre-ordered requests via the app, or by credit or debit cards.

Information Technology (IT)

Information Technology is located on the second floor of the Library at the Pecos Campus and in Bluford Hall at the Williams Campus. IT plans, designs, and integrates various college technologies in support of Student Success. IT performs ongoing operational support for computing, network, application, and media services. This includes technical support in the following areas:

- Enterprise Systems and Infrastructure
- Client/Network Support
  Computer Hardware Repair
- Desktop Applications
- IP Telephony
- Business Process Automation
- Web-based Applications
- Media Audio/Visual Systems
- Project Management

Information Technology provides technical support at the Pecos Campus, Williams Campus, Sun Lakes Center, and Communiversity at Queen Creek. CGCC's network design provides connectivity to a variety of environments including internet and wireless, in support of a multitude of computing technologies. A dedicated and professional team delivers technical services, implementation, and support for instructional and administrative systems.

For technical assistance, please call the Information Technology Helpdesk at 480-732-7025 or visit www.cgc.edu/IT (http://www.cgc.edu/IT).

Institutional Research

The Planning and Research office, located on the Pecos Campus in Mesquite Hall (MSQ), provides assistance to administrative services, as well as academic and student affairs by collecting and analyzing information used to improve the quality of education and services and ensure student success. The office accomplishes this task by coordinating the development and implementation of the college strategic plan, ensuring stakeholders have access to meaningful, reliable and timely analytics that empower informed decision-making and drive strategy, and providing appropriate research support to faculty and staff to improve the delivery of products and services. Call 480-857-5118.

International Education Program

The International Education Program (IEP) is located in the Coyote Center at the Pecos Campus.

The IEP aims to support an environment that encourages global understanding and appreciation by providing support services and programs that enhance academic, cultural and interpersonal relations efforts at the college and the community. The IEP provides the following services for international students:

- International student admissions
- New international student orientation
- Immigration advisement
- Enrollment Services (Class Registration & Class Withdrawal)
- Student engagement activities and programming
- Leadership development

The IEP also provides support for the Intercultural Exchange Club and organizes cultural activities and events to enhance cross-cultural understanding among domestic and international students on campus.

For more information, visit www.cgc.edu/international (http://www.cgc.edu/international) or call 480-732-7391.

Learning Center (Tutoring)

The Learning Center mission is to support students' academic learning by providing free tutoring and resources to reinforce and supplement classroom instruction and to assist students to achieve academic success. While the emphasis is on providing writing, mathematics, and science support, services are available for a wide range of academic courses at CGCC. Tutoring services are available on a drop-in, in person basis for many courses, by appointment for select courses and online. Resources include workshops, software, and print materials. Students must be enrolled at CGCC in the class for which they are seeking assistance. For more information, visit www.cgc.edu/lc (http://www.cgc.edu/lc) or call 480-732-7231.

Library

Pecos

Monday-Thursday, 7:30am -9:00pm
Friday, 7:30am-4:00pm
Saturday, 8:00am-2:00pm
Sunday, closed
Circulation: 480-857-5102; Reference: 480-857-5100
Email: circ@cgc.edu

Williams (Bridget Hall)

Monday-Thursday, 7:00am-8:00pm
Friday, 8:00am-2:00pm
Saturday & Sunday, closed
Circulation: 480-988-6611, Reference: 480-988-8275
Email: circwil@cgc.edu

Visit www.cgc.edu/student-resources/library (http://www.cgc.edu/student-resources/library) for the most up-to-date hours and holiday closure information.

The libraries at Chandler-Gilbert Community College offer a full range of library services that support the academic mission of the College. The libraries provide access to a full-range of information in a variety of formats including web-based, traditional print, and multimedia. Library faculty teach the identification, location, and critical evaluation of the dynamic information world. We also provide virtual and face-to-face reference assistance. Library staff assists patrons with interlibrary loan requests, course reserves, and study room reservations. The Library has 10 conference/study rooms; three library instruction classrooms; access to subscription databases; magazines, journals, and newspaper display and storage; and wireless Internet access.

Maricopa Community College Police Department

Maricopa Community Colleges Police Department are responsible for maintaining a safe, orderly, and peaceful atmosphere on campus to contribute to student development and success. It was formed with these objectives in mind, and is staffed by qualified safety personnel, including certified police officers. Maricopa Community Colleges Police are located in the Public Safety Building (PSB), at the Pecos Campus and in Bluford Hall at the Williams Campus. Students are encouraged to inform the on-duty officer about any situation that might warrant support for safety reasons (stalkers, potentially violent situations, orders of protection, etc.).

Services to students, faculty, and staff include:

- Providing safety escorts to and from parking lots upon request
- Assisting students, faculty, and staff in case of accident or injury on campus
- Providing minor assistance to motorists with disabled vehicles
- Delivering emergency messages from family to students in classes
- Enforcing parking regulations on campus
- Providing Lost and Found services
- Administering college vehicle use
- Patrolling campus
- Encouraging student, faculty, and staff participation in safety and crime prevention programs

For additional information, call 480-732-7280 at the Pecos Campus or 480-988-8888 at the Williams Campus. Information on crime prevention programs, safety policies, incident reports, and CGCC crime statistics for the previous three years can be found at www.cgc.edu/safety (http://www.cgc.edu/safety).

Emergencies

In the event of emergencies on campus, contact the Maricopa Community Colleges Police Department at 480-784-0911. Emergency telephones are located at the entrances to all parking lots of the Pecos Campus and ring directly into the Public Safety Department. Call 911 in the event of a life-threatening emergency.

Emergency Notification System

Chandler-Gilbert Community College uses a mass notification system (RAVE) in order to communicate with students and employees in the unlikely event of an emergency at the college. Student contact information (cell phone number, home phone, email address etc.) provided at the time of registration will automatically be used in the college notification system. Be assured, that students and staff will only be contacted for emergency purposes. The system will not be used for other purposes.

RAVE Guardian App

Students can download the RAVE Guardian App from the Apple App Store or Google Play. This app helps to improve:

- Safety
- Security
- Access to emergency numbers

CGCC students can authenticate their accounts with student email addresses, user names, passwords and personal profiles.

Mathematics and Science Tutoring

The Math and Science Centers are valuable resources to assist CGCC students with a variety of math and science courses by offering tutoring and resources to supplement classroom instruction. The Math and Science tutoring program at the Pecos Campus is located on the second floor of the Library, rooms LIB227, LIB228 and LIB229. At the Williams Campus, tutoring takes place in Bridget Hall, room BRID115. A schedule of tutoring hours and services is posted at the beginning of each semester. The Math and Science tutoring program offers:

- Drop-in tutoring for math, chemistry, biology, physics, engineering, and statistics
- Online tutoring for math, chemistry, biology, physics, engineering, and statistics
- Trained tutors, including math and science faculty
- Computers with mathematics, engineering, science and programming softwares
- Calculators and current textbooks
- Reference materials, handouts, science models and microscopes
- Interactive workshops focusing on a variety of mathematics and science topics

New Student Orientation

All new-to-college, degree & transfer-seeking students are required to attend Coyote Kickoff (Initial Advisement/New Student Orientation). This includes students who have earned college credit through ACE, Dual Enrollment, or Hoop of Learning programs and are now high school graduates.

At Coyote Kickoff, academic advisors and college staff assist you with registering for your first semester courses. You will learn how to access and navigate the online Student Center, discuss major and degree requirements, review important college policies, student resources, and prepare for a successful first semester at CGCC.

Office of Student Recruitment

The Office of Student Recruitment provides information to future students about various academic programs, services, and resources available at Chandler-Gilbert Community College. To schedule a campus tour or request information, call 480-732-7385, visit the web at www.cgc.edu/admissions/new-students (http://www.cgc.edu/admissions/new-students) or email recruitment@cgc.edu.

Online and Hybrid Courses

Distance learning courses also referred to as e-learning courses, are taught via the Internet and may be entirely or partly online. Courses taught partly online are identified as hybrid in CGCC class schedules. E-learning courses cover the same material as courses taught in person. To be successful in e-learning courses students should possess a reasonable level of comfort with technology and have consistent access to a computer with a reliable Internet service provider. E-learning courses are for self-motivated students who can learn independently using online tutorials and assignments. Communication among students, and between students and instructors, is mediated by Canvas. Canvas is the Learning Management System (LMS) used throughout the Maricopa Community Colleges to provide an online centralized method of delivering course material and content to students.

An **In Person** (synchronous) class meets in person at designated dates, times, and locations where students are physically present for class.

An **Online** (asynchronous) class takes place entirely online (you never attend a face-to-face class, but testing may be in person). You should expect to have weekly assignment due dates as well as to work collaboratively with your classmates.

A **Live Online** (synchronous) class takes place entirely online but students must attend virtual sessions on specified days and times.

A **Hybrid** involves both online (asynchronous) and in-person formats. Students are expected to complete online coursework as well as attend face-to-face sessions.

A **Virtual Hybrid** combines both online (asynchronous) and Live Online (synchronous) formats. Students are expected to complete online coursework as well as attend virtual sessions on specified days and times.

Parking

Students taking classes exclusively at the Pecos Campus are no longer required to obtain an MCCCD parking decal to park on campus property.

Students parking at the Williams Campus must obtain and display a current academic year CGCC Williams Campus parking permit. These may be obtained from College Safety in Bluford Hall. Permits will be issued only after the refund deadline has passed for a student's earliest-starting class. Current enrollment in Williams Campus class(es) will be verified prior to a permit being issued. Students are limited to one permit.

A new Williams Campus parking permit will need to be obtained each academic year (fall through the following spring and summer semesters).

CGCC students and employees choosing to park vehicles on Arizona State University Polytechnic campus property are required to register their vehicles and purchase and display ASU parking decals. ASU parking decals can be purchased from the ASU Polytechnic Campus Decal Sales office located in the ASU Student Affairs Complex.

CGCC students and employees are subject to ASU Polytechnic Campus parking and traffic regulations when parking on ASU Polytechnic Campus property and are also responsible for any citations and/or penalties resulting from parking violations.

Practical Instruction

Some courses and programs of study require students to participate in practical instruction, which may include internships, practicums, clinical placements, field experience or other types of hands-on demonstration by students of concepts or theories learned in instructional settings on campus or online. Practical instruction may require students to travel to approved sites throughout the Maricopa Community College District service area, and may also require students to meet eligibility requirements such as fingerprint clearance, background checks, drug testing, and operating various types of motor vehicles. Complete information on practical instruction can be found in recruitment materials and student handbooks for specific instructional programs.

Student Business Services

Student Business Services Office (SBS) at the Pecos Campus is located on the west side of the College Police Building. The SBS Office manages financial operations for the college, including tuition and fee collections and provides financial accountability to funding agencies and individuals. Students can schedule in-person or virtual appointments with the SBS Office if needed, or can call 480-732-7312 or email sbs@cgc.edu directly.

Student Dress Code

State Health Department laws and college policy require that all students wear shoes and a shirt in addition to other apparel. Academic programs may have specific dress codes and standards including but not limited to nursing, mortuary science and aviation programs. If, in the opinion of the faculty or staff member, any student's dress conflicts with the classroom procedures or the educational processes, the violator may be asked to leave the classroom or the campus. The violator may not return until the condition is corrected or the case is reviewed by the appropriate administrator who may be the department chair, dean or vice president.

Student Housing

While CGCC doesn't offer student housing, you may be able able to find an option that allows you to live near other college students through our partnership with Arizona State University (ASU) Polytechnic campus which is adjacent to the CGCC William campus. Meal plans are available to students living in ASU campus housing. Be sure you apply as far in advance of your enrollment as possible.

Students must remain in good standing and a verification of eligibility completed, to remain in residential living each term. To remain in good standing, students need to be enrolled throughout the term(s) and meet all requirements of the housing agreement. Housing accommodation is offered for Academic Year Housing (Fall Semester & Spring Semester), Spring Only Housing, and Summer Housing.

If you're interested in Student Housing, please visit https://housing.asu.edu/ for contact information and the online housing application.

Student ID/Library Cards

Student ID cards serve as a Library Card See Student Identification Cards (p. 21).

Student Identification Cards

Student identification (ID) cards are obtained from the Enrollment Services Office, located in the Coyote Center at the Pecos Campus and in the Bluford Hall at the Williams Campus. The card is used to access many of the services on campus including the Library and Fitness Center and should be kept from semester to semester.

Student Immunization

The Maricopa County Community Colleges District does not require that students receive vaccinations prior to general college admission. Certain professional or occupational programs do require particular vaccinations for participation in those programs. In order to join a program in the Healthcare Education department, there are several requirements you must meet. Maricopa Community Colleges requires all students to meet the placement requirements as set up by our program's most stringent clinical partner. This is done for ease of random placement. More information about these programs can be found on college websites, the district website (https://www.maricopa.edu/degrees-certificates/special-programs/healthcare-education/health-safety-requirements) and program pages.

To participate in ASU housing, students must comply with ASU health requirements. More information can be found at https://eoss.asu.edu/health/parents/immunization

Student Life and Leadership

All students are encouraged to participate in programs and activities sponsored by the Office of Student Life and Leadership located in the Student Center at the Pecos Campus and Bridget Hall at the Williams Campus. There are many opportunities to enhance a student's experience at CGCC by getting involved outside of the classroom.

These include leadership development, volunteer opportunities, cultural events, and an opportunity to participate in one of the many student organizations. For more information visit: https://www.cgc.edu/campus-life/student-life (https://www.google.com/url?q=https://www.cgc.edu/campus-life/student-life&sa=D&source=docs&ust=1686159565107639&usg=AOvVaw3XUUGLAUO390ozr call Pecos: (480)732-7104 or Williams: (480)988-8274.

Equity, Inclusion & Retention Programs

Male Empowerment Network (MEN)

The Male Empowerment Network provides male identifying students with resources, community, and resources in order to thrive during their time at Chandler-Gilbert Community College. To get connected to this growing community of students, reach out to justina.burks@cgc.edu.

Women Rising

Women Rising brings female identifying students together with academic support and professional resources to create a culture of success and empowerment. Contact justina.burks@cgc.edu to become part of the community.

Bridging Success

Bridging Success connects students who were in foster care with our Foster Youth Champions on campus in order to achieve their academic goals. If you are or were in the foster care system and would like to meet other similarly situated students, and get connected with our coaches and champions email: champions@cgc.edu.

Leadership Development

Getting Involved - Leadership Retreats and Leadership Activities are organized to increase students' leadership skills during the fall and spring semesters. Interested students are encouraged to call or email the Office of Student Life and Leadership at 480-732-7104 or student.life@cgc.edu.

Community Service and Volunteer Opportunities

Students are encouraged to serve and volunteer on campus and in the community in a variety of ways. Check out service opportunities here: https://cgc.campuslabs.com/engage/service-opportunities or email service.learning@cgc.edu to get involved. There are also preplanned and organized volunteer opportunities each semester called CommUNITY for students to sign up for.

Coyote Cupboard

Coyote Cupboard is a free food pantry, non-perishable and household items are available to any CGCC student or employee. CGCC is proud to partner with Mathew's Crossing Food Bank. For more information email student.life@cgc.edu

Pecos Campus: Student Center (SC) 100 or Williams Campus: Bridget Hall (BRID)

Produce Distribution

We are proud to partner with United Food Bank to serve students, staff and community members at the Pecos and Williams Campus on a monthly basis offering fresh produce. For more information regarding basic needs please visit: https://www.cgc.edu/student-resources/student-basic-needs/food-pantry/food-pantry

Service-Learning

This is an exciting teaching strategy designed to integrate community service into the classroom. This program benefits everyone involved: students, faculty members, and the community.

Adopt-A-Family Program

This program assists CGCC students with necessary food, clothing, and related resources. During the holidays, meals and gifts are provided as well. Students must complete an application or be referred by college employees. For more information, please contact student.life@cgc.edu.

CGCC Student Organizations

The list of student organizations at CGCC grows each year. Listed below are the current, officially recognized groups. Student organizations may be formed for many purposes — social, service, athletic, professional, and religious. Current information is available in the Office of Student Life and Leadership. For more information about student organizations contact student.life@cgc.edu

- Art Club
- Asian Pacific Islander Club (APIC)
- Chess Club
- Coding Club
- Collegiate DECA
- Engineering Club
- Exercise is Medicine On Campus
- Fashion Style & More (FSM)
- Intercultural Exchange Club (IEC)
- LatinX Student Organization (LSO)
- Literature Club
- One Voice
- Phi Theta Kappa (PTK)
- Pre-Health Professional Club
- Psi Beta Chapter
- Society of Women Engineers (SWE)

Coyote Esports Program

Coyote Esports is an inclusive gaming community welcoming all skill levels from casual to competitive. We provide a supportive environment for our students to compete against other community colleges and universities. Join Coyote Esports Gaming Community here: https://cgc.campuslabs.com/engage/organization/cgcc-esports-club (https://www.google.com/url?q=https://cgc.campuslabs.com/engage/organization/cgcc-esports-club&sa=D&source=docs&ust=1686159565106364&usg=AOvVaw0lOV3aM8C4PPP

How to Create a Student Organization

Student organizations can be created to meet the needs of a diverse student population. Students thinking of creating a new student organization should meet with the Director of Student Life and Leadership to learn the steps to take to have any group officially recognized at CGCC. For more information, contact student.life@cgc.edu

Co-Curricular and Multicultural Programs

Co-curricular programs are programs that refer to activities, programs, events, and learning experiences that complement what students at Chandler-Gilbert Community College are learning in the classroom. These Co-curricular opportunities connect to or mirror the academic curriculum. The office of Student Life and Leadership values diversity and inclusion by providing multicultural opportunities for students to attend heritage events and learn about different cultures. Students interested in participating in Co-curricular or Multicultural events on campus are encouraged to visit https://cgc.campuslabs.com/engage/ (https://cgc.campuslabs.com/engage) or email multicultural.cocurricular@cgc.edu.

College and Student Activities Budgets

CGCC allocates funds to a variety of college and student activities. These funds cover a host of special events, cultural celebrations, co-curricular activities, academic recognitions, service learning, and a variety of performing arts activities. Please contact the Vice President of Student Affairs' Office at 480-732-7322 for more information.

Voter Education and Registration

Students and community members have the opportunity to register to vote in the Office of Student Life and Leadership at CGCC. Voter registration is also available online at www.azsos.gov (https://www.azsos.gov) or by calling 877-THE-VOTE [877-843-8683]. Contact the Office of Student Life and Leadership at 480-732-7104 or visit www.azsos.gov (https://www.azsos.gov) for registration deadlines and election dates.

Student Support and Disability Resources & Services

This department provides student-centered support services and programs for CGCC's diverse student population and those individuals with disabilities. The department is located on the Pecos campus in the Bradshaw building (BRD101), For more information call 480-857-5188. or Williams campus in Bluford Hall (BLU101S), call 480-988-8162

Disability Resources & Services (DRS)

DRS provides access and ongoing support services to students who have a documented disability according to The Americans with Disabilities Act (ADA), and Section 504 of the Rehabilitation Act. Students will apply for services and request academic adjustments through MCCCD's DRS CONNECT system. All registered students must provide appropriate and current documentation that complies with the MCCCD documentation policy and guidelines. DRS provides education, information regarding student rights, advocacy, and implement academic adjustments that support student learning.

Student Tools

maricopa.edu/students (https://www.maricopa.edu/students) is an online student center where students can do the following:

- Apply for admission
- Register for courses
- Check class schedule
- Add/drop courses
- Request official transcripts
- View unofficial transcripts
- Check holds
- Check fee balance and pay fees
- Manage Refund method
- Sign up for a payment plan
- View financial aid
- Check student grades
- Update address/phone
- Check course availability

Travel by Students

College travel is governed by MCCCD Administrative regulation 1.15 https://district.maricopa.edu/administrative-regulations/1-fiscal-management/1-15. In general, student travel is governed by this regulation. Circumstances where student guidelines differ from the general travel regulation are identified in the policy as being specific to students only. If campus financial support is requested for attending tournaments or club functions, students must obtain campus approval prior to running for national or regional organizations and/or officer positions. All travel by individual students or student organizations should be authorized and approved, according to travel and purchasing regulations, prior to purchase or participation in travel activities. The college president may require an advisor(s) for college-sponsored student trips that involve out-of-county travel.

Travel Reduction Program

The Travel Reduction Program (TRP) began in 1989 as part of the State of Arizona's response requiring greater efforts to reduce air pollution.

Why drive alone when you can gain more with an alternate mode of transportation, improve air quality, reduce carbon emissions, decrease congestion, and reduce noise pollution - and get in on major savings!

Full-time students are encouraged to participate in Maricopa County's Travel Reduction Program (TRP). Discounted bus passes, reserved carpool parking, free showers, and contests and prizes are available to qualified participants. Interested students should check with the Student Center information desk (SC100) or contact the college Travel Reduction Coordinator for details. Complete information about the program is available at https://www.maricopa.edu/about/sustainability/travel-reduction-program-trp

Veterans Services

CGCC recognizes and honors the sacrifices of all those who have served our country in the U.S. Armed Forces. The Veterans Services Office is located in Coyote Center at the Pecos Campus and in Bluford Hall at the Williams Campus, and provides the following services:

- GI Bill® benefits counseling and processing
- Referrals for personal, career, academic counseling, enrollment services, and financial aid
- Assistance with family and transition support
- Student Veterans Organization (SVO)

Students applying for veterans benefits for the first time should allow four to six weeks before receiving benefits. The amount of benefits awarded is based on the number of credit hours attending and chapter of benefits. Those students receiving benefits must be following the Veterans Administration (VA) academic progress policy to continue to receive benefits.

Veterans Chapters Served

- Chapter 30 – Montgomery GI Bill®
- Chapter 31 – Veteran Readiness and Employment
- Chapter 33 – Post 9/11 GI Bill®
- Chapter 35 – Survivors and Dependents of Deceased/100% Disabled Veterans
- Chapter 1606 – Selected Reserve GI Bill®

For additional information, contact the Veterans Services Office at 480#726-4122 at the Pecos Campus and 480#988-8177 at the Williams Campus. Information is also available at www.cgc.edu/veterans (http://www.cgc.edu/veterans).

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA

is available at the official U.S. government website at www.va.gov/education (http://www.va.gov/education)

Approved VA Funding

Airway Science Technology, Flight Emphasis

Approved Funding for VA Flight Training for 2025-2026
Flight Standards District Office (FSDO)

Costs are calculated according to the following hourly rate: (Rates shown do not include fuel surcharge, if any)

Aircraft Rate	Solo Rate	Dual Rate	Rate
Cessna 172	$208.35/hour	$196.00/hour	
Piper Archer	$223.23/hour	$210.00/hour	
Seminole	NA	$400.00/hour	
SE Simulator			$115.00/hour
ME Simulator			$125.00/hour

Instructor Rate: $89.00 /Hour
Note: Solo Flights are subject to sales tax in the state of AZ at a rate of 6.3% which is included in the hourly rate.

2025-2026 Projected Individual Flight Training Costs – For New Students or Students Beginning Commercial/Instrument Training
These are the projected costs for flight courses for the 2025-2026 fiscal year based on anticipated rates. Course costs are based on the average number of hours it takes a student to complete the course, and may vary from student to student according to their capability and motivation. The fuel surcharge per hour will be added accordingly and is adjusted monthly. These costs and fees are adjusted annually, new rates are applied in August of each year. Financial aid may be available to assist with these costs, but applying for aid must be done well in advance. Flight costs are in addition to tuition.

Private Pilot

AET110 Private Pilot Flight (Lessons 1-30) Certification $20,623.15

Item	Hours
Instructor Time	93
S.E. Simulator	3
Piper Archer Dual	51
Piper Archer Solo	5
FAA Written[1]	(1)

[1] FAA written price of $175.00 included in the budgeted total for each applicable course

Instrument and Commercial

AET210 Commercial Flight Lab I (Lessons 1-8) $3,093.00

Item	Hours
Instructor Time	15
S.E. Simulator	3.6
Piper Archer Dual	6.4

AET220 Instrument Commercial Flight II (Lessons 1-31) $15,046.00

Item	Hours
Instructor Time	75
S.E. Simulator	13.2
Piper Archer Dual	31.8
FAA Written[1]	(1)

[1] FAA written price of $175.00 included in the budgeted total for each applicable course

AET221 Commercial Flight Lab II (Lessons 9-26) $13,220.25

Item	Hours
Instructor Time	40.7
S.E. Simulator	1.2
Piper Archer Dual	24
Piper Archer Solo	19.8

AET222 Commercial Flight Lab III (Lessons 27-44) $13,570.02

Item	Hours
Instructor Time	43.9
S.E. Simulator	2.4
Piper Archer Dual	22.5
Piper Archer Solo	20.1
FAA Written[1]	(1)

[1] FAA written price of $175.00 included in the budgeted total for each applicable course.

AET239 Commercial Flight Lab IV (Lessons 45-54) $6,239.19

Item	Hours
Instructor Time	21.5
Piper Archer Dual	10.5
Piper Archer Solo	9.5

MULTI ENGINE

AET240 Multiengine Airplane Pilot Flight Lab (Lessons 1-15) $10,921.80

Item	Hours
Instructor Time	36.2
M.E. Simulator	4
Piper Seminole	18

Flight Instructor

AET230 Certified Flight Instructor: Airplane, Single Engine Land Flight Lab Certification $12,404.00

Item	Hours
Instructor Time	61
Piper Archer	31
S.E. Simulator	1
FAA Written[1]	(2)

[1] FAA written price of $175.00 included in the budgeted total for each applicable course.

Total Estimated Flight Costs: $95,117.41. Course costs are based on the average number of hours it takes a student according to their capability and motivation.

Item	Costs
CGCC Tuition	Vary depending on residency status
Books and Flight Training Supplies (Approx.)	$1,125.00

Estimated Fuel Surcharge Throughout Program	**$2,676.00**
• AET110 Private Pilot Flight	$560.00
• AET210 Commercial Flight Lab I	$64.00
• AET220 Instrument Flight Lab	$318.00
• AET221 Commercial Flight Lab II	$438.00
• AET222 Commercial Flight Lab III	$426.00
• AET239 Commercial Flight Lab IV	$200.00
• AET240 Multiengine Airplane Pilot Flight Lab	$360.00
• AET230 Certified Flight Instructor: Airplane, Single Engine Land Flight Lab	$310.00
TSA Registration Fees (International Students Only)	$390.00 (Not Included in Total)

Total Estimated Program Cost: $98,918.41 plus CGCC Tuition

Students using veteran's educational benefits will only be certified for the actual cost and required flight hours of the program.*AET110 Private Pilot Flight Certification is a prerequisite.

Writing Center

The Writing Center is a valuable resource to assist CGCC students with their writing needs in all of their college courses. The Writing Center helps students address a wide range of writing concerns, from how to determine whether they have a good thesis, to how to organize their work, revise more effectively, and document sources accurately. The Writing Center at the Pecos Campus is located on the second floor of the Library, room LIB230. Writing tutors are also available at the Williams Campus in Bridget Hall, room BRID114. A schedule of tutoring hours and services is posted at the beginning of each semester.

The Writing Center services include:

- Individual writing sessions with knowledgeable tutors
- Drop-in tutoring (no appointment needed)
- Online tutoring (appointment may be necessary)
- Asynchronous tutoring in Canvas with electronic essay review services (EERS) (https://learn.maricopa.edu/enroll/ADL7WR)
- Reference materials and handouts
- A comfortable, quiet study area for individual or small-group work
- Computers for academic use
- Interactive workshops focusing on a variety of writing topics

MARICOPA COUNTY COMMUNITY COLLEGE DISTRICT COMMON POLICIES

Maricopa County Community College District Common Pages

The Catalog Common Pages (Catalog Common Pages (https://district.maricopa.edu/administrative-regulations/common-pages/2025-2026)) are MCCCD Administrative Regulations and Appendix items specifically relevant to students. (See Common Pages - Student Regulations Line-Up (https://district.maricopa.edu/stewardship/common-pages/student-regulations))

The Catalog Common Pages are reviewed and updated annually by the Common Pages Committee and coordinated by the District Office of Student Affairs and the District Director of Academic and Student Affairs. The Catalog Common Pages are a compiled list of Board Policies, Administrative Regulations, and program information directed toward student services support areas at the colleges. For more information, please contact:

Kishia Brock, Ph.D — Associate Vice Chancellor of Student Affairs
(480) 731-8313 | kishia.brock@domail.maricopa.edu

Helice Agria — District Director of Academic & Student Systems
(480) 731-8213 | helice.agria@domail.maricopa.edu

Ray Ostos, Ed.D — District Director of Student Affairs
(480) 731-8095| ray.ostos@domail.maricopa.edu
(ray.ostos@domail.maricopa.edu)

DEGREE REQUIREMENTS

- General Academic Policies for Associate Degrees Designed for University Transfer (p. 27)
- Arizona General Education Curriculum (AGEC) – A, B, S (p. 29)
- Associate in Arts (AA) Degree (p. 35)
- Associate in Arts, Elementary Education Degree (AAEE) (p. 38)
- Associate in Arts, Fine Arts (AAFA) (p. 42)
- Associate in Science, (AS) Degree (p. 45)
- Associate in Business, General Requirements (ABUS-GR) Degree (p. 49)
- Associate in Business, Special Requirements (ABUS-SR) Degree (p. 52)
- Associate in General Studies (AGS) Degree and General Education Requirements (p. 54)
- Associate in Applied Science (AAS) Degree and General Education Requirements (p. 75)
- Academic Certificate (AC) (p. 84)
- Bachelor of Science (BS) Degree (https://cgc-next.courseleaf.com/degree-requirements/bachelor-science-bs-degree/)

General Academic Policies for Associate Degrees Designed for University Transfer

Maricopa County Community College District (MCCCD) 2025-2026

General Academic Policies for Associate Degrees Designed for University Transfer

The following academic policies govern the associate degrees designed for university transfer Associate in Arts (AA); Associate in Arts, Elementary Education (AAEE); Associate in Arts, Fine Arts (AAFA); Associate in Business-General Requirements (ABUS-GR); Associate in Business-Special Requirements (ABUS-SR); and Associate in Science (AS).

Note that academic policies that govern the Associate in General Studies (AGS) and Associate in Applied Science (AAS) degrees are listed separately, with the requirements for each of those degrees.

- The graduation policies within the general catalog must be satisfied (see General Graduation Requirements Administrative Regulation 2.3.9 (https://district.maricopa.edu/regulations/admin-regs/section-2/2-3#9)). First Year Experience required (FYE101 or FYE103)
- Minimum semester credits for completion vary slightly by degree and specific emphasis (when applicable). Refer to the Program (Degree) Search at curriculum.maricopa.edu (http://curriculum.maricopa.edu) for credit minimums for individual degree programs.
- Credits completed toward these minimums must be in courses numbered 100 or above with a grade of "C" or better. These credits must include a minimum of 35[1] in satisfaction of the requirements of the Arizona General Education Curriculum (AGEC) along with a maximum of 6 credits towards MCCCD's Additional Requirements.
- Detailed degree requirements are maintained by the Center for Curriculum and Transfer Articulation (CCTA); refer to the program search at curriculum.maricopa.edu (http://curriculum.maricopa.edu)

General Education Requirements

The AGEC requirements include a designated number of courses approved for each of the following areas:

- First Year Composition [FYC]
- Mathematical Applications [MA], Computer/Statistics/Quantitative Applications [CS] (CS not required for Associate in Science)
- Literacy and Critical Inquiry [L]
- Humanities, Arts and Design [HU]
- Social-Behavioral Sciences [SB]
- Natural Sciences: Science Quantitative [SQ], Science General [SG]
- Awareness Area: Cultural Diversity in the U.S. [C]
- Awareness Area: Global [G] or Historical [H] Awareness

- Note that there are three different AGECs each aligning with a different subset of associate degrees—AGEC-A for the AA, AAEE, and AAFA degrees, AGEC-B for the ABUS-GR and ABUS-SR degrees, and AGEC-S for the AS degree. For some types of AGECs/Associate degrees, students are allowed to choose from a broad list of courses; for others the courses are more restricted or even specified.
- A single course can simultaneously count toward one or more areas in the following. Awareness Areas of [C]; and/or [H]/[G] may be shared with AGEC requirements. MCCCD Additional Requirements e.g. Oral Communication and Critical Reading may be shared with other AGEC requirements. For example, CRE101 may be used to satisfy both the MCCCD Reading Requirement and [L] in the AGEC core. For some degree types, other lower division courses can be used to meet the degree requirements.
- While multiple requirements can be met with a single course, the credits are only counted one time toward the required minimum for the degree. Except for the AGEC-S, a single course cannot be used to satisfy more than one AGEC core requirement, with the exception of Awareness Areas. For example, a course cannot be used to satisfy [HU] and [SB], but a course can be used to meet [HU] and [C], [G] and/or [H].
- The AGEC-A and AGEC-B require a minimum of 35 credits[1] and the AGEC-S requires a minimum of 36 credits[1], however, the AGEC credit count within the total credits for a degree may be under these minimums if courses are also applied toward Required Courses or Restricted Electives and the credits are counted in those areas. Awareness Areas and MCCCD's Additional Requirements may also be shared with AGEC Core Areas. Optimizing credits in this way is often recommended because some programs and universities limit transferable credits at 64.
- All MCCCD courses applied to the AGEC must be completed with a grade of "C" or better. All MCCCD courses applied to the AGEC must be accepted for transfer credit as a direct equivalent, departmental elective, or general elective credit at ASU, NAU, and UAZ according to the Course Equivalency Guide for the academic year in which the course was taken. Courses applied exclusively to the Bachelor of Applied Science are ineligible for inclusion in the AGEC.

[1] Credit minimums may be lower if students have transfer credit from ASU, NAU or UAZ for a single course that meets First Year Composition in full. See notes on individual degree policies.

Coursework Beyond General Education

- For some degree types, the additional coursework required to complete the degree is specified while others offer the student more latitude. See degree check sheets for more complete description. Consultation with an academic advisor about course selection is always recommended.
- Oral Communication and Critical Reading are MCCCD Additional Requirements required for Associate in Arts, Associate in Arts, Elementary Education, Associate in Arts, Fine Arts and Associate in Science degrees. Refer to the Program (Degree) Search at curriculum.maricopa.edu (http://curriculum.maricopa.edu) for acceptable options to meet these requirements for individual degree programs.
- Within the Restricted Electives, course recommendations are made for specific transfer institutions. Students should select a transfer plan (group of courses) based on their intended transfer institution. However, not all transfer institutions are reflected in these recommendations. Therefore, students may instead meet the minimum number of Restricted Elective credits using a combination of courses from the transfer plans listed. Restricted Electives should be selected in consultation with an academic, faculty, or program advisor.
- Note that some majors require up to a 4th semester proficiency (202-course level) in a non-English language. Students should consult with an academic advisor to discuss options to complete these requirements.
- General Electives may need to be selected to meet the minimum total credits required for the degree. Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives, (e.g., HISELC for a history elective), or general electives (GENELC) that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree. Transfer advisement information is accessible on the following websites: aztransfer.com/tools/ (http://aztransfer.com/tools/), curriculum.maricopa.edu (http://curriculum.maricopa.edu), as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.
- Any course cross-referenced under another prefix(es) (for example ENH291/EDU291 Children's Literature) covers identical content and its credits can only be counted once toward requirements.

Transfer Credit from Institutions Outside of MCCCD

- Credits transferred from outside of MCCCD must be at a grade of "C" (2.0 on a 4.0 scale) or better. Transfer credit graded pass/fail or pass/no credit may be used to satisfy AGEC requirements if documentation collected by the community college indicates that this was the only grading option available and that the Pass grade ("P") is equivalent to a "C" or better.
- External courses evaluated either as equivalent to an MCCCD course or as elective credit may be applied toward the minimum credits for degree completion.
- The AGEC (Arizona General Education Curriculum) designations of courses completed at other Arizona public colleges or universities will be applied as listed on AZTransfer's Course Equivalency Guide (CEG) for the semester(s) in which the course(s) were completed. If a transcript evaluation determines there is no MCCCD direct equivalency to a course from another Arizona public college or university, applicability to AGEC and/or associate degree requirements will be based on the source institution's AGEC designation for the semester in which the course was completed.
- Courses from private, out-of-state, and/or online institutions (i.e., outside of the Arizona Transfer System comprised of Arizona's public community colleges, tribal colleges and universities) will be applied toward AGEC and/or associate degree requirements based on the courses' evaluated MCCCD equivalence. If courses are not directly equivalent, the credit may be articulated as a departmental elective, and if deemed appropriate, may have a general education designation applied to the course.
- Courses with different credit systems (quarter hours, trimester, units) are converted to semester credit hours. A deficiency in an AGEC category due to quarter-hour or other credit system application must be recovered by additional credits to a total of 35 AGEC credits overall (or 32 credits overall if a student transfers in a single course from an Arizona public university that fulfills the First Year Composition requirement).
- Credit awarded at a Maricopa Community College through prior learning assessment is transferable to the other colleges in the district but is not necessarily transferable to other colleges and universities. No more than 20 such assessed semester credit hours may be applied toward AGEC, and no more than 30 credits (including up to 20 toward AGEC) may be applied toward a degree.

Completion and Transfer

- Completion of the AGEC with a minimum Grade Point Average of at least 2.0 on a 4.0 scale for Arizona residents and 2.50 for non-residents meets Arizona public university general admission requirements. It does not ensure admission to specific university majors or programs with selective admission processes and/or limited enrollment.
- While MCCCD's associate degrees are designed to facilitate a seamless transfer to other Arizona institutions, courses may be transferable and/or meet associate degree requirements, but may not necessarily meet the specific requirements of a particular degree, major, or area of emphasis at another institution.

  Students planning to transfer to another college or university are urged to refer to university requirements and academic advisors from both institutions to be certain that all their selected coursework is applicable to the requirements of their intended transfer degree and within their allowed transferable credit limit. For some majors, the statewide Common Course matrix and AZTransfer Major Guides at aztransfer.com/tools/ (http://aztransfer.com/tools/) and/or university transfer guides can also provide some guidance. For appropriate course selection, students should consult with an academic advisor.

For the most current information regarding common policies degree requirements, log on to https://district.maricopa.edu/stewardship/maricopa-governance/common-pages/student-regulations

Arizona General Education Curriculum (AGEC) – A, B, S

Maricopa County Community College District (MCCCD) 2025-2026

Description

The Maricopa County Community College District Arizona General Education Curriculum (MCCCD AGEC) is a general education certificate that fulfills lower-division general education requirements for students planning to transfer to any Arizona public community college or university. Generally, the MCCCD AGEC transfers as a block without loss of credit. In most cases, all courses used to satisfy the MCCCD AGEC will apply to graduation requirements of the university major for which the AGEC was designed.

As described below, the AGECs are a component of most MCCCD associate degrees and comparable degrees at other Arizona public community colleges. The AGEC-A defines the general education requirements in the Associate in Arts (AA), Associate in Arts, Elementary Education (AAEE), and the Associate in Arts, Fine Arts (AAFA) degrees. The AGEC-B defines the general education requirements in the Associate in Business-General Requirements (ABUS-GR) and Associate in Business-Special Requirements (ABUS-SR) degrees. The AGEC-S defines the general education requirements in the Associate in Science (AS) degree.

As described in more detail below, all AGECs require designated courses in First Year Composition [FYC], Literacy and Critical Inquiry [L], Mathematical Studies [MA], Social-Behavioral Sciences [SB], Humanities, Design and Fine Arts [HU], and Natural Science [SQ/SG]. Students must satisfy two Awareness areas as well: Cultural Diversity in the U.S. and either Global Awareness or Historical Awareness. In addition, the AGEC-A and AGEC-B require a Computer/Statistics/Quantitative Applications course [CS] that is not required for students pursuing the AGEC-S.

Purpose of the AGECs

AGECs were designed to articulate with different academic majors at the state universities, and their particular requirements vary accordingly. In some major-specific pathways, students are allowed to choose from a broad list of courses to satisfy the AGEC requirements, and for others the courses are more restricted or even specified. Additional information on academic majors at the Arizona public universities can be accessed via the following website: aztransfer.com/tools (https://aztransfer.com/tools/)

1. The **AGEC-A** is designed to satisfyGeneral Education requirements in many liberal arts majors as well as other majors that articulate with an Associate in Arts degree (e.g., social sciences, fine arts, humanities, elementary education). AGEC-A requires a minimum of college mathematics or college algebra to satisfy the Mathematics [MA] requirement.
2. The **AGEC-B** is designed to satisfy requirements in business majors that articulate with the Associate in Business (ABUS-GR, ABUS-SR). AGEC-B requires a minimum of brief calculus to satisfy the Mathematics [MA] requirement.
3. The **AGEC-S** is designed to satisfy requirements in majors with more prescriptive mathematics and mathematics-based science requirements such as many in the sciences, technology, engineering and mathematics. AGEC-S requires a minimum of the first course in a calculus sequence to satisfy the Mathematics [MA] requirement, and a minimum of eight (8) credits of either university chemistry, university physics, general biology for majors, or physical and historical geology to satisfy the Natural Sciences [SQ/SG] requirement. In addition, students must select six (6)- to ten (10) additional credits of Subject Options composed of math and/or science appropriate to their major.

Academic Policies that Govern the AGEC A, B, S

- Requires completion of at least 35 credit hours (for AGEC-A and AGEC-B) and 36 credit hours (for AGEC-S) in courses numbered 100 and above that have been approved for one or more AGEC designations; a minimum of 12 of those credits must be completed at one or any combination of the MCCCD colleges. See First Year Composition [FYC] notes in the following AGEC descriptions and footer for credit minimum exceptions.[1]
- All MCCCD courses applied to the AGEC must be completed with a grade of "C" or better.
- All MCCCD courses applied to the AGEC must be accepted for transfer credit as a direct equivalent, departmental elective, or general elective credit at ASU, NAU, and UAZ according to the Course Equivalency Guide (https://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG) at for the academic year in which the course was taken. Courses approved for transfer exclusively toward the Bachelor of Applied Science are ineligible for inclusion in the AGEC.
- A single course can simultaneously count toward one or more Awareness Areas and other AGEC requirements. For example, an approved course in world geography may be used to satisfy [SB] and [G] requirements. While multiple requirements can be met with a single course, the credits for that course are only counted one time toward the required minimum total for the AGEC. Except as detailed below for the AGEC-S, a single course cannot be used to satisfy more than one AGEC requirement, with the exception of Awareness Areas. While multiple requirements can be met with a single course, the credits are only counted one time toward the required minimum for the degree. Except as detailed below for the AGEC-S, a single course cannot be used to satisfy more than one AGEC core requirement other than Awareness Areas. For example, for AGEC-A and AGEC-B, a single course cannot be used to satisfy both [HU] and [SB], but it could be used to meet [HU] and [C], [G] and/or [H].
- Awareness Areas and MCCCD's Additional Requirements may also be shared with other AGEC Requirements. Optimizing credits in this way is often recommended because some programs and universities limit transferable credits at 64.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Transfer Credit from Institutions Outside of MCCCD

- Credits transferred from outside of MCCCD must be completed with a grade of "C" (2.0 on a 4.0 scale) or better. Transfer credit graded pass/fail or pass/no credit may be used to satisfy AGEC requirements if documentation collected by the community college indicates that this was the only grading option available and that the Pass grade ("P") is equivalent to a "C" or better.
- The AGEC (Arizona General Education Curriculum) designations of courses completed at other Arizona public colleges or universities will be applied as listed on AZTransfer's Course Equivalency Guide (https://aztransfer.com/tools/) (CEG) at aztransfer.com/tools/ (https://aztransfer.com/tools/) for the semester(s) in which the

course(s) were completed. If a transcript evaluation determines there is no MCCCD direct equivalency to a course from another Arizona public college or university, applicability to AGEC and/or associate degree requirements will be based on the source institution's AGEC designation for the semester in which the course was completed.

- Courses from private, out-of-state, and/or online institutions (i.e., outside of the Arizona Transfer System composed of Arizona's public community colleges, tribal colleges and universities) will be applied toward AGEC and/or associate degree requirements based on the courses' evaluated MCCCD equivalence. If courses are not directly equivalent, the credit may be articulated as a departmental elective, and if deemed appropriate, may have a general education designation applied to the course.
- Courses with different credit systems (quarter hours, trimester, units) are converted to semester credit hours. A deficiency in an AGEC category due to quarter-hour or other credit system application must be recovered by additional credits to a total of 35 AGEC credits overall (or 32 credits overall if a student transfers in a single course from an Arizona public university that fulfills the First Year Composition requirement).
- Credit awarded at a Maricopa Community College through prior learning assessment in a non-traditional setting is transferable to other colleges in the MCCCD district but is not necessarily transferable to other colleges and universities outside of the MCCCD system. No more than 20 such assessed semester credit hours may be applied toward AGEC.

Completion and Transfer

- Completion of the AGEC with a minimum grade point average of 2.0 for Arizona residents and 2.50 for non-residents (on a 4.0 scale) meets Arizona public university general admission requirements. It does not ensure admission to specific university majors or programs with selective admission processes and/or limited enrollment.

Students planning to transfer to another college or university are urged to refer to university requirements and academic advisors from both institutions to be certain that all their selected coursework is applicable to the requirements of their intended transfer degree. For some majors, the statewide Common Course matrix, AZTransfer Pathway Guides and/or University Transfer Guides posted on the AZTransfer website (https://aztransfer.com/tools/) on aztransfer.com/tools/ (https://aztransfer.com/tools/) can also provide some guidance. For appropriate course selection, students should consult with an academic advisor.

AGEC Requirements

Descriptions and definitions of the requirements for each of the three AGECs follow. The following website identifies the courses that apply to the different requirements within each AGEC for a given academic year: AGEC matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075). AGEC designations are subject to change. It is important to verify a course's AGEC value in the semester it is taken. For convenience, this information is provided for the current and upcoming semester in the "Find a Class (https://classes.sis.maricopa.edu/)" tool on maricopa.edu (http://maricopa.edu/) and on each MCCCD college's website as well as in the AGEC matrix provided by AZTransfer (https://aztransfer.com/tools/) at aztransfer.com/tools/ (https://aztransfer.com/tools/).

Note that for students pursuing an associate degree with a specific emphasis (for example: Associate in Arts, Emphasis in History, Associate in Arts, Fine Arts, Emphasis in Theatre, Associate in Science, Emphasis in Physics), the AGEC course requirements are usually more prescriptive. Students pursuing a major-specific pathway should consult the Program (Degree) Search at curriculum.maricopa.edu (https://curriculum.maricopa.edu) (click on Current Programs) for specific degree and AGEC requirements. Consultation with an academic advisor about course selection is always recommended.

Arizona General Education Curriculum-Arts (AGEC-A) Requirements

Credits: 35 (min)[1]

The AGEC-A requires a minimum of 35 credits (32 if [FYC] is met by single transfer course)[1]; courses applied to meet AGEC-A requirements vary by emphasis.

Refer to the Program (Degree) Search at curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) for specific course requirements.

The Required Courses and/or Restricted Electives for some areas of Emphasis may also have AGEC designations including one or more of the Awareness Areas ([C], [G] and/or [H]). A single course may meet more than one requirement but its credits are only counted once toward the total for the degree. AGEC designations are subject to change. See AGEC matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Code	Title	Credits	Semester
First-Year Composition (FYC)			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L)			_____
Select three credits		3	_____
Mathematical Applications (MA)			_____
Select one of the following:		3-6	_____
College Mathematics			_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
College Algebra			_____
MAT150	College Algebra/ Functions		_____

MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Pre Calculus			_____
MAT187	Precalculus		_____
MAT188	Precalculus		_____
Higher (MA)-approved Course			_____
Higher (MA)-approved general education course			_____
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			_____
Computer/Statistics/Quantitative Applications (CS)			_____
Select three credits		3	_____
Humanities, Arts and Design (HU)			_____
Students are encouraged to choose course work from more than one discipline.		6	_____
Social-Behavioral Sciences (SB)			_____
Students are encouraged to choose course work from more than one discipline.		6	_____
Natural Sciences (SQ/SG)			_____
The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four credits each. Credits for lecture and lab components may be combined or each may carry separate credits. At least four (4) credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement.		8	_____
Awareness Areas			_____
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. Credits for such shared courses may only be counted once. [2]		0-6	_____
Cultural Diversity in the United States (C)			_____
Global Awareness (G) **or** Historical Awareness (H)			_____
			_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075), at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for current course values.

Arizona General Education Curriculum-Business (AGEC-B) Requirements

Credits 35[1] (min)

The AGEC-B requires a minimum of 35 credits (32 if FYC is met by single transfer course)[1].

The Required Courses and/or Restricted Electives for corresponding Associate's degree may also have AGEC designations including one or more of the Awareness Areas ([C], [G] and/or [H]). A single course may meet more than one requirement but its credits are only counted once toward the total for the degree.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Code	Title	Credits	Semester
First-Year Composition (FYC) [1]			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L)			_____
Select three credits		3	_____
Mathematical Applications (MA)			_____
Select one of the following:		3-5	_____
MAT212	Brief Calculus		_____
MAT213	Brief Calculus		_____
Higher (MA) designated course			_____
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			_____
Computer/Statistics/Quantitative Applications (CS)			_____
CIS105	Survey of Computer Information Systems	3	_____

Humanities, Arts and Design (HU)			_____
Students are encouraged to choose course work from more than one discipline.		6	_____
Social-Behavioral Sciences (SB)			_____
ECN211	Macroeconomic Principles	3	_____
ECN212	Microeconomic Principles	3	_____
Natural Sciences (SQ/SG)			_____
The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four (4) credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four (4) credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement.		8	_____
Awareness Areas			_____
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. Credits for such shared courses may only be counted once. [2]		0-6	_____
Cultural Diversity in the United States (C)			_____
Global Awareness (G) **or** Historical Awareness (H)			_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for current course values.

Arizona General Education Curriculum-Science (AGEC-S) Requirements

Credits 36 (min)

The AGEC-S requires a minimum of 36 credits (33 if FYC is met by single transfer course)*; courses applied to meet AGEC-S requirements vary by emphasis.

Refer to the program (Degree) Search at curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) for specific course requirements. The Required Courses and/or Restricted Electives for some areas of Emphasis may also have AGEC designations including one or more of the Awareness Areas ([C], [G] and/or [H]). A single course may meet more than one requirement but its credits are only counted once toward the total for the degree.

Some courses have been approved for more than one AGEC designation (see AGEC matrix). For the AGEC-S only, a single course with an [L] designation may be used to satisfy a second AGEC requirement (as well as any approved Awareness Areas). Only courses with [L] designations may be shared in this way.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Code	Title	Credits	Semester
First-Year Composition (FYC)			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L) [2]			_____
Students pursuing AGEC-S and/or AS degree are strongly encouraged to choose an [L] course that also has [HU] or [SB] designation or to use CRE101 or COM225 from the Maricopa Additional Requirements Area to satisfy the [L] requirement. The [L] course selected may also have been approved to satisfy one or more Awareness Areas ([C], [G], [H]). Thus, a single [L] course could potentially meet another AGEC requirement as well as one or more Awareness areas. [3]		0-3	_____
Mathematical Applications (MA)			_____
Requires the first semester of calculus courses designed for scientists and engineers (MAT220 or MAT221) or any other [MA] designated course for which Calculus I is a prerequisite.		4-5	_____
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			_____
Humanities, Arts and Design (HU)			_____
A single course approved for both [L] and [HU] designations may be used to satisfy both requirements. This policy is unique to AGEC-S and to [L] courses. A course approved for both [HU] and [SB] can be counted for one or the other designation, not both. AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.Physical Geology: Dynamic Earth Lab [5]		6	_____

Social-Behavioral Sciences (SB)			_____
A single course approved for both (L) and (SB) designations may be used to satisfy both requirements. This policy is unique to AGEC-S and to (L) courses. A course approved for both (SB) and (HU) can be counted for one or the other designation, not both. AGEC designations are subject to change. [5]		6	_____
Natural Sciences (SQ/SG)			_____
Students must complete eight (8) credits of General Chemistry, University Physics, General Biology for Majors, or Physical and Historical Geology. Consult specific requirements of university transfer major or associate degree with corresponding emphasis for guidance.			_____
Select one of the following sequences:		8-10	_____
General Chemistry			_____
CHM150 & CHM151LL & CHM152 & CHM152LL	General Chemistry I and General Chemistry I Laboratory and General Chemistry II and General Chemistry II Laboratory		_____
CHM150 & CHM151LL & CHM152AA	General Chemistry I and General Chemistry I Laboratory and General Chemistry II with Lab		_____
CHM151 & 151LL & CHM152 & CHM152LL	General Chemistry I and General Chemistry I Laboratory and General Chemistry II and General Chemistry II Laboratory		_____
CHM151 & 151LL & CHM152AA	General Chemistry I and General Chemistry I Laboratory and General Chemistry II with Lab		_____
CHM150AA & CHM152 & CHM152LL	General Chemistry I with Lab and General Chemistry II and General Chemistry II Laboratory		_____
CHM151AA & CHM152 & CHM152LL	General Chemistry I with Lab and General Chemistry II and General Chemistry II Laboratory		_____
CHM150AA & CHM152AA	General Chemistry I with Lab and General Chemistry II with Lab		_____
CHM151AA & CHM152AA	General Chemistry I with Lab and General Chemistry II with Lab		_____
University Physics			_____
PHY121 & PHY131	University Physics I: Mechanics and University Physics II: Electricity and Magnetism		_____
General Biology for Majors			_____
BIO181 & BIO182	General Biology (Majors) I and General Biology (Majors) II		_____
BIO181 & BIO182XT	General Biology (Majors) I and General Biology (Majors) II		_____
BIO181XT & BIO182	General Biology (Majors) I and General Biology (Majors) II		_____
BIO181XT & BIO182XT	General Biology (Majors) I and General Biology (Majors) II		_____
Physical and Historical Geology			_____

GLG101 & GLG103	Physical Geology: Dynamic Earth Lecture and Physical Geology: Dynamic Earth Lab		_____
or GLG101IN	Physical Geology: Dynamic Earth		_____
and			_____
GLG102 & GLG104	Historical Geology: Primordial to Present Lecture and Historical Geology: Primordial to Present Lab		_____
or GLG102IN	Historical Geology: Primordial to Present		_____
Subject Options - Math/Science			_____
Students should refer to transfer resources, including academic advisement, transfer guides and/or requirements for associate degree with corresponding area of emphasis, to select six (6)-ten (10) additional math and/or science credits that meet requirements for selected major.		6-10	_____
This Math/Science requirement can be met by selecting Mathematics course(s) (MAT) that require Calculus I as a prerequisite and/or Computer Science course(s) (CSC) and/or additional Science courses from the following disciplines: Astronomy, Biology, Botany, Chemistry, Engineering, Environmental Science, Geology, Physical Geography, Physics, Zoology (MCCCD prefixes AST, BIO CHM, ECE, EEE, ENV, GLG, GPH, and/or PHY)			_____
Awareness Areas			_____
Courses may be used to satisfy other AGEC requirements and one or more Awareness Area(s). [6]		0-6	_____
Cultural Diversity in the United States (C)			_____
Global Awareness (G) **OR** Historical Awareness (H)			_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] 0 only if shared with HU or SB

[3] Or to use CRE101 College Critical Reading and Critical Thinking or COM225 Public Speaking from the Maricopa Additional Requirements Area to satisfy the (L) requirement.
It may also have been approved to satisfy one or more Awareness Areas ([C], [G], [H]). (AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken.)

[4] MAT220 Calculus with Analytic Geometry I or MAT221 Calculus with Analytic Geometry I

[5] AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for each course's value(s) in the semester it is taken.

[6] See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for current course values.

AGEC-Area Requirements Descriptions/Definitions

First-Year Composition (FYC)

First-Year Composition courses emphasize skills necessary for college-level expository writing, including correct grammar and punctuation, logical organization of ideas, and identification of supporting documentation.

Literacy and Critical Inquiry [L]

In the [L] course students, typically at the sophomore level, gather, interpret, and evaluate evidence and express their findings in writing or speech. This course includes a series of graded written or spoken formal assignments.

Literacy is defined broadly as communicative competence in written and oral discourse; critical inquiry is defined as the gathering, interpreting, and evaluating of evidence. Building on the proficiency attained in traditional First-Year Composition courses, the Literacy and Critical Inquiry [L] requirement sustains and extends students' ability to thoughtfully use and critically analyze written and/or spoken language.

Mathematical Applications [MA]

The Mathematical Studies requirement is intended to ensure that students have requisite skill in mathematics appropriate for their discipline and can apply mathematical analysis in their chosen fields.

Computer/Statistics/Quantitative Applications [CS]

AGEC-A and AGEC-B require a course that emphasizes the use of statistics, other mathematical methods, computer programming languages and/or software in the interpretation of data and in describing and analyzing quantitative relationships.

Humanities, Arts and Design [HU]

The study of the humanities and the disciplines of art and design deepen awareness of the complexities of the human condition and its diverse histories and cultures. Courses in the humanities are devoted to the production of human thought and imagination, particularly in philosophical, historical, religious and artistic traditions. Courses with an emphasis in fine arts and design are devoted to the study of aesthetic experiences and the processes of artistic creation. They may also feature a design emphasis in which material culture is studied as a product of human thought and imagination.

Social-Behavioral Sciences [SB]

Social-Behavioral Sciences provide scientific methods of inquiry and empirical knowledge about human behavior, both within society and within individuals. This area of emphasis in general education curriculum may include study of such disciplines as anthropology, economics,

history, political science, psychology, or sociology. The courses in this area address the challenge of understanding the diverse natures of individuals and cultural groups who live together in a complex and evolving world.

Natural Sciences [SQ/SG]

In addition to an understanding of basic scientific principles and concepts, courses in the Natural Sciences are designed to help students appreciate, from firsthand laboratory and/or field research experience, the nature of science as a process that embraces curiosity, inquiry, testing, and communication to better understand natural phenomena At least one of the two natural science courses must include an introduction to the fundamental behavior of matter and energy in physical or biological systems.

Awareness Areas

Students must satisfy two Awareness areas: Cultural Diversity in the U.S. and either Global Awareness or Historical Awareness. Courses can satisfy other AGEC requirements and one or two Awareness areas simultaneously. Therefore, no additional semester credits are required to satisfy the two Awareness areas provided courses selected are approved for those designations (see AGEC matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/1/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec)).

Cultural Diversity in the United States [C]

The contemporary "culture" of the United States involves the complex interplay of many different cultures that exist side by side in various states of harmony and conflict. U.S. history involves the experiences not only of different groups of European immigrants and their descendants, but also of diverse groups of American Indians, Hispanic Americans, African Americans and Asian Americans--all of whom played significant roles in the development of contemporary culture and together shape the future of the United States. At the same time, the recognition that gender, class, and religious differences cut across all distinctions of race and ethnicity offers an even richer variety of perspectives from which to view one. Awareness of cultural diversity and its multiple sources can illuminate the collective past, present, and future and can help to foster greater mutual understanding and respect.

The objective of the Cultural Diversity area requirement is to promote awareness of and appreciation for cultural diversity within the contemporary United States. This is accomplished through the study of the cultural, social, or scientific contributions of women and minority groups, examination of their experiences in the United States, or exploration of successful or unsuccessful interactions between and among cultural groups.

Global Awareness [G]

Human organizations and relationships have evolved from being family and village centered to the modern global interdependence that is apparent in many disciplines--for example, contemporary art, business, engineering, music, and the natural and social sciences. Many serious local and national problems are world issues that require solutions which exhibit mutuality and reciprocity. These problems occur in a wide variety of activities, such as food supply, ecology, health care delivery, language planning, information exchange, economic and social developments, law, technology transfer, and even philosophy and the arts. The Global Awareness Area recognizes the need for an understanding of the values, elements, and social processes of cultures other than the culture of the United States. The Global Awareness Area includes courses that recognize the nature of other contemporary cultures and the relationship of the American cultural system to generic human goals and welfare.

Courses that satisfy the global awareness option in the requirements are of one or more of the following types:

1. Area studies that are concerned with an examination of culture-specific elements of a region of the world;
2. The study of a non-English language;
3. Studies of international relationships, particularly those in which cultural change is facilitated by such factors as social and economic development, education, and the transfer of technology; and
4. Studies of cultural interrelationships of global scope such as the global interdependence produced by problems of world ecology.

Historical Awareness [H]

The Historical Awareness Area option in the requirements aims to develop a knowledge of the past that can be useful in shaping the present and future. Because historical forces and traditions have created modern life and lie just beneath its surface, historical awareness is an aid in the analysis of present-day problems. Also, because the historical past is a source of social and national identity, historical study can produce intercultural understanding by tracing cultural differences to their origins. Even the remote past may have instructive analogies for the present.

The Historical Awareness Area consists of courses that are historical in method and content. In this area, the term "history" designates a sequence of past events or a narrative whose intent or effect is to represent such a sequence.

The requirement presumes that these are human events and that history includes all that has been felt, thought, imagined, said, and done by human beings. History is present in the languages, art, music, literature, philosophy, religion, and the natural sciences, as well as in the social science traditionally called history.

Associate in Arts (AA) Degree

Maricopa County Community Colleges District (MCCCD) 2025-2026

Description

The Maricopa County Community College District Associate in Arts (AA) degree requires a minimum of 60 semester credits for the program of study; minimum total credits vary by specific emphasis (for example, Associate in Arts, Emphasis in Psychology). Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding area of emphasis for credit minimums. A minimum grade point average of 2.0 and grades of "C" or better are required in all courses to earn the degree. The AA degree is governed by the MCCCD General Academic Policies for Degrees Designed for University Transfer.

The Associate in Arts degree includes the following components:

I. Program Prerequisites (as specified by emphasis area)
II. Required Courses
III. Restricted Electives (as specified by area of emphasis)
IV. Arizona General Education Curriculum for Arts (AGEC-A)

V. MCCCD Additional Requirements (Oral Communication and Critical Reading)

VI. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree

The Associate in Arts (AA) degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors in the Liberal Arts or programs of study other than business or science. Generally, the degree will transfer as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements.

In most cases, courses used to satisfy the MCCCD Associate in Arts (AA) will apply to general university graduation requirements of the majors that align with the AA degree; however, students need to be aware of any specific requirements of their intended major at the university to be sure they select courses that will meet them. Information regarding the articulation of the AA with majors at the Arizona public universities can be accessed via the following website: aztransfer.com/tools (http://aztransfer.com/tools/)

Degree Requirements

The requirements for the Associate in Arts (AA) follow. The AA degree requires at least 60 credits; however, minimum credits for the AA vary for a specific area of emphasis. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) and click on Current Programs to search for the corresponding area of emphasis and credit minimums; review course sequence at maricopa.edu/degrees-certificates#programs (https://www.maricopa.edu/degrees-certificates#programs).
The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-A (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/2/wo/qEBwEeu9k5ESxdFSGt3Jxw/5.0.105.5) and the AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075). Industry-recognized credentials can be counted as general electives.

Degree Requirements

I. Program Prerequisites - **Credits: Number Varies**
Program prerequisites for the AA degree vary by specific emphasis, and are neither required for all emphases nor for the AA degree without a specific emphasis Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding area of emphasis and credit minimums.

II. Required Courses - **Credits: Number Varies**
Students must complete FYE101 Introduction to College, Career and Personal Success (1) or FYE103 Exploration of College, Career and Personal Success (3) (see General Graduation Requirements Administrative Regulation 2.3.9) and select the required courses for the specific AA degree emphasis. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums.

III. Restricted Electives - **Credits: Number Varies**
Restricted electives for the AA degree vary by specific emphasis and are not required for the general AA degree without a specific emphasis. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums.

IV. Arizona General Education Curriculum-Arts (AGEC-A) - **Credits: up to 44**
The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)[1]. Courses applied to meet AGEC-A requirements vary by emphasis. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding area of emphasis and credit minimums. Any prerequisite/required/restricted elective courses that also have one or more AGEC designation(s) may be applied toward both requirements. Credits for such shared courses are only counted once toward the total credits for the degree. AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken. Some of the courses have been approved for more than one designation. Notes below will show how such courses may be used to meet multiple degree requirements.

V.

Code	Title	Credits	Semester
First-Year Composition (FYC) [1]			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L)			_____
Select three credits		3	_____
Mathematical Applications (MA)			_____
Select one of the following:		3-6	_____
College Mathematics			_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
College Algebra			_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Precalculus			_____
MAT187	Precalculus		_____

MAT188	Precalculus		_____
Higher (MA)-approved Course			_____
Higher (MA)-approved general education course			_____
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			_____
Computer/Statistics/Quantitative Applications (CS)			_____
Select three credits		3	_____
Humanities, Arts and Design (HU)			_____
Students are encouraged to choose course work from more than one discipline.		6	_____
Social-Behavioral Sciences (SB)			_____
Students are encouraged to choose course work from more than one discipline.		6	_____
Natural Sciences (SQ/SG)			_____
The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four (4) credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement.		8	_____
Awareness Areas			_____
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. (See AGEC matrix for current course values). Credits for such shared courses may only be counted once. [2]		0-6	_____
Cultural Diversity in the United States (C)			_____
Global Awareness (G) **or** Historical Awareness (H)			_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for current course values. May be met by [HU] and/or [SB] course depending on specific course(s) selected. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

VI. MCCCD Additional Requirements - **Credits: 0-6**

As noted below, courses in this area may also be applied toward AGEC-A requirements.

Code	Title	Credits	Semester
Oral Communication			_____
Select one of the following:		0-3	_____
COM100	Introduction to Human Communication (SB)		_____
COM110	Interpersonal Communication (SB)		_____
COM225	Public Speaking (L)		_____
COM230	Small Group Communication (SB)		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking (L)		_____
Equivalent as indicated by assessment			_____

VII. General Electives - **Credits: 0-28**

Select courses 100-level or higher if needed to complete a minimum of 60 semester credits but no more than a total of 64 semester credits, which is the maximum number of credits accepted toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. See General Associate Degree Academic Policies for further details, limitations, and guidelines. MCCCD has established recommended courses and sequencing to align with various "Emphasis Areas" in one of nine different "Fields of Interest." See maricopa.edu/degrees-certificates (https://www.maricopa.edu/degrees-certificates) for links to these transfer pathways.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HISELC for a history elective), or general electives (GENELC) that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree. Transfer and major guides are accessible on the following websites: aztransfer.com/tools (http://aztransfer.com/tools/), maricopa.edu/degrees-certificates/university-transfer/partners (http://maricopa.edu/degrees-certificates/university-transfer/partners), as well as those

of individual universities. For appropriate course selection, students should consult with an academic advisor.

Associate in Arts Total Credits: 60-64[1]

[1] 64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer information.

Associate in Arts, Elementary Education Degree (AAEE)

EDUCATION

Maricopa County Community Colleges (MCCCD) 2025-2026

Description

The Maricopa County Community College District Associate in Arts, Elementary Education (AAEE) degree requires a minimum of 60 semester credits for the program of study. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better in all courses are required to earn the degree. The AAEE degree is governed by the MCCCD General Academic Policies for Transfer Degrees. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding 8101 AAEE. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better are required in all courses to earn the degree. The AA degree is governed by the MCCCD General Academic Policies for Transfer Degrees (https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies).

The Associate in Arts, Elementary Education degree includes the following components:

I. Required Courses
II. Restricted Electives
III. Arizona General Education Curriculum for Arts (AGEC-A)
IV. MCCCD Additional Requirements (Oral Communication and Critical Reading)

Purpose of the Degree

The Associate in Arts, Elementary Education (AAEE) degree is designed for the student who plans to transfer to an Elementary Education, Early Childhood, Multicultural/Multilingual, or Special Education program at an Arizona public higher education institution and/or who plans to become a classroom instructional aide. Generally, the degree transfers as a block without loss of credit to Arizona's public universities, and in most cases, its required courses apply to graduation requirements for these Education majors. The AAEE is also embedded within the Bachelor of Arts, Elementary Education and Special Education (BAEE/SPED) offered by the Maricopa Community Colleges.

Degree Requirements

The requirements for the Associate in Arts in Elementary Education follow. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/2/wo/qEBwEeu9k5ESxdFSGt3Jxw/5.0.105.5) and the AGEC matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) report at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://catalog.cgc.edu/degree-requirements/associate-arts-elementary-education-degree-aaee/aztransmac2.asu.edu/cgi-bin/WebObjects/agec/). Courses available for both Areas during a current or upcoming semester can also be found using the "Find a Class (https://classes.sis.maricopa.edu/)" tool on maricopa.edu (https://www.maricopa.edu/) and on each MCCCD college's website. Course sequence is available at maricopa.edu/degrees-certificates#programs (https://www.maricopa.edu/degrees-certificates#programs).

Degree Requirements

I. **Required Courses - Credits: 14-20**

Code	Title	Credits	Semester
EDU221	Introduction to Education	3	_____
EDU222	Introduction to the Exceptional Learner	3	_____
EDU230	Cultural Diversity In Education	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Select one of the following:			_____
MAT256	Investigating Quantity: Number, Operations and Numeration Systems	4	_____
MAT257	Investigating Geometry, Probability and Statistics	4	_____

II. **Restricted Electives - Credits: 8**

A total of eight (8) semester credits is required to satisfy the Electives for Arizona Professional Teacher Standards: three (3) credits in an additional Education course and five (5) credits in Content Area Electives.

Courses must transfer to all public Arizona universities as elective credit, departmental elective, or equivalent to a university course as indicated in the Arizona Course Equivalency Guide (https://aztransfer.com/tools/) (found at https://aztransfer.com/tools) in effect when the course is taken. Courses identified as non-transferable in the Arizona Course Equivalency Guide cannot be used to satisfy this requirement.

Code	Title	Credits	Semester
Restricted Electives			_____
Select one (1) additional EDU course: [1]		3	_____
EDU220	Introduction to Serving English Language Learners (ELL) (Recommended)		_____
EDU236	Classroom Relationships (Recommended)		_____
EDU/HUM/ STOOR292	The Art of Storytelling (Recommended)		_____
Content Area Electives			_____
Choose any combination from the following list of courses and prefixes to total five (5) credits of additional coursework: [2]		5	_____
ARH+++	Any ARH Art Humanities course(s)		_____
ART+++	Any ART Art course(s)		_____
BPC+++	Any BPC Business-Personal Computers course(s)		_____
CFS/ ECHOR176	Child Development		_____
CFS205	Human Development		_____
CIS+++	Any CIS Computer Information Systems course(s)		_____
ECN+++	Any ECN Economics course(s)		_____
EDU+++	Any EDU Education course(s) [1]		_____
EED215	Early Learning: Health, Safety, Nutrition and Physical Fitness		_____
or CFS123 & CFS125	Health and Nutrition in Early Childhood Settings and Safety In Early Childhood Settings		_____
ENG+++	Any ENG English course(s)		_____
ENH+++	Any ENH English course(s)		_____
GCU+++	Any GCU Cultural Geography course(s)		_____
GPH+++	Any GPH Physical Geography course(s)		_____
HIS+++	Any HIS History course(s)		_____
MAT+++	Any MAT Mathematics course(s) 140 or higher [2]		_____
MHL+++	Any MHL Music: History/ Literature course(s)		_____
MTC+++	Any MTC Music: Theory/ Composition course(s)		_____
POS+++	Any POS Political Science course(s)		_____
THE+++	Any THE Theatre course(s)		_____
THF+++	Any THF Theatre and Film course(s)		_____
THP+++	Any THP Theatre Performance/ Production course(s)		_____
Any Foreign Language course(s)			_____
Any Natural Science course(s)			_____

[1] Other than EDU221 Introduction to Education, EDU222 Introduction to the Exceptional Learner, EDU230 Cultural Diversity In Education or EDU250 Teaching and Learning in the Community College

[2] Course(s) selected must be different from those used to fulfill a requirement of the AGEC-A and/or those used to fulfill Required Courses.

[3] Except EDU221 Introduction to Education, EDU222 Introduction to the Exceptional Learner, EDU230 Cultural Diversity In Education, and EDU250 Teaching and Learning in the Community College

[4] Except MAT256 Investigating Quantity: Number, Operations and Numeration Systems and MAT257 Investigating Geometry, Probability and Statistics

III. **Arizona General Education Curriculum—Arts (AGEC-A) - Credits: 35-44**[1]

The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)[1]. AGEC designations are subject to change. See AGEC matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken. Some of the courses have been

approved for more than one designation. Notes below will show how such courses may be used to meet multiple degree requirements.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Code	Title	Credits	Semester
First-Year Composition (FYC) [1]			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L)			_____
COM225	Public Speaking	3	_____
Mathematical Applications (MA)			_____
Select one of the following: [2]		3-6	_____
College Mathematics			_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
College Algebra			_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Precalculus			_____
MAT187	Precalculus		_____
MAT188	Precalculus		_____
Higher Approved General Education Course			_____
Mathematics Applications (MA) area for which MAT15+ is a prerequisite. [2]			
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			_____
Computer/Statistics/Quantitative Applications (CS)			_____
Select one of the following:		3	_____
BPC110	Computer Usage and Applications		_____
CIS105	Survey of Computer Information Systems		_____
EDU/ EEDOR115	Digital Literacy for Teaching and Learning in Education (Recommended)		_____
Humanities, Arts and Design (HU)			_____
Note that some of these courses also have Awareness Areas designations and can be used to satisfy (G) and/or (H) requirement as well as (HU). [3]			_____
Select one of the following ARH, DAH, MHL or THE courses:		3	_____
ARH100	Introduction to Art		_____
ARH101	Art from Prehistory Through Middle Ages		_____
ARH102	Art from Renaissance to Modernism		_____
DAH100	Introduction to Dance in the United States		_____
DAH201	Dance, Culture, and Global Contexts		_____
DAH250	Dance in Popular Culture		_____
MHL140	Survey of Music History		_____
MHL145	American Jazz and Popular Music		_____
MHL146	Survey of Broadway Musicals		_____
MHL153	Rock Music and Culture		_____

THE111	Introduction to Theatre		_____
THE220	Modern Drama		_____
Select one of the following EDU, ENH or HUM courses:		3	_____
EDU/ ENHOR291	Children's Literature (Recommended)		_____
ENH110	Introduction to Literature		_____
ENH241	American Literature Before 1860		_____
ENH242	American Literature After 1860		_____
HUM250	Ideas and Values in the Humanities: Early Civilizations to the Renaissance		_____
HUM251	Ideas and Values in the Humanities: Renaissance to the Contemporary World		_____
Social-Behavioral Sciences (SB)			_____
Note that some of these courses also have Awareness Areas designations and can be used to satisfy (G) and/or (H) requirement as well as (SB). [3]			_____
Select one of the following US History/Government courses: [4]		3	_____
These courses satisfy the United States Constitution requirement for state teacher certification.			_____
GCU/ POSOR113	United States and Arizona Social Studies		_____
HIS103	United States History to 1865		_____
POS110	American National Government		_____
Select one of the following CFS, ECH, GCU, ECN, HIS or PSY courses:		3	_____
CFS205	Human Development		_____
CFS/ ECHOR176	Child Development (Recommended)		_____
ECN211	Macroeconomic Principles		_____
ECN212	Microeconomic Principles		_____
GCU121WG	World Geography: People, Places, and Culture		_____
HIS104	United States History 1865 to Present		_____
PSY101	Introduction to Psychology		_____
Natural Sciences (SQ/SG)			_____
The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of four (4) credits each. At least four (4) credits must be designated as SQ. Eight (8) credits of SG will not satisfy this requirement			_____
Life Sciences			_____
Select four (4) credits of SQ or SG in Biology (BIO)		4	_____
Physical Sciences or Earth/Space Sciences			_____
Select four (4) credits of SQ or SG from one of the following prefixes:		4	_____
AGS, ASM, AST, CHM, GPH, GLG, PHS, or PHY			_____
Note: Students are advised to check with the university they plan to attend as specific requirements for lab sciences may vary			_____
Awareness Areas			_____
Select one of the following:		0-3	_____
Cultural Diversity in the United States (C) [5]			_____
Global Awareness (G) **or** Historical Awareness (H) [6]			_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] Note that MAT182 Plane Trigonometry, MAT206 Elements of Statistics, MAT256 Investigating Quantity: Number, Operations and Numeration Systems, MAT257 Investigating Geometry, Probability and Statistics do NOT meet this requirement.

[3] AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken.

[4] State certification requirements include courses on the constitutions of U.S. and Arizona. Taking GCU113 United States and Arizona Social Studies/POS113 United States and Arizona Social Studies for (SB) fulfills this requirement completely.

Students who instead take HIS103 United States History to 1865 or POS110 American National Government for (SB) should consider taking POS221 Arizona Constitution as a Content Area Elective so they have completed study of both constitutions. POS220 U.S. and Arizona Constitution meets state certification requirements for both constitutions but does not meet (SB).

[5] Met by EDU222 Introduction to the Exceptional Learner and EDU230 Cultural Diversity In Education in Required Courses

[6] May be met by [HU] and/or [SB] course depending on specific courses selected. (AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken.

IV. **MCCCD Additional Requirements - Credits: 0-3**

a. Oral Communications
Met by COM225 Public Speaking that is required to satisfy AGEC-A Literacy and Critical Inquiry [L]

b. Critical Reading
Students may demonstrate proficiency through assessment. CRE101 College Critical Reading and Critical Thinking [L] **or** equivalent as indicated by assessment

Total: 60-64[1]

[1] 64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer pathways.

Associate in Arts, Fine Arts (AAFA)

VISUAL AND PERFORMING ARTS

Maricopa County College District (MCCCD) 2025-2026

Description

The Maricopa County Community College District Associate in Arts, Fine Arts (AAFA) degree requires a minimum of 60 semester credits for the program of study; however, minimum total credits for the AAFA vary by specific emphasis. Students must select one of the emphasis areas: Art (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176476), Dance (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176469), Music (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176467), Musical Theatre (https://aztransmac2.asu.edu/cgi-bin/WebObjects/acres.woa/wa/freeForm10?id=176464), or Theatre (https://aztransmac2.asu.edu/cgi-bin/WebObjects/acres.woa/wa/freeForm10?id=176475). If an emphasis area is not selected, this program is not eligible for Title IV Federal Financial Aid. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums for each emphasis. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better are required in all courses to earn the degree. The AAFA degree is governed by the MCCCD General Academic Policies for associate degrees designed for university transfer.

The Associate in Arts, Fine Arts degree includes the following components:

I. Program Prerequisites (as specified by emphasis area)
II. Required Courses (as specified by area of emphasis)
III. Restricted Electives (as specified by area of emphasis)
IV. Arizona General Education Curriculum for Arts (AGEC-A)
V. MCCCD Additional Requirements (Oral Communication and Critical Reading)
VI. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree

The Associate in Arts, Fine Arts (AAFA) degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors in the Fine Arts. The degree is designed to prepare students to meet selective admission criteria for programs such as the Bachelor of Fine Arts; program admission may have an additional emphasis-specific portfolio or performance requirements.

In most cases, courses used to satisfy the MCCCD Associate in Arts, Fine Arts (AAFA) will apply to general university graduation requirements of the majors that align with AAFA degree; however, students need to pay attention to any specific requirements of their intended focus at the university to be sure they select courses that will meet them. Information regarding the articulation of the AAFA degree with majors at the Arizona public universities can be accessed via the following website: aztransfer.com/tools (https://aztransfer.com/tools/)

Degree Requirements

The requirements for the Associate in Arts, Fine Arts (AAFA) follow. The Associate in Arts, Fine Arts degree requires at least 60 credits; however, minimum total credits for the AAFA vary by specific emphasis (Art (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176476), Dance (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176469), Music (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176467), Musical Theatre (https://aztransmac2.asu.edu/cgi-bin/WebObjects/acres.woa/wa/freeForm10?id=176464), or Theatre (https://aztransmac2.asu.edu/cgi-bin/WebObjects/acres.woa/wa/freeForm10?id=176475)). Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums; review course sequence at maricopa.edu/degrees-certificates (https://www.maricopa.edu/degrees-certificates#programs). The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-A (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/2/wo/qEBwEeu9k5ESxdFSGt3Jxw/5.0.105.5) and the AGEC matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075). Courses available for both Areas during a current or upcoming semester can also be found using the "Find a Class (https://classes.sis.maricopa.edu/)" tool on maricopa.edu (https://www.maricopa.edu/) and on each MCCCD college's website. Industry-recognized credentials can be counted as general electives.

Degree Requirements

I. Required Courses - Credits: Number Varies

Students must complete FYE101 Introduction to College, Career and Personal Success or FYE103 Exploration of College, Career and Personal Success (see General Graduation Requirements Administrative Regulation 2.3.9) and the required (major-specific) courses listed in the Associate in Arts Fine Arts degree Required Courses area for the specific emphasis (Art (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176476), Dance (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176469), Music (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176467), Musical Theatre (https://aztransmac2.asu.edu/cgi-bin/WebObjects/acres.woa/wa/freeForm10?id=176464), or Theatre (https://aztransmac2.asu.edu/cgi-bin/WebObjects/acres.woa/wa/freeForm10?id=176475)).

Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums for each emphasis.

II. Restricted Electives - Credits: Number Varies

Restricted electives for the Associate in Arts, Fine Arts degree vary by specific emphasis: (Art (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176476), Dance (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176469), Music (https://aztransmac2.asu.edu/cgi-bin/WebObjects/MCCCD.woa/wa/freeForm10?id=176467), Musical Theatre (https://aztransmac2.asu.edu/cgi-bin/WebObjects/acres.woa/wa/freeForm10?id=176464), or Theatre (https://aztransmac2.asu.edu/cgi-bin/WebObjects/acres.woa/wa/freeForm10?id=176475)). Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums for each emphasis.

III. Arizona General Education Curriculum-Arts (AGEC-A) - Credits: up to 44

The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)[1]. However, depending on courses selected, it may take as many as 44 credits to satisfy all the General Education criteria. Any required/restricted elective courses that also have one or more AGEC designation(s) may be applied toward both requirements. Credits for such shared courses are only counted once toward the total credits for the degree.

AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken. Some of the courses may have been approved for more than one designation. Notes below will show how such courses may be used to meet multiple degree requirements.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Code	Title	Credits	Semester
First-Year Composition (FYC)			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L)			_____
Select three credits		3	_____
Mathematical Applications (MA)			_____
Select one of the following:		3-6	_____
College Mathematics			_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
College Algebra			_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Higher (MA)-approved Course			_____
Higher (MA)-approved general education course			_____
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			_____
Computer/Statistics/Quantitative Applications (CS)			_____
Select three credits		3	_____
Humanities, Arts and Design (HU)			_____
Select six credits		6	_____
Social-Behavioral Sciences (SB)			_____
Students are encouraged to choose course work from more than one discipline.		6	_____
Natural Sciences (SQ/SG)			_____

The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four credits must be designated as SQ-Science Quantitative. Eight credits of SG-Science General will not satisfy this requirement.	8	_____
Awareness Areas		_____
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. Credits for such shared courses may only be counted once. [2]	0-6	_____
Cultural Diversity in the United States (C)		_____
Global Awareness (G) **or** Historical Awareness (H) [3]		_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for current course values.

[3] May be met by (HU) and/or (SB) course(s) depending on specific courses selected. (AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken.)

I. **MCCCD Additional Requirements - Credits: 0-6**

As noted below, courses in this area may also be applied toward AGEC-A requirements.

Code	Title	Credits	Semester
Oral Communication			_____
Refer to emphasis area (Art, Dance, Music, Musical Theatre, Theatre) for specific COM courses required from the following list:			_____
Select one of the following:		0-3	_____
COM100	Introduction to Human Communication (SB)		_____
COM110	Interpersonal Communication (SB)		_____
COM225	Public Speaking (L)		_____
COM230	Small Group Communication (SB)		_____
or all of the following (SB):			_____
COM100AA & COM100AB & COM100AC	Introduction to Human Communication Part I and Introduction to Human Communication Part II and Introduction to Human Communication Part III		_____
or all of the following (SB):			_____
COM110AA & COM110AB & COM110AC	Interpersonal Communication Part I and Interpersonal Communication Part II and Interpersonal Communication Part III		_____
Critical Reading			_____
Complete one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking (L)		_____
Demonstrate proficiency as indicated by assessment			_____

II. **General Electives - Credits: 0-25**

Select courses 100-level or higher if needed to complete a minimum of 60 semester credits but no more than a total of 64 semester credits, which is the maximum number of credits accepted toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. See General Associate Degree Academic Policies for further details, limitations, and guidelines. MCCCD has established recommended courses and sequencing to align with the Fine Arts Emphasis Areas. See maricopa.edu/degrees-certificates (https://www.maricopa.edu/degrees-certificates#programs) for links to these transfer pathways.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HISELC for a history elective), or general electives (GENELC) that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree. Transfer and major guides are accessible on the following websites: aztransfer.com/tools (https://aztransfer.com/tools/), curriculum.maricopa.edu (https://curriculum.maricopa.edu/), as well as those of individual universities.

For appropriate course selection, students should consult with an academic advisor.

**64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer pathways.

Associate in Science, (AS) Degree

Maricopa County Community College District (MCCCD) 2025-2026

Description

The Maricopa County Community College District Associate in Science (AS) degree requires a minimum of 60 semester credits for the program of study; minimum total credits vary by specific emphasis (for example, Associate in Science, Emphasis in Physics). Refer to curriculum.maricopa.edu (http://curriculum.maricopa.edu) for credit minimums for individual degree programs by emphasis. A minimum grade point average of 2.0 is required to earn the degree. The AS degree is governed by the MCCCD General Academic Policies for Degrees Designed for University Transfer.

The Associate in Arts degree includes the following components:

I. Program Prerequisites (as specified by emphasis area)
II. Required Courses
III. Restricted Electives (as specified by emphasis area)
IV. Arizona General Education Curriculum for Science (AGEC-S)
V. MCCCD Additional Requirements (Oral Communication and Critical Reading)
VI. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree

The Associate in Science (AS) degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors with more stringent mathematics and mathematics-based science requirements. Generally, the degree will transfer as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements.

It does not, however, guarantee acceptance into particular university majors/programs with a limited number of students. Students should consult with their transfer institution for any specific admission requirements (e.g., GPA, letters of reference, work experience).

In most cases, courses used to satisfy the MCCCD Associate in Science (AS) will apply to general university graduation requirements of the majors that align with the AS degree; however, students need to be aware of any specific requirements of their intended major at the university to be sure they select courses that will meet them. Information regarding the articulation of the AS with majors at the Arizona public universities can be accessed via the following website: aztransfer.com/tools (http://aztransfer.com/tools/)

It is recommended that students select courses that meet more than one general education and/or awareness area requirement. Doing so will maximize the number of math and science electives the student can take as part of the Associate in Science degree.

Special Academic Policies that Govern the Associate in Science Degree

- The AGEC-S does not require a course with [CS] Computer/Statistics designation.
- Unlike the AGEC-A and AGEC-B, the same course is allowed to satisfy the ([L] and [HU]) or ([L] and [SB]) areas of the AGEC-S. The credits for such a "shared" course are only counted one time toward the required minimum for the degree.

Degree Requirements

The requirements for the Associate in Science (AS) follow. The AS degree requires at least 60 credits; however, minimum credits for the AS may vary for a specific area of emphasis. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) and click on Current Programs to search for the corresponding area of emphasis and credit minimums. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-S (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/2/wo/qEBwEeu9k5ESxdFSGt3Jxw/5.0.105.13) and the AGEC Matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec. Industry-recognized credentials can be counted as general electives.

Requirements

I. **Program Prerequisites - Credits: Number varies**
Program prerequisites for the AS degree vary by specific emphasis, and are neither required for all emphases nor for the general AS degree without a specific emphasis. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) and click on Current Programs to search for the corresponding area of emphasis for specific courses required and credit minimums.

II. **Required Courses - Credits: Number varies**
Students must complete FYE101 (1) or FYE103 (3) (see General Graduation Requirements Administrative Regulation 2.3.9) and select the required courses for the specific AS degree emphasis. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) and click on Current Programs to search for the corresponding area of emphasis for specific courses required and credit minimums.

III. **Restricted Electives - Credits: Number varies**
Restricted electives for the AS degree vary by specific emphasis and are not required for the general AS degree without a specific emphasis. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) and click on Current Programs to search for the corresponding area of emphasis for specific courses required and credit minimums.

IV. **Arizona General Education Curriculum—Science (AGEC-S) - Credits: Up to 56**
The AGEC-S requires a minimum of 36 credits (33 if FYC is met by single transfer course).[1] Courses applied to meet AGEC-A requirements vary by emphasis. Refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) and click on Current Programs to search for the corresponding area of emphasis for specific courses required and credit minimums.

Any prerequisite/required/restricted elective courses that also have one or more AGEC designation(s) may be applied toward both requirements. Credits for such shared courses are only counted once toward the total credits for the degree.

AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for each course's value(s) in the semester it is taken. Some of the courses have been approved for more than one designation. Notes below will show how such courses may be used to meet multiple degree requirements.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Code	Title	Credits	Semester
First-Year Composition (FYC)			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L) [2]			_____
Students are strongly encouraged to choose an (L) course that also has (HU) or (SB) designation or to use CRE101 or COM225 from the Maricopa Additional Requirements Area to satisfy the (L) requirement. It may also have been approved to satisfy one or more Awareness Areas (C), (G), (H). [3]		0-3	_____
Mathematical Applications (MA)			_____
The AGEC-S requires the first semester of a calculus sequence designed for scientists and engineers (MAT220 or MAT221) or any other (MA) designated course for which Calculus I is a prerequisite.		4-5	_____
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			_____
Humanities, Arts and Design (HU)			_____
For the AGEC-S, a single course with both (HU) and (L) designations may satisfy both Areas. Note that some (HU) courses also have Awareness Areas designations and can be used to satisfy (C), (G) and/or (H) requirement(s) as well as their respective Core Area(s). [3]		6	_____
Social-Behavioral Sciences (SB)			_____
For the AGEC-S, a single course with both (SB) and (L) designations may satisfy both Areas. Note that some (SB) courses also have Awareness Areas designations and can be used to satisfy (C), (G) and/or (H) requirement(s) as well as their respective Core Area(s). [3]		6	_____
Natural Sciences (SQ/SG)			_____
Students must complete eight (8) to ten (10) credits of General Chemistry, University Physics, General Biology for Majors, or Physical and Historical Geology. [4]			_____
Select one of the following sequences:		8-10	_____
General Chemistry			_____
CHM150 & CHM151LL & CHM152 & CHM152LL	General Chemistry I and General Chemistry I Laboratory and General Chemistry II and General Chemistry II Laboratory		_____
CHM150 & CHM151LL & CHM152AA	General Chemistry I and General Chemistry I Laboratory and General Chemistry II with Lab		_____
CHM151 & 151LL & CHM152 & CHM152LL	General Chemistry I and General Chemistry I Laboratory and General Chemistry II and General Chemistry II Laboratory		_____
CHM151 & 151LL & CHM152AA	General Chemistry I and General Chemistry I Laboratory and General Chemistry II with Lab		_____

CHM150AA & CHM152 & CHM152LL	General Chemistry I with Lab and General Chemistry II and General Chemistry II Laboratory	_____
CHM151AA & CHM152 & CHM152LL	General Chemistry I with Lab and General Chemistry II and General Chemistry II Laboratory	_____
CHM150AA & CHM152AA	General Chemistry I with Lab and General Chemistry II with Lab	_____
CHM151AA & CHM152AA	General Chemistry I with Lab and General Chemistry II with Lab	_____
University Physics		_____
PHY121 & PHY131	University Physics I: Mechanics and University Physics II: Electricity and Magnetism	_____
General Biology for Majors		_____
BIO181 & BIO182	General Biology (Majors) I and General Biology (Majors) II	_____
BIO181 & BIO182XT	General Biology (Majors) I and General Biology (Majors) II	_____
BIO181XT & BIO182	General Biology (Majors) I and General Biology (Majors) II	_____
BIO181XT & BIO182XT	General Biology (Majors) I and General Biology (Majors) II	_____
Physical and Historical Geology		_____
GLG101 & GLG103	Physical Geology: Dynamic Earth Lecture and Physical Geology: Dynamic Earth Lab	_____
or GLG101IN	Physical Geology: Dynamic Earth	_____
GLG102IN & GLG104	Historical Geology: Primordial to Present and Historical Geology: Primordial to Present Lab	_____
or GLG102	Historical Geology: Primordial to Present Lecture	_____
Subject Options - Math/Science		_____
Students should refer to transfer resources, including academic advisement and transfer guides, to select six (6)- ten (10) additional math and/or science credits that meet requirements for the selected major.	6-10	_____
This Math/Science requirement can be met by selecting Mathematics course(s) (MAT) that require Calculus I as a prerequisite and/or Computer Science course(s) (CSC) and/or additional Science courses from the following disciplines: Astronomy, Biology, Botany, Chemistry, Engineering, Environmental Science, Geology, Physical Geography, Physics, Zoology (MCCCD prefixes AST, BIO, CHM, ECE, EEE, ENV, GLG, GPH, and/or PHY)		_____
Awareness Areas		_____
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. Credits for such shared courses may only be counted once. [5]	0-6	_____
Cultural Diversity in the United States (C)		_____
Global Awareness (G) **or** Historical Awareness (H)		_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] 0 only if shared with HU or SB

[3] AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for each course's value(s) in the semester it is taken.

[4] Consult specific requirements of university transfer major for guidance or refer to curriculum.maricopa.edu (https://curriculum.maricopa.edu/) and click on Current Programs to search for the corresponding area of emphasis.

[5] See AGEC matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/1/wa/agecMatrixReport?inst=001075) for current course values.

V. **MCCCD Additional Requirements - Credits: 0-6**

Some courses in this area have [SB] and [L] designations and may also be applied to the corresponding AGEC requirements. See the AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) on aztransfer.com (http://aztransfer.com) for course designations.

Code	Title	Credits	Semester
Oral Communication			_____
Select one of the following:		0-3	_____
COM100	Introduction to Human Communication (SB)		_____
COM110	Interpersonal Communication (SB)		_____
COM225	Public Speaking (L)		_____
COM230	Small Group Communication (SB)		_____
or all of the following (SB):			_____
COM100AA & COM100AB & COM100AC	Introduction to Human Communication Part I and Introduction to Human Communication Part II and Introduction to Human Communication Part III		_____
or all of the following (SB):			_____
COM110AA & COM110AB & COM110AC	Interpersonal Communication Part I and Interpersonal Communication Part II and Interpersonal Communication Part III		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
OR Equivalent as indicated by assessment			_____

VI. **General Electives - Credits: 0-28**

Select courses 100-level or higher if needed to complete a minimum of 60 semester credits but no more than a total of 64 semester credits, which is the maximum number of credits accepted toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. See General Associate Degree Academic Policies for further details, limitations, and guidelines.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HISELC for a history elective), or general electives (GENELC) that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree. Transfer and major guides are accessible on the following websites: aztransfer.com (https://aztransfer.com/), maricopa.edu/degrees-certificates/university-transfer/partners (http://maricopa.edu/degrees-certificates/university-transfer/partners), as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.

Total: 60-64[1]

[1] 64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer pathways.

Associate in Business, General Requirements (ABUS-GR) Degree

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Maricopa County Community College District (MCCCD) 2025-2026

Description

The Maricopa County Community College District Associate in Business General Requirements (ABUS-GR) degree requires a minimum of 62 semester credits for the program of study. A minimum grade point average of 2.0 (4.0 scale) and grades of C or better are required in all courses to earn the degree. The Associate in Business-General Requirements degree is governed by the MCCCD General Academic Policies for Transfer Degrees.

This degree provides the first two years of a four-year curriculum for students who wish to transfer to a university and pursue a bachelor's degree in business. For a comprehensive list of bachelor's degrees at Arizona's public universities, refer to the AZTransfer Business Matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/ATASS.woa/wa/ViewMatrixReport?Code=BUS).. With a bachelor's degree, students may pursue a number of careers, including but not limited to accountancy, business administration, business data analytics, economics, entrepreneurship, finance, marketing, management, retail management, and supply chain management.

The Associate in Business-General Requirements degree includes the following components:

I. Required Courses
II. Restricted Electives
III. Arizona General Education Curriculum for Business (AGEC-B)
IV. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree

The Associate in Business General Requirements (ABUS-GR) degree is designed for students who plan to transfer to four-year colleges and universities. In general, the components of this degree meet requirements for the various business majors (except Computer Information Systems) at Arizona's public universities. Computer Information Systems majors should follow the Associate in Business Special Requirements (ABUS-SR) pathway instead. Generally, the degree transfers as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements. It does not, however, guarantee acceptance into particular university majors/programs with a limited number of students. Students should consult with their transfer institution for any specific admission requirements (e.g., GPA, letters of reference, work experience).

Special Academic Policies that Govern the ABUS-GR Degree

- The ABUS-GR does not include any MCCCD Special Requirements for Oral Communication and/or Critical Reading like the other associate degrees. (However, some university programs have a speech requirement; consult your academic advisor or transfer guide to verify the specifics for your program.)

Degree Requirements

The courses required for the Associate in Business General Requirements follow. The following websites identify the courses that apply to the different General Education Areas: AGEC-B (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/2/wo/qEBwEeu9k5ESxdFSGt3Jxw/5.0.105.9) and the AGEC Matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075). Courses available for both Areas during a current or upcoming semester can also be found using the "Find A Class (https://classes.sis.maricopa.edu/)" tool on maricopa.edu (https://www.maricopa.edu/) or on each MCCCD college's website.

Degree Requirements

I. **Required Courses - Credits: 22-28**

Code	Title	Credits	Semester
Required Courses			_____
Accounting			_____
Select one of the following:		6-9	_____
ACC111 & ACC230 & ACC240	Accounting Principles I and Uses of Accounting Information I and Uses of Accounting Information II		_____
ACC211 & ACC212	Financial Accounting and Managerial Accounting		_____
ACC111 & ACC112 & ACC212	Accounting Principles I and Accounting Principles II and Managerial Accounting		_____
Other Courses			_____
Some of the following courses can be used to satisfy both this requirement and an AGEC-B requirement. AGEC designations are subject to change. [1]			_____
ECN211	Macroeconomic Principles (SB)	3	_____
ECN212	Microeconomic Principles (SB)	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
GBS205	Legal, Ethical, and Regulatory Issues in Business	3	_____

GBS221	Business Statistics	3	_____
Quantitative Methods			_____
Select one of the following:		3-4	_____
GBS220	Quantitative Methods in Business		_____
MAT217	Mathematical Analysis for Business		_____
MAT218	Mathematical Analysis for Business		_____

[1] See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for each course's value(s) in the semester it is taken.

Note: Students planning to transfer to ASU`s W.P. Carey School of Business BS program should take MAT217 Mathematical Analysis for Business or MAT218 Mathematical Analysis for Business. Students planning to transfer to ASU`s W.P. Carey School of Business BA program may take GBS220 Quantitative Methods in Business, MAT217 Mathematical Analysis for Business, or MAT218 Mathematical Analysis for Business. Students planning to transfer to the University of Arizona should take GBS220 Quantitative Methods in Business

II. **Restricted Electives - Credits: 0-6**

Complete six (6) credits from the following options. Some courses may be used to satisfy both Restricted Elective and Arizona General Education Curriculum (AGEC) requirements simultaneously. AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075 for each course's value(s) in the semester it is taken.

Code	Title	Credits	Semester
Select two of the following:		0-6	_____
CIS114DE	Excel Spreadsheet		_____
CIS133DA	Internet/Web Development Level I		_____
CIS162AD	C#: Level I		_____
GBS110	Human Relations in Business and Industry		_____
or MGT251	Human Relations in Business		_____
GBS151	Introduction to Business (Recommended)		_____
GBS220	Quantitative Methods in Business		_____
GBS233	Business Communication		_____
IBS101	Introduction to International Business		_____
MGT253	Owning and Operating a Small Business		_____
MKT271	Principles of Marketing		_____
PAD100	21st Century Public Policy and Service		_____
REA179	Real Estate Principles I		_____
REA180	Real Estate Principles II		_____
REA201	Real Estate Principles I and II		_____
SBU200	Society and Business		_____

III. **Arizona General Education Curriculum-Business (AGEC-B) - Credits: 29-37[1]**

The AGEC-B requires a minimum of 35 credits (32 if FYC is met by single transfer course).[1] Any Required and Restricted elective course(s) that also have one or more AGEC designation(s) may be used to meet AGEC-B requirements. Credits for such shared courses only count once toward the total for the degree.

Some courses may be met by Required Courses or Restricted Electives. Some of these courses also have Awareness Areas designations and can be used to satisfy [C], [G] and/or [H] requirement(s) as well as other AGEC requirements, Required Course(s) or Restricted Elective(s). Courses may meet more than one requirement but are only counted once toward the total credits for the degree. AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075 for each course's value(s) in the semester it is taken.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Code	Title	Credits	Semester
First-Year Composition (FYC) [1]			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L)			_____
May be met by GBS233 in the Restricted Electives Area.		0-3	_____
Mathematical Applications (MA)			_____

Select one of the following:		3-5	_____
MAT212	Brief Calculus		_____
MAT213	Brief Calculus		_____
Higher General Education Courses in the Mathematical Applications (MA) Area			_____
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			_____
Computer/Statistics/Quantitative Applications (CS)			_____
CIS105	Survey of Computer Information Systems	3	_____
Humanities, Arts and Design (HU)			_____
Students are encouraged to choose course work from more than one discipline.		6	_____
Social-Behavioral Sciences (SB)			_____
Met by Required Courses [2]		0	_____
Natural Sciences (SQ/SG)			_____
The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four (4) credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four (4) credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement.		8	_____
Awareness Areas			_____
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. Credits for such shared courses may only be counted once. [3]			_____
Select up to six credits from the following:		0-6	_____
Cultural Diversity in the United States (C)			_____
Global Awareness (G) **or** Historical Awareness (H)			_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] ECN211 Macroeconomic Principles AND ECN212 Microeconomic Principles

[3] See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075 for current course values.

Students transferring to ASU to major in business should complete courses from the following list (up to the 64 credit transfer maximum) to meet W.P. Carey School of Business requirements. If students do not take these prior to transfer, they may need to take additional credits to meet ASU graduation requirements:

Code	Title	Credits	Semester
Any course that transfers to ASU in the SOC prefix and carries the (SB) designation			_____
Any course that transfers to ASU in the PSY prefix and carries the (SB) designation			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
COM259	Communication in Business and Professions		_____

Note: COM requirements vary by business major. Check ASU's MyPath2ASU (https://webapp4.asu.edu/transfercreditguide/app/transfermap?init=false&nopassive=true) or major map for acceptable options.

IV. **General Electives**

Select courses 100-level or higher if needed to complete a minimum of 62 semester credits but no more than a total of 64 semester credits, which is the maximum number of credits accepted toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. See General Associate Degree Academic Policies for further details, limitations, and guidelines. MCCCD has established recommended courses and sequencing for the various associate's degrees.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HIS ELC for a history elective), or general electives (GEN ELC) that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree.

Transfer advisement information is accessible on the following websites: aztransfer.com/tools, curriculum.maricopa.edu (http://curriculum.maricopa.edu), as well as those of individual universities. For

appropriate course selection, students should consult with an academic advisor.

Total: 62[1]

[1] 64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer information.

Associate in Business, Special Requirements (ABUS-SR) Degree

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Maricopa County Community College District (MCCCD) 2025-2026

Description

The Maricopa County Community College District Associate in Business, Special Requirements (ABUS-SR) degree requires a minimum of 62 semester credits for the program of study. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better are required in all courses to earn the degree. The Associate in Business-Special Requirements degree is governed by the MCCCD General Academic Policies for Transfer Degrees.

This degree provides the first two years of a four-year curriculum for students who wish to pursue Computer Information Systems majors at Arizona`s public universities. With a bachelor's degree, students may pursue a number of careers, including but not limited to accountancy, business administration, business data analytics, computer information systems, economics, entrepreneurship, finance, marketing, management, retail management, and supply chain management.

The Associate in Business-Special Requirements degree includes the following components:

I. Required Courses
II. Arizona General Education Curriculum for Business (AGEC-B)
III. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree

The Associate in Business Special Requirements (ABUS-SR) degree is designed for students who plan to transfer to four-year colleges and universities. In general, the components of this degree meet requirements for Computer Information Systems majors at Arizona's public universities. Other Business majors should follow the Associate in Business General Requirements (ABUS-GR) pathway instead. Generally, the ABUS-SR degree transfers as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements. It does not, however, guarantee acceptance into particular university majors/programs with a limited number of students. Students should consult with their transfer institution for any specific admission requirements (e.g., GPA, letters of reference, work experience).

Special Academic Policies that Govern the ABUS-SR Degree

- The ABUS-SR does not include any MCCCD Special Requirements for Oral Communication and/or Critical Reading like the other associate degrees. (However, some university programs have a speech requirement; consult your academic advisor or transfer guide to verify the specifics for your program.)

Degree Requirements

The courses required for the Associate in Business Special Requirements follow. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-B (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/2/wo/qEBwEeu9k5ESxdFSGt3Jxw/5.0.105.9) and the AGEC Matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075). Courses available for both Areas during a current or upcoming semester can also be found using the Find A Class (https://classes.sis.maricopa.edu/) tool on maricopa.edu (https://maricopa.edu) or on each MCCCD college's website.

Degree Requirements

I. **Required Courses - Credits: 28-34**

Code	Title	Credits	Semester
Required Courses			_____
Accounting			_____
Select six to nine credits from the following:		6-9	_____
ACC111 & ACC230 & ACC240	Accounting Principles I and Uses of Accounting Information I and Uses of Accounting Information II		_____
ACC211 & ACC212	Financial Accounting and Managerial Accounting		_____
ACC111 & ACC112 & ACC212	Accounting Principles I and Accounting Principles II and Managerial Accounting		_____
Other Courses			_____
Some of the following courses can be used to satisfy both this requirement and an AGEC-B requirement. AGEC designations are subject to change. [1]			_____
ECN211	Macroeconomic Principles (SB)	3	_____
ECN212	Microeconomic Principles (SB)	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____

or FYE103	Exploration of College, Career and Personal Success		_____
GBS205	Legal, Ethical, and Regulatory Issues in Business	3	_____
GBS221	Business Statistics	3	_____
CIS162AD	C#: Level I	3	_____
CIS250	Management of Information Systems	3	_____
Quantitative Methods [2]			_____
Select one of the following:		3-4	_____
GBS220	Quantitative Methods in Business		_____
MAT217	Mathematical Analysis for Business		_____
MAT218	Mathematical Analysis for Business		_____

[1] See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for each course's value(s) in the semester it is taken.

[2] Note: Students planning to transfer to ASU`s W.P. Carey School of Business BS program should take MAT217 Mathematical Analysis for Business or MAT218 Mathematical Analysis for Business. Students planning to transfer to ASU`s W.P. Carey School of Business BA program may take GBS220 Quantitative Methods in Business, MAT217 Mathematical Analysis for Business, or MAT218 Mathematical Analysis for Business. Students planning to transfer to the University of Arizona should take GBS220 Quantitative Methods in Business

II. **Arizona General Education Curriculum- Business (AGEC-B) - Credits: 29-37**[1]

The AGEC-B requires a minimum of 35 credits (32 if FYC is met by single transfer course)[1]. Any Required and Restricted elective course(s) that also have one or more AGEC designation(s) may be used to meet AGEC-B requirements. Credits for such shared courses only count once toward the total for the degree.

Some courses may be met by Required Courses or Restricted Electives. Some of these courses also have Awareness Areas designations and can be used to satisfy [C], [G] and/or [H] requirement(s) as well as other AGEC requirements or Required Course(s).AGEC designations are subject to change. Courses may meet more than one requirement but are only counted once toward the total credits for the degree. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Code	Title	Credits	Semester
First-Year Composition (FYC) [1]			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L)			_____
Select three credits		3	_____
Mathematical Applications (MA)			_____
Select one of the following:		3-5	_____
MAT212	Brief Calculus		_____
MAT213	Brief Calculus		_____
Higher General Education Courses in the Mathematical Applications (MA) Area			_____
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			
Computer/Statistics/Quantitative Applications (CS)			_____
CIS105	Survey of Computer Information Systems	3	_____
Humanities, Arts and Design (HU)			_____
Students are encouraged to choose course work from more than one discipline.		6	_____
Social-Behavioral Sciences (SB)			_____
Met by Required Courses [2]		0	_____
Natural Sciences (SQ/SG)			_____
The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four (4) credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement		8	_____

Awareness Areas		_____
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. Credits for such shared courses may only be counted once. [3]		_____
Select up to six credits from the following:	0-6	_____
Cultural Diversity in the United States (C)		_____
Global Awareness (G) **or** Historical Awareness (H)		_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] ECN211 Macroeconomic Principles and ECN212 Microeconomic Principles

[3] See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for current course values

Students transferring to ASU to major in business should complete courses from the following list (up to the 64 credit transfer maximum) to meet W.P. Carey School of Business requirements. If students do not take these prior to transfer, they may need to take additional credits to meet ASU graduation requirements:

Code	Title	Credits	Semester
Any course that transfers to ASU in the SOC prefix and carries the (SB) designation			_____
Any course that transfers to ASU in the PSY prefix and carries the (SB) designation			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
COM259	Communication in Business and Professions		_____

Note: COM requirements vary by business major. COM requirements vary by business major. Check ASU's MyPath2ASU (https://webapp4.asu.edu/transfercreditguide/app/transfermap?init=false&nopassive=true) or major map for acceptable options.

III. **General Electives**
Select courses 100-level or higher if needed to complete a minimum of 62 semester credits but no more than a total of 64 semester credits, which is the maximum number of credits accepted toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. See General Associate Degree Academic Policies for further details, limitations, and guidelines. MCCCD has established recommended courses and sequencing for the various associate's degrees. See maricopa.edu/degrees-certificates/business-entrepreneurialism-management/associate-business-special-requirements-8800-abus-sr (https://www.maricopa.edu/degrees-certificates/business-entrepreneurialism-management/associate-business-special-requirements-8800-abus-sr) for ABUS-SR course sequence.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HIS ELC for a history elective), or general electives (GEN ELC) that are numbered 100 level or higher, and completed with a grade of "C" or better, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree.

Transfer advisement information is accessible on the following websites: aztransfer.com/tools, (https://aztransfer.com/tools/) curriculum.maricopa.edu (https://curriculum.maricopa.edu/), as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.

Total: 62[1]

[1] 64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer information.

Associate in General Studies (AGS) Degree and General Education Requirements

Maricopa County Community College District (MCCCD) 2025-2026

Description

The Maricopa County Community College District Associate in General Studies degree requires 60-64 semester credits in courses numbered 100 and above. The degree includes the following components:

I. **Required Courses** (1-3) Credits

First Year Experience (all courses completed with a grade of "C" or better)

II. **General Education** (minimum of 35 credits)

Core Areas (all courses completed with a grade of "C" or better)

- First Year Composition
- Mathematics
- Computer Usage

- Oral Communication
- Critical reading

Distribution Areas (all courses completed with a grade of "D" or better)

- Humanities, Arts and Design
- Social-Behavioral Sciences
- Natural Sciences
- Literacy and Critical Inquiry

III. **General Electives** (enough additional courses numbered 100 or above, completed with a grade of "D" or better, to bring total credits to at least 60)

Purpose of the Degree

The Associate in General Studies (AGS) degree is recommended for students whose educational goals require flexibility. The degree allows students to apply any course numbered 100 or above, including some that are not transferable to the Arizona public universities and may not be transferable to other universities, toward the credits required for the degree. Therefore, for students who intend to transfer to another college or university to pursue a bachelor's degree, this degree may be less appropriate than other associate degrees offered by the Maricopa Community Colleges: Associate in Arts (AA); Associate in Arts, Elementary Education (AAEE); Associate in Arts, Fine Arts (AAFA); Associate in Business-General Requirements (ABUS-GR); Associate in Business-Special Requirements (ABUS-SR); Associate in Science (AS); and all emphases of these degrees.

Academic Policies that Govern the Associate in General Studies Degree:

- The graduation policies within the general catalog must be satisfied (see General Graduation Requirements Administrative Regulation 2.3.9). First Year Experience is required (FYE101 Introduction to College, Career and Personal Success OR FYE103 Exploration of College, Career and Personal Success)
- A single course can simultaneously count toward a Core Area and a Distribution Area requirement. Courses that meet this criterion are **bold print** and **underscored** in the Core areas and Distribution areas (on the course list at the conclusion of this document). For example, CRE101 College Critical Reading and Critical Thinking may be used to satisfy both the Literacy and Critical Inquiry requirement of the Distribution area and the Core curriculum's Critical Reading area. While multiple requirements can be met with a single course, the credits are only counted one time toward the required minimum for the degree. A course cannot satisfy more than one Core area, even if it is approved for more than one Core area. A course cannot satisfy more than one Distribution area, even if it is approved for more than one Distribution area.
- Credits transferred from outside of MCCCD must be at a grade of "C" (2.0 on a 4.0 scale) or better. Transfer credit graded pass/fail or pass/no credit may be transferred if documentation collected by the community college indicates that this was the only grading option available to the student and that the Pass grade ("P") is equivalent to a "C" or better.
- Courses with different credit systems (quarter hours, trimester, units) are converted to semester credit hours. The recovery of a deficiency in a requirement (Prerequisites, Required Courses, Restricted Electives, or General Education) category due to a quarter-hour or other credit system application will be determined by the college.
- Completion of the AGS with a minimum Grade Point Average (on a 4.0 scale) of at least 2.0 for Arizona residents and 2.50 for non-residents meets Arizona public university general admission requirements. However, meeting all AGS minimums does not ensure admission to specific university majors or programs with selective admission processes and/or limited enrollment. Furthermore, because the AGS is not designed to align with the requirements for bachelor's degrees, not all credits may be transferable and students may have deficiencies in lower division (100- and 200-level) courses for a particular major.

Summary of Degree Requirements

Details on how to identify courses approved for each of the different categories is described following the outline.

I. Required Courses - Credits: 1-3

Code	Title	Credits	Semester
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____

II. MCCCD General Education - Credits: 35-48

Code	Title	Credits	Semester
Core Areas			_____
First-Year Composition [1]			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Mathematics			_____
Select three to six credits		3-6	_____
Computer Usage			_____
Select one credit		1	_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____

COM100AA & COM100AB & COM100AC	Introduction to Human Communication Part I and Introduction to Human Communication Part II and Introduction to Human Communication Part III		_____
COM110AA & COM110AB & COM110AC	Interpersonal Communication Part I and Interpersonal Communication Part II and Interpersonal Communication Part III		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Distribution Areas			_____
Humanities, Arts and Design			_____
Students are encouraged to choose course work from more than one discipline		9	_____
Social-Behavioral Sciences			_____
Students are encouraged to choose course work from more than one discipline. [2]		6-9	_____
Natural Sciences			_____
Two lecture courses and one corresponding laboratory course are to be selected. Credits for lecture and lab components may be combined or each may carry separate credit. For appropriate course selection students should consult with an academic advisor.		7-8	_____
Literacy and Critical Inquiry			_____
Select zero to three credits [3]		0-3	_____

1 First-Year Composition may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full

2 If COM100 Introduction to Human Communication, COM110 Interpersonal Communication, or COM230 Small Group Communication is shared between the AGS' Core and Distribution areas, the Social-Behavioral Sciences requirements for the degree may be met with just 6 additional credits in this area (see Academic Policies section on prior page). The credits for the shared COM course are only counted once, but they may be applied to meet both Oral Communication and Social-Behavioral Science requirements.

3 The Literacy and Critical Inquiry requirement may be met by CRE101 College Critical Reading and Critical Thinking College Critical Reading and Critical Thinking(which also satisfies Critical Reading) or COM225 Public Speaking Public Speaking (which also satisfies Oral Communication) with a grade of "C" or better. The credits for shared courses are only counted once, but may be applied to meet both a Core (see course list above) and a Distribution Area requirement. Alternatively, the Literacy and Critical Inquiry requirement may be met with a grade of "D" or better by selecting an additional 3 credits from the list of approved options.

III. General Electives - Credits: 13-26
Select additional courses 100-level or higher to complete a minimum of 60 semester credits but no more than a total of 64 semester credits. Industry-recognized credentials can be counted as general electives.

Associate in General Studies Total Credits: 60-64
All courses listed meet AGS requirements as specified.

AGS General Education Core

(16 credits - grade of "C" or better[1])

1 First-Year Composition may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full

First-Year Composition (6 Credits) [1]

Courses below meet Arizona General Education Curriculum AGEC requirements.

Code	Title	Credits	Semester
First-Year Composition [1]			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Total Credits		**6**	_____

1 First-Year Composition may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full

Oral Communication (3 Credits)

Courses below simultaneously count towards a Core Area and a Distribution requirement.

Code	Title	Credits	Semester
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____

COM100AA & COM100AB & COM100AC	Introduction to Human Communication Part I and Introduction to Human Communication Part II and Introduction to Human Communication Part III	_____
COM110	Interpersonal Communication	_____
COM110AA & COM110AB & COM110AC	Interpersonal Communication Part I and Interpersonal Communication Part II and Interpersonal Communication Part III	_____
COM225	Public Speaking	_____
COM230	Small Group Communication	_____

Critical Reading (0-3 Credits)

Courses below simultaneously count towards a Core Area and a Distribution requirement.

Code	Title	Credits	Semester
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____

Mathematics (3-6 Credits)

Code	Title	Credits	Semester
Mathematics			_____
Select one of the following:		3	_____
MAT112	Mathematical Concepts and Applications		_____
MAT114	College Algebra Prep		_____
MAT115	College Algebra Prep		_____
MAT120	Intermediate Algebra		_____
MAT121	Intermediate Algebra		_____
MAT122	Intermediate Algebra		_____
MAT126	Intermediate Algebra with Review		_____
MAT206	Elements of Statistics		_____
MAT217	Mathematical Analysis for Business		_____
MAT218	Mathematical Analysis for Business		_____
MAT256	Investigating Quantity: Number, Operations and Numeration Systems		_____
MAT257	Investigating Geometry, Probability and Statistics		_____
Courses below meet Arizona General Education Curriculum AGEC requirements.			_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
MAT150	College Algebra/ Functions		_____
MAT150 & MAT182	College Algebra/ Functions and Plane Trigonometry		_____
MAT151	College Algebra/ Functions		_____
MAT151 & MAT182	College Algebra/ Functions and Plane Trigonometry		_____
MAT152	College Algebra/ Functions		_____
MAT152 & MAT182	College Algebra/ Functions and Plane Trigonometry		_____
MAT155	College Algebra/ Functions with Review		_____

MAT155 & MAT182	College Algebra/ Functions with Review and Plane Trigonometry	_____
MAT156	College Algebra/ Functions with Review	_____
MAT156 & MAT182	College Algebra/ Functions with Review and Plane Trigonometry	_____
MAT172	Finite Mathematics	_____
MAT187	Precalculus	_____
MAT188	Precalculus	_____
MAT212	Brief Calculus	_____
MAT213	Brief Calculus	_____
MAT220	Calculus with Analytic Geometry I	_____
MAT221	Calculus with Analytic Geometry I	_____
MAT225	Elementary Linear Algebra	_____
MAT227	Discrete Mathematical Structures	_____
MAT230	Calculus with Analytic Geometry II	_____
MAT231	Calculus with Analytic Geometry II	_____
MAT240	Calculus with Analytic Geometry III	_____
MAT241	Calculus with Analytic Geometry III	_____
MAT276	Modern Differential Equations	_____
MAT277	Modern Differential Equations	_____
Equivalent course/Satisfactory completion of a higher level Mathematics course.		_____

Computer Usage (1 Credit)

Computer-related course or demonstration of comparable computer skills. Additional courses may be approved by individual colleges. Students should contact their advisor for college-specific courses satisfying the requirement.

Code	Title	Credits	Semester
Core - Computer Usage			_____
Select 1 credit from the following:		1	_____
Accounting			_____
ACC115	Computerized Accounting		_____
Applied Biological Sciences			_____
ABS283	Bioinformatics and Scientific Computing		_____
Administration of Justice Studies			_____
AJS205	Effective Communication and Report Writing in Criminal Justice		_____
Architecture			_____
ARC243	Architectural Drawings: Site Plans and Sections		_____
ARC244	Architectural Drawings: Structural Systems		_____
ARC245	Architectural Drawings: Mechanical and Electrical Systems		_____
Art and Visual Communication			_____
AVC100	Introduction to Digital Arts		_____
AVC169	2D Media Design		_____
AVC170	3D Computer Design		_____
AVC173	Computer Art		_____
AVC175	Electronic Publishing Design I		_____
AVC177	Digital Photographic Imaging I		_____
Any 180++ course			_____
AVC183	Digital Graphic Arts I		_____
AVC283	Digital Graphic Arts II		_____
AVC289	Computer Illustration		_____
Business-Personal Computers			_____
Any BPC Course(s), including:			_____
BPC110	Computer Usage and Applications [1]		_____
Computer Information Systems			_____

Any CIS Course(s), including: [2]		_____
CIS105	Survey of Computer Information Systems [1]	_____
CIS162AB	C++: Level I [1]	_____
CIS162AD	C#: Level I [1]	_____
CIS163AA	Java Programming: Level I [1]	_____
Computer Science		_____
Any CSC Course(s), including: [3]		_____
CSC100AA	Introduction to Computer Science (C++) [1]	_____
CSC100AB	Introduction to Computer Science (C++) [1]	_____
CSC110	Introduction to Computer Science (Java) [1]	_____
CSC110AA	Introduction to Computer Science (Java) [1]	_____
CSC110AB	Introduction to Computer Science (Java) [1]	_____
CSC120	Digital Design Fundamentals [1]	_____
CSC150	Programming in C/C++ [1]	_____
CSC150AA	Programming In C/C++ [1]	_____
CSC180	Computer Literacy [1]	_____
CSC180AA	Computer Literacy [1]	_____
CSC180AB	Computer Literacy [1]	_____
CSC181AA	Applied Problem Solving With Visual Basic [1]	_____
CSC182	Principles of Programming with C#.NET [1]	_____
CSC182AA	Principles Of Programming With C#.NET [1]	_____
CSC205	Object Oriented Programming and Data Structures [1]	_____
CSC205AA	Object Oriented Programming and Data Structures [1]	_____
CSC205AB	Object Oriented Programming and Data Structures [1]	_____
CSC205AC	Object Oriented Programming and Data Structures [1]	_____
CSC205AD	Object Oriented Programming and Data Structures [1]	_____
Drafting Technology		_____
DFT105AA	Computer Aided Drafting I: AutoCAD [1,4]	_____
DFT254AA	Computer Aided Drafting II: AutoCAD	_____
Education		_____
EDU115	Digital Literacy for Teaching and Learning in Education	_____
Early Education		_____
EED115	Digital Literacy for Teaching and Learning in Education	_____
Electrical Engineering		_____
EEE120	Digital Design Fundamentals [1]	_____
Electronic		_____
ELE131	Digital Logic and Circuits	_____
ELE181	Computer Programming for Technology	_____
ELE241	Microprocessor Concepts	_____
ELE243	Microprocessor Applications	_____
ELE245	Advanced Microprocessors and Systems	_____
Electronic Technology		_____
ELT131	Digital and Logic Circuits	_____
ELT243	Microprocessor Applications	_____
English		_____
ENG100AE	Composition Skills	_____
Food & Nutition		_____
FON100	Introductory Nutrition	_____
General Business		_____

GBS221	Business Statistics [1]	_____
Geographic Information Science		_____
GIS205	Geographic Information Technologies [1]	_____
GIS211	Geographic Information Science I [1]	_____
Journalism		_____
JRN133	Development of Small Publications	_____
Paralegal Studies		_____
LAS229	Litigation Technologies	_____
Mathematics		_____
MAT206	Elements of Statistics [1]	_____
Music Theory/Composition		_____
MTC180	Computer Literacy for Musicians [1]	_____
Music: Commercial/Business		_____
MUC180	Computer Literacy for the Music Business	_____
MUC191	Electronic Music I	_____
Office Automation Systems		_____
OAS111AA	Computer Keyboarding I	_____
Psychology		_____
PSY230	Introduction to Statistics [1]	_____
PSY230WL	Introduction to Statistics with Lab	_____
Social Work		_____
SWU225	Statistics for Social Research/ Justice and Government [1]	_____

[1] Course meets Arizona General Education Curriculum AGEC requirements.AGEC designations are subject to change. See AGEC matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for each course's value(s) in the semester it is taken.

[2] Except CIS159 Visual Basic Programming I, CIS217AM Advanced Microsoft Access: Database Management, and CIS259 Visual Basic Programming II

[3] Except CSC200 Principles of Computer Science (Java), CSC200AA Principles of Computer Science (Java), CSC200AB Principles of Computer Science (Java), CSC210 Data Structures And Algorithms (Java), CSC210AA Data Structures and Algorithms (Java), CSC210AB Data Structures and Algorithms (Java)

[4] Must be taken with CSC100AA Introduction to Computer Science (C++) or CSC100AB Introduction to Computer Science (C++) to meet AGEC value

AGS General Education Distribution Areas

(28-29 credits- grade of "D" or better)

Humanities, Arts and Design (9 Credits)

Students are encouraged to choose courses from more than one discipline.

Code	Title	Credits	Semester
Distribution Area - Humanities, Arts and Design			_____
Select nine credits from the following:		9	_____
African American Studies			_____
AFR203	African-American History to 1865		_____
Arabic Humanities			_____
AHU245	Arabic Culture and Islam [1]		_____
American Indian Studies			_____
AIS213	American Indian Religions [1]		_____
Administration of Justice Studies			_____
AJS123	Ethics and the Administration of Justice [1]		_____
Art Humanities			_____
Any Art Humanities Course(s), including:			_____
ARH100	Introduction to Art [1]		_____
ARH101	Art from Prehistory Through Middle Ages [1]		_____
ARH102	Art from Renaissance to Modernism [1]		_____
ARH109	History of American Art		_____
ARH110	History of Graphic Design		_____
ARH112	Introduction to Modern and Contemporary Art [1]		_____
ARH115	History of Photography [1]		_____
ARH118	Introduction to Chinese Art [1]		_____
ARH145	History of Native American Art [1]		_____
ARH201	Art of Asia [1]		_____

ARH202	Art of Africa, Oceania, and Americas [1]		_____
ARH203	Art of Ancient Egypt [1]		_____
ARH204	Roman Art and Architecture [1]		_____
ARH217	Mexican Art History [1]		_____
ARH216	Pre-Columbian Art History		_____
ARH240	Art and Architecture of the Islamic World to 1800		_____
ARH250	Visual Language and Interpretation		_____
ART			_____
ART131	Photography I [1]		_____
Anthropology			_____
ASB211	Women Across Cultures [1]		_____
ASB214	Magic, Witchcraft and Healing: An Introduction to Comparative Religion [1]		_____
ASB220	Anthropology Goes to the Movies [1]		_____
ASB222	Buried Cities and Lost Tribes: Old World [1]		_____
ASB223	Buried Cities and Lost Tribes: New World [1]		_____
ASB253	Death and Dying Across Cultures [1]		_____
Art and Visual Communications			_____
AVC150	Multimedia Storytelling		_____
Chicana and Chicano Studies			_____
CCS101	Chicana and Chicano Studies [1]		_____
Communication			_____
COM150	Digital Storytelling		_____
COM241	Oral Interpretation of Literature [1]		_____
Construction			_____
CON101	Construction and Culture (formerly CNS101) [1]		_____
Dance Humanities			_____
DAH100	Introduction to Dance in the United States [1]		_____
DAH201	Dance, Culture, and Global Contexts [1]		_____
DAH250	Dance in Popular Culture [1]		_____
DAH255	Hip Hop: Arts, Aesthetic and Culture [1]		_____
Engineering Science			_____
ECE150	Exploring Engineering and its Impact on Society	3	_____
Education			_____
EDU230	Cultural Diversity In Education (effective Spring '22) [1]		_____
EDU291	Children's Literature [1]		_____
EDU292	The Art of Storytelling [1]		_____
EDU294	Multicultural Folktales [1]		_____
Early Education			_____
EED225	Language and Literacy in the Context of Culture and Relationships [1]	3	_____
English			_____
ENG200	Reading and Writing About Literature [1]		_____
ENG213	Introduction to the Study of Language [1]		_____
English Humanities			_____
Any ENH Course(s), including: [2]			_____
ENH110	Introduction to Literature [1]		_____
ENH111	Literature and the American Experience		_____
ENH112	Chicano Literature [1]		_____
ENH113	Writers/Directors and Current Issues [1]		_____
ENH114	African American Literature [1]		_____
ENH117	Rap Literature: The Oral Tradition		_____

ENH130	Mystery Fiction from the Nineteenth Century to the Present	_____
ENH140AA	Sports in Literature and Film [1]	_____
ENH190	Introduction to US Ethnic Literature [1]	_____
ENH201	World Literature Through the Renaissance [1]	_____
ENH202	World Literature After the Renaissance [1]	_____
ENH204	Introduction to Contemporary Literature [1]	_____
ENH206	Nature and Environmental Literature [1]	_____
ENH214	Poetry Study [1]	_____
ENH220	Gender, Media, and Culture [1]	_____
ENH221	Survey of English Literature Before 1800 [1]	_____
ENH222	Survey of English Literature After 1800 [1]	_____
ENH230	Introduction to Shakespeare [1]	_____
ENH231	Introduction to Shakespeare: The Early Plays [1]	_____
ENH232	Introduction to Shakespeare: The Late Plays [1]	_____
ENH235	Survey Of Gothic Literature [1]	_____
ENH241	American Literature Before 1860 [1]	_____
ENH242	American Literature After 1860 [1]	_____
ENH245	J.R.R. Tolkien and C.S. Lewis: Battling Modernism [1]	_____
ENH251	Mythology [1]	_____
ENH253	Contemporary Global Literature and Film	_____
ENH254	Literature and Film [1]	_____
ENH255	Contemporary U.S. Literature and Film [1]	_____
ENH256	Shakespeare on Film [1]	_____
ENH259	American Indian Literature [1]	_____
ENH260	Literature of the Southwest [1]	_____
ENH275	Modern Fiction [1]	_____
ENH277	Narrative Genres	_____
ENH277AA	Dark Futures: Dystopian Narrative	_____
ENH277AB	Whodunnits: Mystery Narrative	_____
ENH277AC	Happily Ever: Children's Narrative	_____
ENH277AD	Stuff Blows Up: Action Narrative	_____
ENH277AE	Tour of Duty: War Narrative	_____
ENH277AF	Heroic Quests: Fantasy Narrative	_____
ENH277AG	Out There: Science Fiction Narrative	_____
ENH277AH	Facing Fear: Horror Narrative	_____
ENH277AI	Make 'em Laugh: Comedy Narrative	_____
ENH277AJ	Love and Passion: Romance Narrative	_____
ENH277AK	The Wild Frontier: Western Narrative	_____
ENH280	Topics in American Literature [1]	_____
ENH284	19th Century Women Writers [1]	_____
ENH285	Contemporary Women Writers [1]	_____
ENH291	Children's Literature [1]	_____
ENH294	Multicultural Folktales [1]	_____
ENH295	Banned Books and Censorship [1]	_____
Film, Media, and Theatre		_____
FMT107	Career Pathways in the Media [1]	_____
French		_____

FRE265	Advanced French I [1]	_____
Game Studies		_____
GST202	Games, Culture and Aesthetics	_____
Health Care Related		_____
HCR210	Clinical Health Care Ethics [1]	_____
History		_____
HIS101	History of Western Civilization Middle Ages to 1789 [1]	_____
HIS102	History of Western Civilization 1789 to Present [1]	_____
HIS103	United States History to 1865 [1]	_____
HIS108	United States History 1945 to the Present [1]	_____
HIS110	World History to 1500 [1]	_____
HIS111	World History 1500 to the Present [1]	_____
HIS113	History of Eastern Civilizations to 1850 [1]	_____
HIS114	History of Eastern Civilizations 1850 to Present [1]	_____
HIS203	African-American History to 1865 [1]	_____
HIS212	History of Religion [1]	_____
HIS251	History of England to 1700 [1]	_____
HIS252	History of England 1700 to Present [1]	_____
Honors		_____
HON190	The Honors Experience [1]	_____
Humanities		_____
Any HUM course(s), including: [3]		_____
HUM101	General Humanities [1]	_____
HUM107	Humanities Through the Arts [1]	_____
HUM108	Contemporary Humanities [1]	_____
HUM201	Humanities: Universal Themes [1]	_____
HUM202	Humanities: Universal Themes [1]	_____
HUM205	Introduction to Cinema [1]	_____
HUM206	Introduction to Television Arts [1]	_____
HUM209	Women and Films [1]	_____
HUM210	Contemporary Cinema [1]	_____
HUM211AA	Foreign Films: Classics [1]	_____
HUM211AE	Foreign Films: Italian	_____
HUM212	Documentary Film	_____
HUM213	Hispanic Film [1]	_____
HUM214	African-Americans in Film [1]	_____
HUM215	Film Comedy [1]	_____
HUM216	The Films and Career of Alfred Hitchcock [1]	_____
HUM220	History and Film [1]	_____
HUM235	Disability Studies [1]	_____
HUM245	Introduction to Holocaust Studies [1]	_____
HUM250	Ideas and Values in the Humanities: Early Civilizations to the Renaissance [1]	_____
HUM251	Ideas and Values in the Humanities: Renaissance to the Contemporary World [1]	_____
HUM260	Intercultural Perspectives [1]	_____
HUM261	Asian Ideas and Values [1]	_____
HUM292	The Art of Storytelling [1]	_____
Interior Design		_____
INT115	Historical Architecture and Furniture [1]	_____

INT120	Modern Architecture and Furniture [1]	_____
Japanese Humanities		_____
JPH245	Traditional and Modern Japanese Culture [1]	_____
Latin		_____
LAT201	Intermediate Latin I [1]	_____
LAT202	Intermediate Latin II [1]	_____
Music: History/Literature		_____
MHL140	Survey of Music History [1]	_____
MHL143	Music in World Cultures [1]	_____
MHL145	American Jazz and Popular Music [1]	_____
MHL146	Survey of Broadway Musicals [1]	_____
MHL153	Rock Music and Culture [1]	_____
MHL155	Survey of American Music [1]	_____
MHL194	Music and Culture [1]	_____
MHL204	Hip-Hop Music and Culture [1]	_____
MHL241	Music History and Literature to 1750 [1]	_____
MHL242	Music History and Literature 1750 to Present [1]	_____
MHL295	Topics in Music [1]	_____
Philosophy		_____
Any PHI Course(s), including:		_____
PHI101	Introduction to Philosophy [1]	_____
PHI103	Introduction to Logic [1]	_____
PHI104	World Philosophy [1]	_____
PHI105	Introduction to Ethics [1]	_____
PHI201	History of Ancient Philosophy [1]	_____
PHI212	Contemporary Moral Issues [1]	_____
PHI213	Medical and Bio-Ethics [1]	_____
PHI214	Business Ethics	_____
PHI216	Environmental Ethics [1]	_____
PHI218	Philosophy of Sexuality [1]	_____
PHI224	Political Philosophy [1]	_____
PHI244	Philosophy of Religion [1]	_____
PHI245	Introduction to Eastern Philosophy [1]	_____
PHI251	Philosophy of Sport [1]	_____
Queer Studies		_____
QST200	Introduction to Queer Studies [1]	_____
QST210	Queer Media Studies [1]	_____
Religious Studies		_____
Any REL Course(s)		_____
REL100	World Religions [1]	_____
REL101	Introduction to Religion [1]	_____
REL151	Religion in the Hispanic World [1]	_____
REL200	Religion and Film [1]	_____
REL202	Classics of Asian Religions [1]	_____
REL203	American Indian Religions [1]	_____
REL205	Religion and the Modern World [1]	_____
REL206	Religion in America [1]	_____
REL207	Ritual, Symbol, and Myth [1]	_____
REL212	Introduction to Islam [1]	_____
REL218	Religion and Culture	_____
REL244	Philosophy of Religion [1]	_____
REL248	Religion, Peace and Violence	_____
REL250	Religion in Ireland: Neolithic to Early Medieval [1]	_____
REL270	Introduction to Christianity [1]	_____
REL271	Introduction to the New Testament [1]	_____
REL282AA	Service Learning Experience in Religious Studies	_____

REL282AC	Service Learning Experience in Religious Studies	_____
REL290	Women and World Religions [1]	_____
REL291	Religion and Sexuality [1]	_____
Studies in Language & Culture		_____
SLC201	Introduction to Linguistics [1]	_____
SLC202	Introduction to Literary and Cultural Theory [1]	_____
Spanish		_____
SPA241	Spanish and Spanish-American Film I [1]	_____
SPA242	Spanish and Spanish-American Film II [1]	_____
SPA265	Advanced Spanish I [1]	_____
SPA266	Advanced Spanish II [1]	_____
Spanish Humanities		_____
SPH241	Spanish and Latin American Film in Translation [1]	_____
SPH245	Hispanic Heritage in the Southwest [1]	_____
Sustainability/Social Sciences and Humanities		_____
SSH111	Sustainable Cities [1]	_____
Storytelling		_____
STO292	The Art of Storytelling [1]	_____
STO294	Multicultural Folktales [1]	_____
STO295	Traditional Storytelling Around the World [1]	_____
Social Work		_____
SWU183	Introductory Ethics: A Social Service Perspective [1]	_____
Textiles and Clothing		_____
TEC105	Cultural Aspects of Clothing [1]	_____
TEC125	Fashion Design	_____
Theater		_____
THE111	Introduction to Theatre [1]	_____
THE220	Modern Drama [1]	_____
Theatre and Film		_____
THF205	Introduction to Cinema [1]	_____
THF206	Introduction to Television Arts [1]	_____
THF210	Contemporary Cinema [1]	_____
Theater/Performance/Production		_____
THP217	Introduction to Design Scenography [1]	_____
THP241	Oral Interpretation of Literature [1]	_____
Women's Studies		_____
WST209	Women and Films [1]	_____
WST284	19th Century Women Writers [1]	_____
WST285	Contemporary Women Writers [1]	_____
WST290	Women and World Religions [1]	_____

[1] Course meets Arizona General Education Curriculum (AGEC) requirements.
[2] Except HUM225 Introduction to Popular Culture

Social-Behavioral Sciences (6-9 Credits)

Students are encouraged to choose courses from more than one discipline. Social-Behavioral Sciences requirements may be met with 6 credits only if COM100 Introduction to Human Communication, COM110 Interpersonal Communication, or COM230 Small Group Communication is shared between Core and Distribution (see Academic Policies section). The credits are only counted once, but may be applied meet Oral Communication and Social-Behavioral Science requirements.

Code	Title	Credits	Semester
Distribution Area - Social-Behavioral Sciences			_____
Select six to nine credits from the following:		6-9	_____
African American Studies			_____
AFR202	Ethnic Relations in the United States [1]		_____
AFR203	African-American History to 1865 [1]		_____
AFR204	African-American History 1865 to Present [1]		_____
American Indian Studies			_____
AIS101	Survey of American Indian Issues [1]		_____

AIS140	American Indian History [1]		_____
AIS141	Sovereign Indian Nations [1]		_____
AIS160	American Indian Law		_____
Administration of Justice Studies			_____
AJS101	Introduction to Criminal Justice [1]		_____
AJS119	Computer Applications in Justice Studies		_____
AJS200	Current Issues In Criminal Justice [1]		_____
AJS225	Criminology [1]		_____
AJS258	Victimology and Crisis Management in Public Safety		_____
AJS270	Community Relations [1]		_____
Anthropology			_____
ASB100	Introduction to Global Health [1]		_____
ASB102	Introduction to Cultural Anthropology [1]		_____
ASB202	Ethnic Relations in the United States [1]		_____
ASB211	Women Across Cultures [1]		_____
ASB222	Buried Cities and Lost Tribes: Old World [1]		_____
ASB223	Buried Cities and Lost Tribes: New World [1]		_____
ASB226	Human Impacts on Ancient Environments [1]		_____
ASB230	Principles of Archaeology [1]		_____
ASB235	Southwest Archaeology [1]		_____
ASB252	Sports and Culture [1]		_____
Anthropology			_____
ASM104	Bones, Stones, and Human Evolution [1]		_____
ASM275	Forensic Anthropology [1]		_____
Behavioral Health Services Technology			_____
BHS150	Introduction to Behavioral Health and Social Services [1]		_____
BHS155	Professional Resiliency and Well-Being [1]		_____
BHS175	Trauma-Informed Care and Recovery Treatment [1]		_____
BHS210	Addictions, Substance Use Disorders, and Recovery [1]		_____
Counseling and Applied Psychology			_____
CAP120	Introduction to Counseling [1]	3	_____
Chicana and Chicano Studies			_____
CCS202	Ethnic Relations in the United States [1]		_____
Child/Family Studies			_____
CFS112	Personal Growth and Family Relations [1]		_____
CFS157	Marriage and Family Life [1]		_____
CFS159	The Modern Family [1]		_____
CFS176	Child Development [1]		_____
CFS205	Human Development [1]		_____
CFS235	Developing Child: Theory into Practice, Prenatal to Age Eight [1]		_____
CFS259	Sexuality over the Life Span [1]		_____
Communication			_____
Courses below meet Arizona General Education Curriculum (AGEC) requirements.			_____
COM100	Introduction to Human Communication		_____

COM100AA & COM100AB & COM100AC	Introduction to Human Communication Part I and Introduction to Human Communication Part II and Introduction to Human Communication Part III	_____
COM110	Interpersonal Communication [1]	_____
COM110AA & COM110AB & COM110AC	Interpersonal Communication Part I and Interpersonal Communication Part II and Interpersonal Communication Part III	_____
COM163	Intercultural Communication in Everyday Life	_____
COM230	Small Group Communication	_____
COM250	Introduction to Organizational Communication	_____
COM263	Elements of Intercultural Communication	_____
Counseling and Personal Development		_____
CPD102AH	Stress Management [1]	_____
CPD180	Human Resilience: Cognitive, Emotional, and Behavioral Applications [1]	_____
Early Childhood Education		_____
ECH176	Child Development [1]	_____
Economics		_____
ECN160	Economic History of the United States [1]	_____
ECN211	Macroeconomic Principles [1]	_____
ECN212	Microeconomic Principles [1]	_____
ECN213	The World Economy [1]	_____
ECN250	World Economic Systems [1]	_____
Education		_____
EDU221	Introduction to Education [1]	_____
EDU222	Introduction to the Exceptional Learner [1]	_____
Early Education		_____
EED205	The Developing Child: Prenatal to Age Eight [1]	_____
EED222	Introduction to the Exceptional Young Child: Birth to Age Eight [1]	_____
Emergency Medical Technology		_____
EMT258	Victimology and Crisis Management in Public Safety [1]	_____
English		_____
ENG213	Introduction to the Study of Language [1]	_____
Fire Science Technology		_____
FSC258	Victimology and Crisis Management in Public Safety [1]	_____
Cultural Geography		_____
GCU102	Human Geography: Spatial Relationships Between Humans and Culture with Their Environment [1]	_____
GCU113	United States and Arizona Social Studies [1]	_____
GCU121WG	World Geography: People, Places, and Culture	_____
GCU221	Arizona Geography: Landforms, Climate, Water, People, and Culture [1]	_____
Health Science		_____
HES100	Healthful Living [1]	_____
HES120	Principles of Physical Fitness and Wellness	_____
History		_____

Any HIS Course(s), including [2]		_____
HIS100	History of Western Civilization to Middle Ages	_____
HIS101	History of Western Civilization Middle Ages to 1789	_____
HIS102	History of Western Civilization 1789 to Present	_____
HIS103	United States History to 1865	_____
HIS104	United States History 1865 to Present	_____
HIS105	Arizona History	_____
HIS106	Southwest History	_____
HIS108	United States History 1945 to the Present	_____
HIS109	Mexican American History and Culture	_____
HIS113	History of Eastern Civilizations to 1850	_____
HIS114	History of Eastern Civilizations 1850 to Present	_____
HIS140	American Indian History	_____
HIS145	History of Mexico	_____
HIS190	Environmental History	_____
HIS201	History of Women in America	_____
HIS203	African-American History to 1865	_____
HIS204	African-American History 1865 to Present	_____
HIS209	The Chicana/o in 20th and 21st Century America	_____
HIS277	The Modern Middle East	_____
Honors		_____
HON201	Leadership Development: Historical and Contemporary Perspectives	_____
Humanities		_____
HUM235	Disability Studies	_____
International Business		_____
IBS109	Cultural Dimension for International Trade	_____
Information Studies		_____
IFS201	Information in a Post-Truth World	_____
IFS210	Digital Information and Access in a Global Society	_____
IFS213	Hacking and Open Source Culture	_____
Mass Communications		_____
MCO120	Media and Society	_____
Management		_____
MGT229	Management and Leadership I	_____
MGT230	Management and Leadership II	_____
Public Administration		_____
PAD200	Public Affairs Economics	_____
Political Science		_____
Any POS course(s), including:		_____
POS100	Introduction to Political Science [1]	_____
POS101	Current Issues	_____
POS110	American National Government [1]	_____
POS113	United States and Arizona Social Studies [1]	_____
POS114	World Social Studies [1]	_____
POS115	Issues in American Politics [1]	_____
POS120	International Relations [1]	_____
POS125	Issues in World Politics [1]	_____
POS130	State and Local Government [1]	_____

POS140	Comparative Government [1]	_____
POS180	United Nations Studies	_____
POS210	Political Ideologies [1]	_____
POS221	Arizona Constitution	_____
POS222	U.S. Constitution	_____
POS223	Civil Rights and Liberties [1]	_____
POS281AB	Public Policy/ Service Internship	_____
POS282AA	Volunteerism for Political Science: A Service Learning Experience	_____
POS282AC	Volunteerism for Political Science: A Service Learning Experience	_____
POS285	Political Issues and Public Policy [1]	_____
Psychology		_____
PSY101	Introduction to Psychology [1]	_____
PSY123	Psychology of Parenting [1]	_____
PSY132	Psychology and Culture [1]	_____
PSY156	Understanding Death and Dying [1]	_____
PSY157	African/Black Psychology [1]	_____
PSY215	Sports Psychology [1]	_____
PSY218	Health Psychology [1]	_____
PSY225	Psychology of Religion [1]	_____
PSY235	Psychology of Gender [1]	_____
PSY240	Developmental Psychology [1]	_____
PSY241	Understanding and Changing Behavior [1]	_____
PSY243	The Psychology of Developmental Disabilities [1]	_____
PSY250	Social Psychology [1]	_____
PSY260	Psychology of Personality [1]	_____
PSY262	Positive Psychology: The Science of Well-Being [1]	_____
PSY266	Psychological Disorders [1]	_____
PSY277	Psychology of Human Sexuality [1]	_____
PSY280	Industrial/ Organizational Psychology [1]	_____
Queer Studies		_____
QST200	Introduction to Queer Studies [1]	_____
QST200	Introduction to Queer Studies [1]	_____
Recreation		_____
REC120	Leisure and the Quality of Life [1]	_____
Society and Business		_____
SBU200	Society and Business [1]	_____
Studies in Language & Culture		_____
SLC201	Introduction to Linguistics [1]	_____
Sociology		_____
Any SOC course(s), including: [3]		_____
SOC101	Introduction to Sociology [1]	_____
SOC110	Drugs and Society [1]	_____
SOC130	Human Sexuality [1]	_____
SOC141	Sovereign Indian Nations [1]	_____
SOC157	Sociology of Families and Relationships [1]	_____
SOC180	Social Implications of Technology [1]	_____
SOC212	Gender and Society [1]	_____
SOC220	Sport and Society [1]	_____
SOC241	Race and Ethnic Relations [1]	_____
SOC251	Social Problems [1]	_____
SOC266	Sociology Through Film [1]	_____
SOC270	The Sociology of Health and Illness [1]	_____

Sustainability/Social Sciences and Humanities		_____
SSH111	Sustainable Cities [1]	_____
Sustainability/Natural Sciences		_____
SUS110	Sustainable World [1]	_____
Social Work		_____
SWU171	Introduction to Social Work [1]	_____
SWU182	A Social Services Perspective of Government [1]	_____
SWU250	Mindfulness for Stress Management [1]	_____
SWU258	Victimology and Crisis, a Social Services Perspective [1]	_____
SWU295	Foundations of Social Work Practice [1]	_____
Textiles and Clothing		_____
TEC105	Cultural Aspects of Clothing [1]	_____
Women's Studies		_____
WST100	Introduction to Women's and Gender Studies [1]	_____
WST161	American Women Since 1920 [1]	_____
Yaqui Indian History and Culture		_____
YAQ100	Yaqui Indian History and Culture [1]	_____

[1] Course meets Arizona General Education Curriculum (AGEC) requirements.

[2] Except HIS111 World History 1500 to the Present, HIS170 American Indian History of the Southwest,HIS173 United States (U.S.) Military History 1603 to Present, HIS251 History of England to 1700, HIS252 History of England 1700 to Present

[3] Except SOC143 Sociology of African American Problems, SOC245 Social Deviance, SOC253 Social Class and Stratification, SOC265 Sociology of Aging

Natural Sciences (7-8 Credits)

Two lecture courses and one corresponding laboratory course are to be selected. The lecture and corresponding laboratory course(s) may carry separate credit. For appropriate course selection students should consult with an advisor.

Code	Title	Credits	Semester
Distribution Area - Natural Sciences			_____
Select seven to eight credits from the following:		7-8	_____
Agricultural Science			_____
AGS164	Plant Growth and Development [1]		_____
AGS260	Soils [1]		_____
Anthropology			_____
ASB231	Archaeological Field Methods [1]		_____
Anthropology			_____
ASM104	Bones, Stones, and Human Evolution [1]		_____
ASM265	Laboratory Methods in Archaeology [1]		_____
ASM275	Forensic Anthropology [1]		_____
Astronomy			_____
AST101	Survey of Astronomy [1]		_____
AST106	Life in the Universe [1]		_____
AST111	Introduction to Solar System Astronomy [1]		_____
AST112	Introduction to Stars, Galaxies, and Cosmology [1]		_____
Biology			_____
BIO100	Biology Concepts [1]		_____
BIO101	Introduction to Human Genetics for Non-Majors [1]		_____
BIO102	Cells to Systems: An Introduction to Biology for Non-Majors [1]		_____
BIO105	Environmental Biology [1]		_____
BIO107	Introduction to Biotechnology [1]		_____
BIO108	Plants and Society [1]		_____
BIO109	Natural History of the Southwest [1]		_____
BIO111	Microbes and Society [1]		_____
BIO116	Introduction to Animal Behavior [1]		_____
BIO145	Marine Biology [1]		_____
BIO149AK	Field Biology: Ecological and Environmental Field Experience		_____

BIO149AL	Field Biology: Ecological and Environmental Field Experience	_____
BIO149AM	Field Biology: Ecological and Environmental Field Experience	_____
BIO149AN	Field Biology: Ecological and Environmental Field Experience	_____
BIO156	Introductory Biology for Allied Health [1]	_____
BIO156XT	Introductory Biology for Allied Health [1]	_____
BIO160	Introduction to Human Anatomy and Physiology [1]	_____
BIO181	General Biology (Majors) I [1]	_____
BIO181XT	General Biology (Majors) I [1]	_____
BIO182	General Biology (Majors) II [1]	_____
BIO182XT	General Biology (Majors) II [1]	_____
BIO201	Human Anatomy and Physiology I [1]	_____
BIO201XT	Human Anatomy and Physiology I [1]	_____
BIO202	Human Anatomy and Physiology II [1]	_____
BIO205	Microbiology [1]	_____
Chemistry		_____
CHM107 & 107LL	Chemistry and Society and Chemistry and Society Laboratory [1]	_____
CHM130 & 130LL	Fundamental Chemistry and Fundamental Chemistry Laboratory [1]	_____
CHM130AA	Fundamental Chemistry with Lab	_____
CHM150 & CHM151LL	General Chemistry I and General Chemistry I Laboratory	_____
CHM140AA	General Chemistry for Engineers with Lab	_____
CHM150AA	General Chemistry I with Lab [1]	_____
CHM151 & 151LL	General Chemistry I and General Chemistry I Laboratory [1]	_____
CHM151AA	General Chemistry I with Lab [1]	_____
CHM152 & 152LL	General Chemistry II and General Chemistry II Laboratory [1]	_____
CHM152AA	General Chemistry II with Lab [1]	_____
CHM230 & 230LL	Fundamental Organic Chemistry and Fundamental Organic Chemistry Laboratory [1]	_____
CHM230AA	Fundamental Organic Chemistry with Lab	_____
Construction		_____
CON106	Foundations of Concrete (formerly CNS106) [1]	_____
Environmental Sciences		_____
ENV101	Introduction to Environmental Science [1]	_____
Food and Nutrition		_____
Courses below meet Arizona General Education Curriculum (AGEC) requirements. [1]		_____
FON241 & 241LL	Principles of Human Nutrition and Principles of Human Nutrition Laboratory	_____

FON241LL	Principles of Human Nutrition Laboratory	1	_____
Forensic Science			_____
FOR105	Forensic Science: Physical Evidence [1]		_____
FOR106	Forensic Science: Biological Evidence [1]		_____
Geology			_____
GLG121	Geology of the Grand Canyon		_____
GLG140	Introduction to Oceanography		_____
GLG229AB	Field Studies for Educators		_____
GLG229AC	Field Studies for Educators		_____
GLG230AA	Field Geology of the Southwest		_____
GLG230AB	Field Geology of the Southwest		_____
GLG230AC	Field Geology of the Southwest		_____
GLG231AA	Special Topics in Geology		_____
GLG231AB	Special Topics in Geology		_____
GLG231AC	Special Topics in Geology		_____
GLG231AD	Special Topics in Geology		_____
GLG280	Geology of Arizona Lecture		_____
GLG281	Geology of Arizona Lab		_____
GLG282AA	Volunteerism for Geology: A Service Learning Experience		_____
Courses below meet Arizona General Education Curriculum (AGEC) requirements.			_____
GLG101 & GLG103	Physical Geology: Dynamic Earth Lecture and Physical Geology: Dynamic Earth Lab		_____
GLG101IN	Physical Geology: Dynamic Earth		_____
GLG102 & GLG104	Historical Geology: Primordial to Present Lecture and Historical Geology: Primordial to Present Lab		_____
GLG102IN	Historical Geology: Primordial to Present		_____
GLG105	Introduction to Planetary Science		_____
GLG106	Life in the Universe		_____
GLG110 & GLG111	Geological Disasters and the Environment and Geological Disasters and the Environment Lab		_____
GLG110IN	Geological Disasters and the Environment		_____
Physical Geography			_____
Courses below meet Arizona General Education Curriculum (AGEC) requirements.			_____
GPH111	Physical Geography: Atmosphere, Lithosphere, Water and Hazards Lecture		_____
GPH112 & GPH113	Physical Geography: Climate, Landforms, Water and Hazards Laboratory and Physical Geography: Atmosphere, Lithosphere, Water, and Hazards		_____
GPH211	Landform Processes		_____
GPH212 & GPH214	Introduction to Meteorology I and Introduction to Meteorology Laboratory I		_____

GPH213 & GPH215	Climate and Weather and Climate and Weather Laboratory	_____
Physical Science		_____
PHS110	Fundamentals of Physical Science [1]	_____
PHS115	The Science of Musical Instruments [1]	_____
PHS120	Introduction to Physical Science: Astronomy, Meteorology, Geology and Oceanography [1]	_____
Physics		_____
PHY101	Introduction to Physics [1]	_____
PHY111	General Physics I [1]	_____
PHY112	General Physics II [1]	_____
PHY121	University Physics I: Mechanics [1]	_____
PHY131	University Physics II: Electricity and Magnetism [1]	_____
Psychology		_____
PSY275	Biopsychology [1]	_____
PSY290AB	Research Methods [1]	_____
PSY290AC	Research Methods Laboratory [1]	_____

[1] Course(s) meets Arizona General Education Curriculum (AGEC) requirements.

Literacy and Critical Inquiry (0-3 Credits)

Literacy requirements may be met with 0 credits only if CRE101 College Critical Reading and Critical Thinking or COM225 Public Speaking is shared between Core and Distribution (see Academic Policies section). The credits are only counted once, but may be applied to meet [Critical Reading and Literacy and Critical Inquiry] or [Oral Communication and Literacy and Critical Inquiry] requirements.

Code	Title	Credits	Semester
Distribution Area - Literacy and Critical Inquiry			_____
Select up to three credits from the following:		0-3	_____
American Indian Studies			_____
AIS203	Fundamentals of Economic Development for Indigenous Nations		_____
AIS213	American Indian Religions [1]		_____
Counseling and Applied Psychology			_____
CAP260	Career and Professional Preparation for the Helping Professions		_____
Communication			_____
COM222	Argumentation [1]		_____
COM225	Public Speaking [1]		_____
COM241	Oral Interpretation of Literature [1]		_____
Counseling and Personal Development			_____
CPD160	Introduction to Multiculturalism [1]		_____
Critical Reading			_____
CRE101	College Critical Reading and Critical Thinking [1]		_____
CRE201	Critical Reading and Writing in a Global Society [1]		_____
Culinary Arts			_____
CUL223	Food Service Management [1]		_____
Dance Humanities			_____
DAH255	Hip Hop: Arts, Aesthetic and Culture [1]		_____
Education			_____
EDU282AC	Service-Learning Experience in Education [1]		_____
English			_____
ENG111	Technical and Professional Writing [1]		_____
ENG200	Reading and Writing About Literature [1]		_____
ENG215	Strategies of Academic Writing [1]		_____
ENG216	Persuasive Writing on Public Issues [1]		_____

ENG217	Personal and Exploratory Writing [1]	_____
English Humanities		_____
ENH241	American Literature Before 1860 [1]	_____
ENH253	Contemporary Global Literature and Film [1]	_____
ENH254	Literature and Film [1]	_____
ENH255	Contemporary U.S. Literature and Film [1]	_____
ENH277AE	Tour of Duty: War Narrative [1]	_____
ENH277AG	Out There: Science Fiction Narrative [1]	_____
Exercise Science		_____
EXS290	Introduction to Evidence-Based Practice [1]	_____
Food and Nutrition		_____
FON225	Research in Complementary and Alternative Nutrition Therapies [1]	_____
General Business		_____
GBS233	Business Communication [1]	_____
Physical Geography		_____
GPH267	Extreme Weather and Climate [1]	_____
Humanities		_____
HUM212	Documentary Film [1]	_____
HUM225	Introduction to Popular Culture [1]	_____
HUM235	Disability Studies [1]	_____
HUM250	Ideas and Values in the Humanities: Early Civilizations to the Renaissance [1]	_____
HUM251	Ideas and Values in the Humanities: Renaissance to the Contemporary World [1]	_____
Information Studies		_____
IFS201	Information in a Post-Truth World [1]	_____
Journalism		_____
JRN201	News Writing [1]	_____
JRN234	Feature Writing [1]	_____
Mass Communications		_____
MCO220	Cultural Diversity and the Media [1]	_____
Music: History/Literature		_____
MHL204	Hip-Hop Music and Culture [1]	_____
Philosophy		_____
PHI103	Introduction to Logic [1]	_____
PHI214	Business Ethics [1]	_____
PHI218	Philosophy of Sexuality [1]	_____
PHI224	Political Philosophy [1]	_____
Political Science		_____
POS115	Issues in American Politics [1]	_____
Psychology		_____
PSY290AB	Research Methods [1]	_____
PSY290AC	Research Methods Laboratory [1]	_____
Religious Studies		_____
REL203	American Indian Religions [1]	_____
REL205	Religion and the Modern World [1]	_____
REL207	Ritual, Symbol, and Myth [1]	_____
Studies in Language & Culture		_____
SLC202	Introduction to Literary and Cultural Theory [1]	_____
Textiles and Clothing		_____
TEC105	Cultural Aspects of Clothing	_____
Theatre		_____
THE220	Modern Drama [1]	_____
Theatre Performance/Production		_____
THP241	Oral Interpretation of Literature [1]	_____

[1] Course meets Arizona General Education Curriculum (AGEC) requirements.

Elective Courses (15-22 Credits)
May select courses from prefixes already chosen for General Education Distribution requirements in order to develop depth in one or more subject areas.

Associate in Applied Science (AAS) Degree and General Education Requirements

Maricopa County Community College District (MCCCD) 2025-2026

Description

The Associate in Applied Science (AAS) degree requires at least 60 credits in its program of study. The exact number of credits for a specific degree is identified as part of the presentation of its requirements at curriculum.maricopa.edu (https://curriculum.maricopa.edu/) click on Current Programs or search in the offering college(s)' catalog.

Purpose of the Degree

The Maricopa County Community College District Associate in Applied Science (AAS) degree is recommended for students who wish to gain a depth of technical expertise in a particular workforce-related area of study. The AAS degree options vary at the different MCCCD colleges and can be searched alphabetically (https://curriculum.maricopa.edu/) (click on Current Programs) or by field of interest (https://www.maricopa.edu/degrees-certificates). Requirements for each degree can be found on the linked web pages and in the corresponding college(s)'s catalog.

Academic Policies That Govern the AAS Degree:

- Requires 60 or more credits numbered 100 or above and includes credits or the equivalent in the General Education Core areas and credits in the Distribution areas. AAS degree requirements follow with the use of a diagonal character or comma (/ or ,) between course numbers to signify options. An asterisk (*) following the course number defines requirements with an effective begin term of spring;
- All courses must be completed with a grade of C or higher; any additional requirements such as grades of B or higher or minimum grade point average requirements are listed on individual degrees and certificates;
- The graduation policies within the general catalog must be satisfied (see General Graduation Requirements Administrative Regulation 2.3.9). First Year Experience required (FYE101 or FYE103)
- Some courses also have equivalent combinations of modular variants; all options are listed and completion of either the course or its modular equivalents will satisfy the AAS requirements.
- Requires completion of General Education courses as indicated in the General Education Requirements for the Associate in Applied Science degree from the Maricopa County Community College District, or completion of a curriculum as stated in the catalog.
- Industry-recognized credentials can be counted as general electives.
- Courses with different credit systems (quarter hours, trimester, units) are converted to semester credit hours. The recovery of a deficiency in a requirement (Prerequisites, Required Courses, Restricted Electives, or General Education) category due to a quarter-hour or other credit system application will be determined by the college.
- Any course that is cross referenced with that of another discipline/subject (for example EDU291/ENH291, Children's Literature) covers identical contents. A course under either subject (for example, EDU291 or ENH291) will count only once toward degree requirements.

Degree Requirements

General Education Core (12-15 Credits)[1]

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Demonstrate college-level skills in the following areas:

Code	Title	Credits	Semester
First-Year Composition [1]			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
or ENG111	Technical and Professional Writing		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM100AA & COM100AB & COM100AC	Introduction to Human Communication Part I and Introduction to Human Communication Part II and Introduction to Human Communication Part III		_____
COM110	Interpersonal Communication		_____
COM110AA & COM110AB & COM110AC	Interpersonal Communication Part I and Interpersonal Communication Part II and Interpersonal Communication Part III		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Complete one of the following:		0-3	_____

CRE101	College Critical Reading and Critical Thinking		_____
Equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3	_____
MAT112	Mathematical Concepts and Applications		_____
MAT114	College Algebra Prep		_____
MAT115	College Algebra Prep		_____
MAT120	Intermediate Algebra		_____
MAT121	Intermediate Algebra		_____
MAT122	Intermediate Algebra		_____
MAT126	Intermediate Algebra with Review		_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
MAT150	College Algebra/ Functions		_____
MAT150 & MAT182	College Algebra/ Functions and Plane Trigonometry		_____
MAT151	College Algebra/ Functions		_____
MAT151 & MAT182	College Algebra/ Functions and Plane Trigonometry		_____
MAT152	College Algebra/ Functions		_____
MAT152 & MAT182	College Algebra/ Functions and Plane Trigonometry		_____
MAT155	College Algebra/ Functions with Review		_____
MAT155 & MAT182	College Algebra/ Functions with Review and Plane Trigonometry		_____
MAT156	College Algebra/ Functions with Review		_____
MAT156 & MAT182	College Algebra/ Functions with Review and Plane Trigonometry		_____
MAT172	Finite Mathematics		_____
MAT187	Precalculus		_____
MAT188	Precalculus		_____
MAT206	Elements of Statistics		_____
MAT212	Brief Calculus		_____
MAT213	Brief Calculus		_____
MAT217	Mathematical Analysis for Business		_____
MAT218	Mathematical Analysis for Business		_____
MAT220	Calculus with Analytic Geometry I		_____
MAT221	Calculus with Analytic Geometry I		_____
MAT225	Elementary Linear Algebra		_____
MAT227	Discrete Mathematical Structures		_____
MAT230	Calculus with Analytic Geometry II		_____
MAT231	Calculus with Analytic Geometry II		_____
MAT240	Calculus with Analytic Geometry III		_____
MAT241	Calculus with Analytic Geometry III		_____
MAT256	Investigating Quantity: Number, Operations and Numeration Systems		_____

MAT257	Investigating Geometry, Probability and Statistics	_____
MAT276	Modern Differential Equations	_____
MAT277	Modern Differential Equations	_____
Equivalent course		_____
Satisfactory completion of a higher level mathematics course		_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

General Education Distribution Areas (9-10 Credits)

Humanities, Arts and Design (2-3 Credits)

Code	Title	Credits	Semester
Distribution Area: Humanities, Arts and Design			_____
Select two to three credits from the following:		2-3	_____
African American Studies			_____
AFR203	African-American History to 1865		_____
Arabic Humanities			_____
AHU245	Arabic Culture and Islam		_____
American Indian Studies			_____
AIS213	American Indian Religions		_____
Administration of Justice Studies			_____
AJS123	Ethics and the Administration of Justice		_____
Art Humanities			_____
Any Art Humanities Course(s)			_____
Art			_____
ART131	Photography I		_____
Anthropology			_____
ASB211	Women Across Cultures		_____
ASB214	Magic, Witchcraft and Healing: An Introduction to Comparative Religion		_____
ASB220	Anthropology Goes to the Movies		_____
ASB222	Buried Cities and Lost Tribes: Old World		_____
ASB223	Buried Cities and Lost Tribes: New World		_____
ASB253	Death and Dying Across Cultures		_____
Art and Visual Communication			_____
AVC150	Multimedia Storytelling		_____
Chicana and Chicano Studies			_____
CCS101	Chicana and Chicano Studies		_____
Communication			_____
COM150	Digital Storytelling		_____
COM241	Oral Interpretation of Literature		_____
Construction			_____
CON101	Construction and Culture		_____
Dance Humanities			_____
DAH100	Introduction to Dance in the United States		_____
DAH201	Dance, Culture, and Global Contexts		_____
DAH250	Dance in Popular Culture		_____
DAH255	Hip Hop: Arts, Aesthetic and Culture		_____
Engineering Science			_____
ECE150	Exploring Engineering and its Impact on Society		_____
Education			_____
EDU230	Cultural Diversity In Education (Eff. Spring '22)		_____
EDU291	Children's Literature		_____
EDU292	The Art of Storytelling		_____
EDU294	Multicultural Folktales		_____
Early Education			_____
EED225	Language and Literacy in the Context of Culture and Relationships		_____
English			_____
ENG200	Reading and Writing About Literature		_____

ENG213	Introduction to the Study of Language	_____
English Humanities		_____
Any English Humanities Course(s)		_____
French		_____
FRE265	Advanced French I	_____
Game Studies		_____
GST202	Games, Culture and Aesthetics	_____
Health Care Related		_____
HCR210	Clinical Health Care Ethics	_____
History		_____
HIS101	History of Western Civilization Middle Ages to 1789	_____
HIS102	History of Western Civilization 1789 to Present	_____
HIS103	United States History to 1865	_____
HIS108	United States History 1945 to the Present	_____
HIS110	World History to 1500	_____
HIS111	World History 1500 to the Present	_____
HIS113	History of Eastern Civilizations to 1850	_____
HIS114	History of Eastern Civilizations 1850 to Present	_____
HIS203	African-American History to 1865	_____
HIS212	History of Religion	_____
HIS251	History of England to 1700	_____
HIS252	History of England 1700 to Present	_____
Honors		_____
HON190	The Honors Experience	_____
Humanities		_____
Any Humanities Course(s) [1]		_____
Interior Design		_____
INT115	Historical Architecture and Furniture	_____
INT120	Modern Architecture and Furniture	_____
Japanese Humanities		_____
JPH245	Traditional and Modern Japanese Culture	_____
Latin		_____
LAT201	Intermediate Latin I	_____
LAT202	Intermediate Latin II	_____
Music: History/Literature		_____
MHL140	Survey of Music History	_____
MHL143	Music in World Cultures	_____
MHL145	American Jazz and Popular Music	_____
MHL146	Survey of Broadway Musicals	_____
MHL153	Rock Music and Culture	_____
MHL155	Survey of American Music	_____
MHL194	Music and Culture	_____
MHL204	Hip-Hop Music and Culture	_____
MHL241	Music History and Literature to 1750	_____
MHL242	Music History and Literature 1750 to Present	_____
MHL295	Topics in Music	_____
Philosophy		_____
Any Philosophy Course(s)		_____
Queer Studies		_____
QST200	Introduction to Queer Studies	_____
QST210	Queer Media Studies	_____
Religious Studies		_____
Any Religious Studies Course(s)		_____
Studies in Language & Culture		_____
SLC201	Introduction to Linguistics	_____

See https://www.cgc.edu/CourseDescriptions for current course description information.

SLC202	Introduction to Literary and Cultural Theory	_____
Spanish		_____
SPA241	Spanish and Spanish-American Film I	_____
SPA242	Spanish and Spanish-American Film II	_____
SPA265	Advanced Spanish I	_____
SPA266	Advanced Spanish II	_____
Spanish Humanities		_____
SPH241	Spanish and Latin American Film in Translation	_____
SPH245	Hispanic Heritage in the Southwest	_____
Sustainability/Social Sciences and Humanities		_____
SSH111	Sustainable Cities	_____
Storytelling		_____
STO292	The Art of Storytelling	_____
STO294	Multicultural Folktales	_____
STO295	Traditional Storytelling Around the World	_____
Social Work		_____
SWU183	Introductory Ethics: A Social Service Perspective	_____
Textiles and Clothing		_____
TEC105	Cultural Aspects of Clothing	_____
TEC125	Fashion Design	_____
Theatre		_____
THE111	Introduction to Theatre	_____
THE220	Modern Drama	_____
Theatre and Film		_____
THF205	Introduction to Cinema	_____
THF206	Introduction to Television Arts	_____
THF210	Contemporary Cinema	_____
Theatre Performance/Production		_____
THP217	Introduction to Design Scenography	_____
THP241	Oral Interpretation of Literature	_____
Women's Studies		_____
WST209	Women and Films	_____
WST284	19th Century Women Writers	_____
WST285	Contemporary Women Writers	_____
WST290	Women and World Religions	_____

[1] Except HUM225 Introduction to Popular Culture

Social-Behavioral Sciences (3 Credits)

Code	Title	Credits	Semester
Distribution Area: Social-Behavioral Sciences			_____
Select three credits from the following:		3	_____
African American Studies			_____
AFR202	Ethnic Relations in the United States		_____
AFR203	African-American History to 1865		_____
AFR204	African-American History 1865 to Present		_____
American Indian Studies			_____
AIS101	Survey of American Indian Issues		_____
AIS140	American Indian History		_____
AIS141	Sovereign Indian Nations		_____
AIS160	American Indian Law		_____
Administration of Justice Studies			_____
AJS101	Introduction to Criminal Justice		_____
AJS200	Current Issues In Criminal Justice		_____
AJS225	Criminology		_____
AJS258	Victimology and Crisis Management in Public Safety		_____
AJS270	Community Relations		_____
Anthropology			_____

ASB100	Introduction to Global Health	_____
ASB102	Introduction to Cultural Anthropology	_____
ASB202	Ethnic Relations in the United States	_____
ASB211	Women Across Cultures	_____
ASB222	Buried Cities and Lost Tribes: Old World	_____
ASB223	Buried Cities and Lost Tribes: New World	_____
ASB226	Human Impacts on Ancient Environments	_____
ASB230	Principles of Archaeology	_____
ASB235	Southwest Archaeology	_____
ASB252	Sports and Culture	_____
Anthropology		_____
ASM104	Bones, Stones, and Human Evolution	_____
ASM275	Forensic Anthropology	_____
Behavioral Health Services Technology		_____
BHS150	Introduction to Behavioral Health and Social Services	_____
BHS155	Professional Resiliency and Well-Being	_____
BHS175	Trauma-Informed Care and Recovery Treatment	_____
BHS210	Addictions, Substance Use Disorders, and Recovery	_____
Counseling and Applied Psychology		_____
CAP120	Introduction to Counseling	_____
Chicana and Chicano Studies		_____
CCS202	Ethnic Relations in the United States	_____
Child/Family Studies		_____
CFS112	Personal Growth and Family Relations	_____
CFS157	Marriage and Family Life	_____
CFS159	The Modern Family	_____
CFS176	Child Development	_____
CFS205	Human Development	_____
CFS235	Developing Child: Theory into Practice, Prenatal to Age Eight	_____
CFS259	Sexuality over the Life Span	_____
Communications		_____
COM100	Introduction to Human Communication	_____
COM100AA & COM100AB & COM100AC	Introduction to Human Communication Part I and Introduction to Human Communication Part II and Introduction to Human Communication Part III	_____
COM110	Interpersonal Communication	_____
COM110AA & COM110AB & COM110AC	Interpersonal Communication Part I and Interpersonal Communication Part II and Interpersonal Communication Part III	_____
COM163	Intercultural Communication in Everyday Life	_____
COM230	Small Group Communication	_____
COM250	Introduction to Organizational Communication	_____
COM263	Elements of Intercultural Communication	_____
Counseling and Personal Development		_____

CPD102AH	Stress Management	_____
CPD180	Human Resilience: Cognitive, Emotional, and Behavioral Applications	_____
Early Childhood Education		_____
ECH176	Child Development	_____
Economics		_____
Any Economics Course(s)		_____
Education		_____
EDU221	Introduction to Education	_____
EDU222	Introduction to the Exceptional Learner	_____
Early Education		_____
EED205	The Developing Child: Prenatal to Age Eight	_____
EED222	Introduction to the Exceptional Young Child: Birth to Age Eight	_____
Emergency Medical Technology		_____
EMT258	Victimology and Crisis Management in Public Safety	_____
English		_____
ENG213	Introduction to the Study of Language	_____
Fire Science Technology		_____
FSC258	Victimology and Crisis Management in Public Safety	_____
Cultural Geography		_____
GCU102	Human Geography: Spatial Relationships Between Humans and Culture with Their Environment	_____
GCU113	United States and Arizona Social Studies	_____
GCU121WG	World Geography: People, Places, and Culture	_____
GCU221	Arizona Geography: Landforms, Climate, Water, People, and Culture	_____
Health Science		_____
HES100	Healthful Living	_____
HES120	Principles of Physical Fitness and Wellness	_____
History		_____
Any History Course(s) [1]		_____
Honors		_____
HON201	Leadership Development: Historical and Contemporary Perspectives	_____
Humanities		_____
HUM235	Disability Studies	_____
International Business		_____
IBS109	Cultural Dimension for International Trade	_____
Information Studies		_____
IFS201	Information in a Post-Truth World	_____
IFS210	Digital Information and Access in a Global Society	_____
IFS213	Hacking and Open Source Culture	_____
Mass Communications		_____
MCO120	Media and Society	_____
Management		_____
MGT229	Management and Leadership I	_____
MGT230	Management and Leadership II	_____
Public Administration		_____
PAD200	Public Affairs Economics	_____
Political Science		_____
Any Political Science Course(s)		_____
Psychology		_____
PSY101	Introduction to Psychology	_____
PSY123	Psychology of Parenting	_____
PSY132	Psychology and Culture	_____

PSY156	Understanding Death and Dying	_____
PSY157	African/Black Psychology	_____
PSY215	Sports Psychology	_____
PSY218	Health Psychology	_____
PSY225	Psychology of Religion	_____
PSY235	Psychology of Gender	_____
PSY240	Developmental Psychology	_____
PSY241	Understanding and Changing Behavior	_____
PSY243	The Psychology of Developmental Disabilities	_____
PSY250	Social Psychology	_____
PSY260	Psychology of Personality	_____
PSY262	Positive Psychology: The Science of Well-Being	_____
PSY266	Psychological Disorders	_____
PSY277	Psychology of Human Sexuality	_____
PSY280	Industrial/ Organizational Psychology	_____
Queer Studies		_____
QST200	Introduction to Queer Studies	_____
QST210	Queer Media Studies	_____
Recreation		_____
REC120	Leisure and the Quality of Life	_____
Society and Business		_____
SBU200	Society and Business	_____
Studies in Language & Culture		_____
SLC201	Introduction to Linguistics	_____
Sociology		_____
Any Sociology Course(s) [2]		_____
Sustainability/Social Sciences and Humanities		_____
SSH111	Sustainable Cities	_____
Sustainability/Natural Sciences		_____
SUS110	Sustainable World	_____
Social Work		_____
SWU171	Introduction to Social Work	_____
SWU182	A Social Services Perspective of Government	_____
SWU250	Mindfulness for Stress Management	_____
SWU258	Victimology and Crisis, a Social Services Perspective	_____
SWU295	Foundations of Social Work Practice	_____
Textiles and Clothing		_____
TEC105	Cultural Aspects of Clothing	_____
Women's Studies		_____
WST100	Introduction to Women's and Gender Studies	_____
WST161	American Women Since 1920	_____
Yaqui Indian History and Culture		_____
YAQ100	Yaqui Indian History and Culture	_____

[1] Except HIS111 World History 1500 to the Present, HIS170 American Indian History of the Southwest, HIS173 United States (U.S.) Military History 1603 to Present, HIS251 History of England to 1700, HIS252 History of England 1700 to Present

[2] Except SOC143 Sociology of African American Problems, SOC245 Social Deviance, SOC253 Social Class and Stratification, SOC265 Sociology of Aging

Natural Sciences (4 Credits)

The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course. The lecture and corresponding laboratory course(s) may carry separate credit. Students should consult with an advisor for appropriate course selection.

Code	Title	Credits	Semester
Distribution Area: Natural Sciences			_____
Select four credits from the following:		4	_____
Agricultural Science			_____
AGS164	Plant Growth and Development		_____
AGS260	Soils		_____
Anthropology (Soc/Behv. Science)			_____
ASB231	Archaeological Field Methods		_____
Anthropology (Science/Math)			_____

ASM104	Bones, Stones, and Human Evolution	_____
ASM265	Laboratory Methods in Archaeology	_____
ASM275	Forensic Anthropology	_____
Astronomy		_____
AST101	Survey of Astronomy	_____
AST106	Life in the Universe	_____
AST111	Introduction to Solar System Astronomy	_____
AST112	Introduction to Stars, Galaxies, and Cosmology	_____
Biology		_____
BIO100	Biology Concepts	_____
BIO101	Introduction to Human Genetics for Non-Majors	_____
BIO102	Cells to Systems: An Introduction to Biology for Non-Majors	_____
BIO105	Environmental Biology	_____
BIO107	Introduction to Biotechnology	_____
BIO108	Plants and Society	_____
BIO109	Natural History of the Southwest	_____
BIO111	Microbes and Society	_____
BIO116	Introduction to Animal Behavior	_____
BIO145	Marine Biology	_____
BIO149AN	Field Biology: Ecological and Environmental Field Experience	_____
BIO156	Introductory Biology for Allied Health	_____
BIO156XT	Introductory Biology for Allied Health	_____
BIO160	Introduction to Human Anatomy and Physiology	_____
BIO181	General Biology (Majors) I	_____
BIO181XT	General Biology (Majors) I	_____
BIO182	General Biology (Majors) II	_____
BIO182XT	General Biology (Majors) II	_____
BIO201	Human Anatomy and Physiology I	_____
BIO201XT	Human Anatomy and Physiology I	_____
BIO202	Human Anatomy and Physiology II	_____
BIO205	Microbiology	_____
Chemistry		_____
CHM107 & 107LL	Chemistry and Society and Chemistry and Society Laboratory	_____
CHM130 & 130LL	Fundamental Chemistry and Fundamental Chemistry Laboratory	_____
CHM130AA	Fundamental Chemistry with Lab	_____
CHM140AA	General Chemistry for Engineers with Lab	_____
CHM150AA	General Chemistry I with Lab	_____
CHM150 & CHM151LL	General Chemistry I and General Chemistry I Laboratory	_____
CHM151AA	General Chemistry I with Lab	_____
CHM151 & 151LL	General Chemistry I and General Chemistry I Laboratory	_____
CHM152AA	General Chemistry II with Lab	_____
CHM152 & 152LL	General Chemistry II and General Chemistry II Laboratory	_____

CHM230 & 230LL	Fundamental Organic Chemistry and Fundamental Organic Chemistry Laboratory	_____
Construction		_____
CON106	Foundations of Concrete	_____
Environmental Sciences		_____
ENV101	Introduction to Environmental Science	_____
Food and Nutrition		_____
FON241 & 241LL	Principles of Human Nutrition and Principles of Human Nutrition Laboratory	_____
FON241LL	Principles of Human Nutrition Laboratory	_____
Forensic Science		_____
FOR105	Forensic Science: Physical Evidence	_____
FOR106	Forensic Science: Biological Evidence	_____
Geology		_____
Any combination of GLG course(s) meeting the minimums described above		_____
Physical Geography		_____
GPH111 & GPH112	Physical Geography: Atmosphere, Lithosphere, Water and Hazards Lecture and Physical Geography: Climate, Landforms, Water and Hazards Laboratory	_____
GPH113	Physical Geography: Atmosphere, Lithosphere, Water, and Hazards	_____
GPH211	Landform Processes	_____
GPH212 & GPH214	Introduction to Meteorology I and Introduction to Meteorology Laboratory I	_____
GPH213 & GPH215	Climate and Weather and Climate and Weather Laboratory	_____
Physical Science		_____
PHS110	Fundamentals of Physical Science	_____
PHS115	The Science of Musical Instruments	_____
PHS120	Introduction to Physical Science: Astronomy, Meteorology, Geology and Oceanography	_____
Physics		_____
PHY101	Introduction to Physics	_____
PHY111	General Physics I	_____
PHY112	General Physics II	_____
PHY121	University Physics I: Mechanics	_____
PHY131	University Physics II: Electricity and Magnetism	_____
Psychology		_____
PSY275	Biopsychology	_____
PSY290AB	Research Methods	_____
PSY290AC	Research Methods Laboratory	_____

Academic Certificate (AC)

Maricopa County Community College District (MCCCD) 2025-2026

Purpose of the Academic Certificate

The Maricopa County Community College District Academic Certificate (AC) is a defined and coherent program of study that is recommended for students who wish to gain additional expertise in a specific area of emphasis in an academic discipline. While this program of study can result in proficiency in the specified skills and competencies, as well as mastery of a body of knowledge, it is not designed to prepare someone for employment in a specific occupation. The coursework for an Academic Certificate may be from a variety of disciplines or it can be discipline specific. There is no required general studies component

to an Academic Certificate; however, the program may include some courses that have specific general education (AGEC) designations such as Humanities, Arts and Design [HU], Social-Behavioral Sciences [SB], Literacy and Critical Inquiry [L], or Cultural Awareness [C]. (See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/1/wa/agecMatrixReport?inst=001075) for current course values.)

Academic Policies that Govern the Academic Certificate

- Although the program of study for an Academic Certificate (AC) does not have a mandated minimum number of credit hours, most ACs require approximately 12-39 credit hours in courses numbered 100 and above; students must have earned a minimum of 6 credits toward the certificate at the institution awarding the certificate. For certificates with less than 6 credit hours, all credits must be completed at the college granting the award.
- Students must earn a grade of C or better in all courses within the program.
- Follows the graduation policies listed in the college's general catalog for the appropriate catalog year.
- Any course cross-referenced under another prefix(es) (for example ENH291 Children's Literature/EDU291 Children's Literature) covers identical content and its credits can only be counted once toward certificate requirements.
- Although ACs may include a subset of coursework required in particular transfer degrees, the intent of an AC is not to align with any specific university major. There is no presumption of block transfer to another college or university.
- May have admission criteria established by the college if and when appropriate.
- Generally offered at a limited number of colleges. For a listing of all ACs available in the district and their affiliated college(s) see the CCTA website (https://curriculum.maricopa.edu/) at curriculum.maricopa.edu/ (https://curriculum.maricopa.edu/)

EDUCATIONAL PROGRAMS

CGCC students have several choices of educational programs to pursue:

- Degrees offered by all Maricopa Community Colleges and found in the Degree Requirements section of this catalog:
  - Associate in Arts; Associate in Arts in Elementary Education; Associate in Arts, Fine Arts in Art, Dance, and Theatre; Associate in Business; and Associate in Science degrees offered by all Maricopa Community Colleges and designed for students who may or may not know their majors but plan to transfer to one of Arizona's public universities.
  - Associate in General Studies degree for students whose educational goals require flexibility and a broader choice of courses.
  - Bachelor of Science in Artificial Intelligence and Machine Learning.
- Occupational programs offered at CGCC have several missions: preparing students for employment, upgrading students' existing job skills, and assisting students in career changes. Students can choose from several alternatives:
  - Associate in Applied Science degree programs – usually a two-year program of course work.
  - Certificate Programs – a series of courses designed for concentrated proficiency in specialized career fields.
  - Individual courses – designed to meet individual career or personal needs.
- Academic Certificates for students who wish to gain additional expertise in an academic area.
- Special programs include:
  - Continuing Education and Workforce Development
  - Fitness, Wellness, and Recreation
  - Honors Program
  - Performing Arts

Because change is a constant factor in the employment picture, each occupational program has an advisory council. These councils are composed of local leaders in industry and provide valuable assistance to faculty as they continually adjust the courses and programs to meet community needs. With the support of the advisory councils, highly qualified faculty, and up-to-date facilities, students are assured quality instruction in their future career field.

Students who choose to transfer to four-year institutions will find that many credits are transferable and provide a beginning foundation for completing a baccalaureate degree. The AAS degrees transfer as a "block" to the Bachelor of Applied Science at Arizona State University (Polytechnic and West campuses), and Northern Arizona University.

- Aviation & Applied Technology (p. 87)
  - Aircraft Maintenance Technology, Associate in Applied Science (p. 91)
  - Aircraft Maintenance Technology, Certificate of Completion (p. 93)
  - Aircraft Maintenance Technology - Airframe, Associate in Applied Science (p. 94)
  - Aircraft Maintenance Technology - Airframe, Certificate of Completion (p. 95)
  - Aircraft Maintenance Technology - Powerplant, Associate in Applied Science (p. 96)
  - Aircraft Maintenance Technology - Powerplant, Certificate of Completion (p. 97)
  - Airway Science Technology - Flight Emphasis, Associate in Applied Science (p. 98)
  - Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion (p. 100)
  - Industrial Technology for Semiconductor (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/industrial-technology-semiconductor/#requirementstext)
- Biological Sciences (p. 101)
  - Sustainability, Academic Certificate (p. 103)
- Business & Computing Studies (p. 104)
  - Accounting, Associate in Applied Science (p. 117)
  - Accounting, Certificate of Completion (p. 118)
  - Adobe Foundations: Animation and Graphics Production, Certificate of Completion (p. 119)
  - Amazon Web Services Cloud Associate, Certificate of Completion (p. 119)
  - Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 120)
  - Amazon Web Services Cloud Specialist, Certificate of Completion (p. 120)
  - Cisco Network Administration and Security, Certificate of Completion (p. 121)
  - Cisco Network Administration: CCNA, Certificate of Completion (p. 122)
  - Computer System Configuration and Support, Certificate of Completion (p. 122)
  - Computer System Configuration and Support, Linux, Certificate of Completion (p. 123)
  - Computer System Configuration and Support, Network, Certificate of Completion (p. 123)
  - Computer System Configuration and Support, Security, Certificate of Completion (p. 124)
  - Cyber Engineering, Certificate of Completion (p. 125)
  - Cyber Operations, Certificate of Completion (p. 126)
  - Cybersecurity Fundamentals, Certificate of Completion (p. 127)
  - Cybersecurity, Associate in Applied Science (p. 127)
  - Data Analytics, Associate in Applied Science (p. 130)
  - Data Analytics, Certificate of Completion (p. 131)
  - Desktop Support, Certificate of Completion (p. 132)
  - Financial Services: Pre-licensure, Certificate of Completion (p. 133)
  - General Business, Associate in Applied Science (p. 133)
  - General Business, Certificate of Completion (p. 134)
  - Information Technology, Associate in Applied Science (p. 135)
  - Linux Associate, Certificate of Completion (p. 145)
  - Management, Associate in Applied Science (p. 146)
  - Microsoft Office Professional, Certificate of Completion (p. 147)
  - Microsoft Office Specialist, Certificate of Completion (p. 148)
  - Network and Systems Administration, Associate in Applied Science (p. 149)

- Organizational Leadership, Certificate of Completion (p. 152)
- Organizational Management, Associate in Applied Science (p. 153)
- Programming and Systems Analysis Level I, Certificate of Completion (p. 154)
- Programming and Systems Analysis Level II, Certificate of Completion (p. 155)
- Programming and Systems Analysis, Associate in Applied Science (p. 156)
- Python Applications, Certificate of Completion (p. 158)
- Small Business Management Level I, Certificate of Completion (p. 159)
- Social Media Marketing, Certificate of Completion (p. 159)
- Web App Development, Certificate of Completion (p. 160)
- Web Design, Certificate of Completion (p. 160)
- Web Design/Development, Associate in Applied Science (p. 161)
- Web Development, Certificate of Completion (p. 163)
- Web Foundations, Certificate of Completion (p. 164)

- Communication & Fine Arts (p. 165)
  - Illustration, Certificate of Completion (p. 191)
  - Illustration and Sequential Art, Associate in Applied Science (p. 192)
  - Photography, Associate in Applied Science (p. 193)
  - Sequential Art, Certificate of Completion (p. 196)
- Composition, Creative Writing & Literature (p. 196)
- Health Sciences, Public Service, & Counseling (p. 202)
  - Administration of Justice Studies, Associate in Applied Science (p. 209)
  - Administration of Justice, Certificate of Completion (p. 211)
  - Corrections, Certificate of Completion (p. 212)
  - Crime Scene Investigation, Certificate of Completion (p. 212)
  - Emergency Medical Technology, Certificate of Completion (p. 213)
  - Emergency Medical Technology Comprehensive, Certificate of Completion (p. 214)
  - Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science (p. 214)
  - Fingerprint Identification and Photography, Certificate of Completion (p. 217)
  - Forensic Science, Associate in Applied Science (p. 217)
  - Homeland Security, Certificate of Completion (p. 219)
  - Law Enforcement, Certificate of Completion (p. 219)
  - Law Enforcement Training, Associate in Applied Science (p. 220)
  - Law Enforcement Training Academy, Certificate of Completion (p. 221)
  - Legal Studies, Certificate of Completion (p. 221)
  - Mortuary Science, Associate in Applied Science (p. 222)
  - Personal Training, Certificate of Completion (p. 223)
  - Personal Training: Advanced, Certificate of Completion (p. 224)
  - Victimology, Certificate of Completion (p. 225)
- Languages, Humanities, & Information Studies (p. 226)
  - Chicana and Chicano Studies, Academic Certificate (p. 232)
  - Language Studies, Academic Certificate (p. 233)
  - Spanish Language and Culture, Academic Certificate (p. 234)
  - Women and Gender Studies, Academic Certificate (p. 235)
- Mathematics (p. 235)
- Nursing (p. 239)
  - Registered Nurse Pathway, Associate in Applied Science (p. 242)
- Physical Sciences & Engineering (p. 244)
  - Artificial Intelligence and Machine Learning, Associate in Applied Science (p. 252)
  - Artificial Intelligence and Machine Learning, Bachelor of Science (p. 254)
  - Artificial Intelligence and Machine Learning, Certificate of Completion (p. 259)
  - Engineering Technology, Associate of Applied Science (p. 260)
- Social & Behavioral Sciences (p. 262)
  - Early Childhood Education, Associate in Applied Science (p. 269)
  - Early Childhood Education, Certificate of Completion (p. 271)
  - Foundations of Early Childhood Education, Certificate of Completion (p. 273)
- Special Programs (p. 274)
  - Enhancement Programs (p. 274)
  - Enrichment Programs (p. 274)

Aviation & Applied Technology

Bashir Khalil, Division Chair
480-988-8112 | bashir.khalil@cgc.edu

Courses

Prefix	Course
AET	Aeronautics
AIT	Automated Industrial Technology
AMT	Aircraft Maintenance Technology
UAS	Unmanned Aircraft Systems

Career Programs

Aircraft Maintenance Technology
Aircraft Maintenance Technology-Airframe
Aircraft Maintenance Technology-Powerplant
Airway Science Technology, Flight Emphasis
Certified Flight Instructor Instrument Airplane Rating
Industrial Technology for Semiconductor
Unmanned Aircraft Systems

Associate in Applied Science (AAS)

- Aircraft Maintenance Technology - Airframe, Associate in Applied Science (p. 94)
- Aircraft Maintenance Technology - Powerplant, Associate in Applied Science (p. 96)
- Aircraft Maintenance Technology, Associate in Applied Science (p. 91)
- Airway Science Technology - Flight Emphasis, Associate in Applied Science (p. 98)

- Unmanned Aircraft Systems, Associate in Applied Science (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/unmanned-aircraft-systems-aas/)

Certificate Of Completion (CCL)

- Aircraft Maintenance Technology - Airframe, Certificate of Completion (p. 95)
- Aircraft Maintenance Technology - Powerplant, Certificate of Completion (p. 97)
- Aircraft Maintenance Technology, Certificate of Completion (p. 93)
- Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion (p. 100)
- Industrial Technology for Semiconductor (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/industrial-technology-semiconductor/)
- Unmanned Aircraft Systems, Certificate of Completion (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/unmanned-aircraft-systems-ccl/)

Aircraft Maintenance Technology

Hutto, Clarence (Mike)

- A.A., Mesa Community College
- B.A., St. Leo College

Julian, William

- Kansas College of Technology
- A.A.S., Eastern New Mexico University

Khalil, Bashir M.
Occupational Program Director

- A.A., A.S., Cochise College
- B.S., M.S., Indiana State University

Morgan, Charlie

- B.S., Arizona State University

Snyder, Eric

- B.S., Southern Illinois University

Summerford, Roark David

- B.S. Arizona State University

Varela, Rachel Leigh

- B.S., Arizona State University

Zilch, John

- B.S., Midwestern State University
- M.S., Embry Riddle Aeronautical University

Unmanned Aircraft Systems

Vacant

Aeronautics (AET)

AET107 / Private Pilot Ground School
5 Credits **/ 5.0 Periods for Lecture**
Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, airplane systems, airports, airspace, communications, Federal Air Regulations, navigation, airplane performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam. Prerequisites: None. Corequisites: AET110 or AET112.
Division: Aviation and Applied Technology

AET110 / Private Pilot Flight
1 Credit **/ 5.0 Periods for Laboratory**
Flight course in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate practical examination. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, night flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Approximately 50 hours airplane flight experience at student's expense required. Requires passing check ride similar to the FAA Private Pilot check ride. Prerequisites: None. Corequisites: AET107.
Division: Aviation and Applied Technology

AET115 / Aviation Meteorology
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Aviation and Applied Technology

AET203 / Basic Airplane Systems
3 Credits **/ 3.0 Periods for Lecture**
Beginning commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examination. Discussions will include, but not be limited to reciprocating engines, engine systems, airplane systems, altitude systems, and commercial regulations. Prerequisites: A grade of C or better in (AET207, AET217, and AET210) or permission of Instructor. Corequisites: AET222.
Division: Aviation and Applied Technology

AET207 / Attitude Instruments and Navigation
3 Credits **/ 3.0 Periods for Lecture**
Beginning instrument pilot ground course in preparation for the Federal Aviation Administration (FAA) Instrument Pilot Rating and Instrument Rating written examinations. Includes preflight preparation, flight instruments, basic attitude instrument flying, radio navigation systems, and technically advanced aircraft systems. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET210, AET217, and AET220.
Division: Aviation and Applied Technology

AET208 / Aviation Safety
3 Credits **/ 3.0 Periods for Lecture**
Introduction to aviation safety, including aviation safety programs, risk management, pilot psychology, physiology, human factors, and accident review and investigation. Prerequisites: A grade of C or better in AET107, or permission of Instructor.
Division: Aviation and Applied Technology

AET210 / Commercial Flight Lab I
1 Credit **/ 5.0 Periods for Laboratory**
Initial flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on instrument and technically advanced aircraft operations. Student must fly approximately 10 hours at own expense. Requires passing operational stage checks similar to the FAA check rides. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET217, and AET220.
Division: Aviation and Applied Technology

AET213 / Aerodynamics and Performance
3 Credits **/ 3.0 Periods for Lecture**
Advanced commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examinations. Includes discussion of aerodynamic factors including lift, weight, drag, and thrust. Discussions will include, but are not limited to aerodynamics, performance, safe and efficient airplane operations, airplane stability and control, stalls, and spins. Prerequisites: A grade of C or better in AET207, AET217, and AET210. Corequisites: AET221.
Division: Aviation and Applied Technology

AET217 / Instrument Procedures
3 Credits **/ 3.0 Periods for Lecture**
Advanced instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Includes Federal Aviation Regulations, instrument approach procedures, and instrument en route considerations. Requires passing written exam similar to the Instrument pilot rating and Instrument rating written exams. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210, and AET220.
Division: Aviation and Applied Technology

AET220 / Instrument Flight Lab
1 Credit **/ 5.0 Periods for Laboratory**
Flight course in preparation for the Federal Aviation Administration (FAA) Instrument rating practical examination. Emphasis on instrument operations. Student must fly approximately 40 hours at own expense. Requires passing of stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210, and AET217.
Division: Aviation and Applied Technology

AET221 / Commercial Flight Lab II
1 Credit **/ 5.0 Periods for Laboratory**
Intermediate flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial and solo cross-country flight operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures during dual instruction are designed to be performed with flight instructor guidance. Requires passing commercial pilot stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET207 and AET210 or permission of Instructor. Corequisites: AET213.
Division: Aviation and Applied Technology

AET222 / Commercial Flight Lab III
1 Credit **/ 5.0 Periods for Laboratory**
Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures are designed to be performed with little flight instructor guidance. Requires commercial pilot stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET221 and AET213. Corequisites: AET203.
Division: Aviation and Applied Technology

AET225 / Advanced Aircraft Systems
4 Credits **/ 4.0 Periods for Lecture**
Survey of advanced aircraft systems to include electrical, automatic flight control, pressurization, cabin atmosphere, ice control, rain control, fire detection and extinguishing. Includes theory and analysis of turbine aircraft engines. Introduction to turbine engine systems to include lubrication, ignition, fuel control, cooling, exhaust, and propellers. Includes overview of maintenance publications, forms and records. Prerequisites: Private Pilot Certificate or permission of Instructor.
Division: Aviation and Applied Technology

AET227 / Certified Flight Instructor: Airplane, Single Engine Land Ground School
5 Credits **/ 5.0 Periods for Lecture**
Ground school in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor and Fundamentals of Instruction written examinations. Includes fundamentals of instruction, aerodynamics, airplane performance, systems, operations, weight and balance, weather, federal regulations, navigation, maneuvers, pilot physiology, ethics, and aeronautical decision making. Requires passing written exams similar to the FAA Certified Flight Instructor: Airplane, and Fundamentals of Instruction written exams. Prerequisites: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET230.
Division: Aviation and Applied Technology

AET229 / Crew Resource Management
3 Credits **/ 3.0 Periods for Lecture**
Crew communications, teamwork, leadership, "followership," decision-making, and situational awareness; also the benefits of diversity, and the role diversity plays in the modern aerospace industry. Emphasis on utilization of all available resources in order to conduct a safe and efficient flight. Prerequisites: A grade of C or better in AET217, or permission of instructor.
Division: Aviation and Applied Technology

AET230 / Certified Flight Instructor: Airplane, Single Engine Land Flight Lab
1 Credit **/ 3.0 Periods for Laboratory**
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: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET227.
Division: Aviation and Applied Technology

AET237 / Multiengine Airplane Pilot Ground School
2 Credits **/ 2.0 Periods for Lecture**
Aeronautical knowledge necessary to meet requirements for a multi-engine airplane rating including orientation, aerodynamics, airplane systems, airplane performance, flight planning, and emergency procedures. Prerequisites: A grade of C or better in AET220 or FAA Commercial Pilot Certificate with instrument rating Corequisites: AET240.
Division: Aviation and Applied Technology

AET239 / Commercial Flight Lab IV
1 Credit **/ 5.0 Periods for Laboratory**
Final flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 20 hours at their own expense. Maneuvers and procedures are designed to be performed without flight instructor guidance. Requires passing commercial pilot stage check similar to the FAA check ride. Prerequisites: A grade of C or better in (AET203 and AET222), or permission of Instructor.
Division: Aviation and Applied Technology

AET240 / Multiengine Airplane Pilot Flight Lab
1 Credit **/ 1.5 Periods for Laboratory**
Flight course in preparation for the Federal Aviation Administration (FAA) Multi-engine Airplane practical examination. Approximately 18 hours of flight experience at the student`s expense and passing check ride similar to the FAA Multi-engine check ride are required. Prerequisites: A grade of C or better in AET239 or FAA Commercial Pilot Certificate with Single Engine Land and Instrument rating. Corequisites: AET237.
Division: Aviation and Applied Technology

Automated Industrial Technology (AIT)

AIT100 / Industrial Safety
1 Credit **/ 1.0 Periods for Lecture**
Introductory course in workplace safety training, including an overview of critical safety policies, procedures, and practices that help prevent injuries and keep the workplace safe and productive. Prerequisites: None.
Division: Aviation and Applied Technology

AIT124 / Composites
3 Credits **/ 4.0 Periods for Lecture & Lab**
Basic composite materials, construction, and repair. Manufacturing methods and equipment. Assessment and repair of composite structures using vacuum bagging and other approved procedures. Corrosion control, electrical bonding, materials substitutions, machining of composite components, mold fabrication. Hot bond repair of composite components including complex shapes and varied materials. Prerequisites: None.
Division: Aviation and Applied Technology

AIT126 / Energy Industry Fundamentals
3 Credits **/ 3.0 Periods for Lecture**
Various types of energy and their conversion to useable energy such as electrical power. How generated electrical power is transmitted and distributed to the point of use. Prerequisites: None.
Division: Aviation and Applied Technology

AIT132 / Industrial Technology for the Semiconductor Industry
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to semiconductor manufacturing concepts, processes, and hands-on application. Includes electrical theory, circuits, schematics, hand tools, safety, clean room protocols, model based problem solving, lean manufacturing, vacuum technology, and troubleshooting. Prerequisites: None.
Division: Aviation and Applied Technology

Aircraft Maintenance Technology (AMT)

AMT124 / Aircraft Forms, Regulations, Weight and Balance, Drawings and Ground Operations
5 Credits **/ 7.0 Periods for Lecture & Lab**
Federal Aviation maintenance regulations, publications, forms, and records. Overview of technician`s privileges and limitations. Perform aircraft weight and balance, aircraft ground operations, and fuel servicing techniques. Interpretation and production of drawings, symbols, and schematic diagrams. Emphasis on safety and other human factors. Prerequisites: Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+, or higher or a grade of C or better in ENG101 and RDG100 and (MAT120 or higher level mathematics course).
Division: Aviation and Applied Technology

AMT126 / Fundamentals of Mathematics and Electricity
9 Credits **/ 11.0 Periods for Lecture & Lab**
Mathematical computation of fundamental electrical circuit parameters. Basic definitions, laws, and concepts. Schematics, wiring, and parts placement diagrams. Test and troubleshoot electrical and electronic components and circuits. Prerequisites: Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+, or higher or a grade of C or better in ENG101 and RDG100 and (MAT120 or higher level mathematics course).
Division: Aviation and Applied Technology

AMT128 / Physics for Aviation, Corrosion Control, Materials, Hardware, Processes, Fluid Lines and Fittings
5 Credits **/ 7.0 Periods for Lecture & Lab**
General concepts of fluid lines and fittings, aircraft materials, hardware and processes, cleaning and corrosion control, physics for aviation, inspection concepts and techniques. Prerequisites: Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+, or higher or a grade of C or better in ENG101 and RDG100 and (MAT120 or higher level mathematics course).
Division: Aviation and Applied Technology

AMT220 / Fundamentals of Bonded Composite and Wooden Aircraft Structures, Fabric Coverings and Finishes
3 Credits **/ 5.0 Periods for Lecture & Lab**
Concepts of aircraft structural design and materials including bonded composites, wooden structures, fabric coverings, and protective finishing maintenance. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT222 / Atmosphere Control, Fire Detection, Ice and Rain Protection Systems
4 Credits **/ 6.0 Periods for Lecture & Lab**
Operation and maintenance of aircraft auxiliary systems. Inspection, servicing, troubleshooting, and repair of environmental control, ice and rain control, fire protection, and warning systems. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT224 / Aircraft Metallic Structures
5 Credits **/ 7.0 Periods for Lecture & Lab**
Inspection, fabrication, and repair techniques of aircraft metallic structures. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT226 / Aircraft Hydraulics, Pneumatics, Fuel, Landing Gear, Positioning and Warning Systems
7 Credits **/ 9.0 Periods for Lecture & Lab**
Identification, inspection, troubleshooting, and repair techniques of aircraft hydraulics, pneumatics, landing gear, positioning and warning, and fuel systems. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT228 / Aircraft Electrical, Instruments, Communication and Navigation Systems
7 Credits **/ 9.0 Periods for Lecture & Lab**
Operation, inspection, installation, servicing, and troubleshooting of aircraft electrical, Direct Current (DC), Alternating Current (AC), instruments, communication, navigation systems, and fuel indication systems. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT230 / Airframe Assembly and Inspection
6 Credits **/ 8.0 Periods for Lecture & Lab**
Airframe inspection and special inspection techniques, reporting, and documentation procedures. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT263 / Aircraft Turbine Engines
5 Credits **/ 7.0 Periods for Lecture & Lab**
Turbine engine theory and maintenance. Focuses on operational characteristics and engine test techniques on the aircraft and in test cells. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT264 / Aircraft Reciprocating Engines
7 Credits **/ 9.0 Periods for Lecture & Lab**
Reciprocating engines theory, design, and operations. Focusing on techniques used in troubleshooting, overhaul, inspection, and repair of opposed and radial engines. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT266 / Engine Fuel Systems, Fuel Metering and Induction System
6 Credits **/ 8.0 Periods for Lecture & Lab**
Inspection, servicing, troubleshooting, overhaul, and repair of aircraft fuel delivery systems, fuel metering devices, turbochargers, superchargers, and induction system principles of operation and design. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT268 / Engine Electrical, Ignition and Starter Systems
6 Credits **/ 8.0 Periods for Lecture & Lab**
Maintain powerplant electrical systems including inspecting, servicing, troubleshooting, overhauling, and repairing engine electrical, ignition, starter systems, and components. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT270 / Engine Instruments, Fire Protection, Lubrication, Cooling, and Exhaust Systems
5 Credits **/ 7.0 Periods for Lecture & Lab**
Operation, inspection, and maintenance of engine instruments, fire detection and extinguishing, engine lubrication, cooling, and exhaust systems. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT272 / Propeller Systems and Engine Inspections
4 Credits **/ 6.0 Periods for Lecture & Lab**
Propeller systems operation, inspection, troubleshooting, servicing, repair, and maintenance. Reciprocating and turbine engine inspection and documentation. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

Unmanned Aircraft Systems (UAS)

UAS107 / Uncrewed Aircraft Systems Operator Certification
3 Credits **/ 3.0 Periods for Laboratory, 1.0 Periods for Lecture**
This course offers in-depth preparation for students to take the Federal Aviation Administration (FAA) Remote Pilot Aeronautical Knowledge test. Topics include regulations, air space, charts, airport operations, weather, loading, flight performance, radio communications, aeronautical decision making, small Uncrewed Aircraft Systems (sUAS) flight operations, and maintenance. In the associated flight lab, students receive a sUAS and acquire practical skills and experience including maintenance and pre-flight inspections, flight skills, and emergency procedures while operating a sUAS through various uncrewed flight scenarios. Prerequisites: None. Course Notes: Students must complete the required sUAS flight lessons to satisfactorily complete the course.
Division: Aviation and Applied Technology

Aircraft Maintenance Technology, Associate in Applied Science

Associate in Applied Science: AAS 3670
88-115 Credits
Program Contact
Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Aircraft Maintenance Technology degree is designed to provide students with strong General Education skills in support of their aviation maintenance knowledge and skills. This degree prepares students to enter careers in aircraft (fixed-wing and rotorcraft) and structural manufacturing and maintenance. Graduates can potentially work in general, corporate, commercial, or military sectors. Students who complete this program are eligible to apply for relevant Federal Aviation Administration (FAA) written, oral, and practical exams. A Certificate of Completion (CCL) in Aircraft Maintenance Technology is fully embedded in this AAS.

Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-19	_____
AMT124 & AMT126 & AMT128	Aircraft Forms, Regulations, Weight and Balance, Drawings and Ground Operations and Fundamentals of Mathematics and Electricity and Physics for Aviation, Corrosion Control, Materials, Hardware, Processes, Fluid Lines and Fittings		_____
Hold a valid FAA Airframe or Powerplant Certificate			_____
AMT220	Fundamentals of Bonded Composite and Wooden Aircraft Structures, Fabric Coverings and Finishes	3	_____
AMT222	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems	4	_____
AMT224	Aircraft Metallic Structures	5	_____
AMT226	Aircraft Hydraulics, Pneumatics, Fuel, Landing Gear, Positioning and Warning Systems	7	_____
AMT228	Aircraft Electrical, Instruments, Communication and Navigation Systems	7	_____
AMT230	Airframe Assembly and Inspection	6	_____
AMT263	Aircraft Turbine Engines	5	_____
AMT264	Aircraft Reciprocating Engines	7	_____
AMT266	Engine Fuel Systems, Fuel Metering and Induction System	6	_____
AMT268	Engine Electrical, Ignition and Starter Systems	6	_____
AMT270	Engine Instruments, Fire Protection, Lubrication, Cooling, and Exhaust Systems	5	_____
AMT272	Propeller Systems and Engine Inspections	4	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____

CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT120	Intermediate Algebra		_____
MAT121	Intermediate Algebra		_____
MAT122	Intermediate Algebra		_____
MAT126	Intermediate Algebra with Review		_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area		3	_____
Natural Sciences			_____
PHY101	Introduction to Physics	4	_____
Total Credits		**88-115**	_____

Aircraft Maintenance Technology, Certificate of Completion

Certificate of Completion: CCL 5670
65-84 Credits
Program Contact
Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

Program Description

The Certificate of Completion (CCL) in Aircraft Maintenance Technology prepares students to enter careers in aircraft, fixed-wing and rotorcraft, and structural manufacturing and maintenance. Graduates can potentially work in general, corporate, commercial, manufacturing, and military sectors. Students who complete the certificate are eligible to apply for relevant Federal Aviation Administration (FAA) written, oral, and practical exams. This certificate is fully embedded in the Associate in Applied Science (AAS) in Aircraft Maintenance Technology.

Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Admission Criteria

Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+ or higher.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-19	_____
AMT124 & AMT126 & AMT128	Aircraft Forms, Regulations, Weight and Balance, Drawings and Ground Operations and Fundamentals of Mathematics and Electricity and Physics for Aviation, Corrosion Control, Materials, Hardware, Processes, Fluid Lines and Fittings		
Hold a valid FAA Airframe or Powerplant Certificate			_____
AMT220	Fundamentals of Bonded Composite and Wooden Aircraft Structures, Fabric Coverings and Finishes	3	_____
AMT222	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems	4	_____
AMT224	Aircraft Metallic Structures	5	_____
AMT226	Aircraft Hydraulics, Pneumatics, Fuel, Landing Gear, Positioning and Warning Systems	7	_____

AMT228	Aircraft Electrical, Instruments, Communication and Navigation Systems	7	_____
AMT230	Airframe Assembly and Inspection	6	_____
AMT263	Aircraft Turbine Engines	5	_____
AMT264	Aircraft Reciprocating Engines	7	_____
AMT266	Engine Fuel Systems, Fuel Metering and Induction System	6	_____
AMT268	Engine Electrical, Ignition and Starter Systems	6	_____
AMT270	Engine Instruments, Fire Protection, Lubrication, Cooling, and Exhaust Systems	5	_____
AMT272	Propeller Systems and Engine Inspections	4	_____
Total Credits		**65-84**	_____

Aircraft Maintenance Technology - Airframe, Associate in Applied Science

Associate in Applied Science: AAS 3668
60-82 Credits
Program Contact
Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Aircraft Maintenance Technology-Airframe degree is designed to provide students with strong General Education skills in support of their aviation maintenance knowledge and skills. This degree prepares students to enter careers in aircraft (fixed-wing and rotorcraft) and structural manufacturing and maintenance. Graduates can potentially work in general, corporate, commercial, or military sectors. Students who complete this program are eligible to apply for relevant Federal Aviation Administration (FAA) written, oral, and practical exams. A Certificate of Completion (CCL) in Aircraft Maintenance Technology-Airframe is also available.

Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-19	_____
AMT124 & AMT126 & AMT128	Aircraft Forms, Regulations, Weight and Balance, Drawings and Ground Operations and Fundamentals of Mathematics and Electricity and Physics for Aviation, Corrosion Control, Materials, Hardware, Processes, Fluid Lines and Fittings		
Hold a valid FAA Airframe or Powerplant Certificate			_____
AMT220	Fundamentals of Bonded Composite and Wooden Aircraft Structures, Fabric Coverings and Finishes	3	_____
AMT222	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems	4	_____
AMT224	Aircraft Metallic Structures	5	_____
AMT226	Aircraft Hydraulics, Pneumatics, Fuel, Landing Gear, Positioning and Warning Systems	7	_____

AMT228	Aircraft Electrical, Instruments, Communication and Navigation Systems	7	_____
AMT230	Airframe Assembly and Inspection	6	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
General Electives			_____
Complete up to five (0-5) credits to reach a minimum of sixty (60) total program credits. Consult with an AMT faculty advisor, program director, and/or academic advisor to identify coursework that best aligns with academic and professional goals.		0-5	_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT120	Intermediate Algebra		_____
MAT121	Intermediate Algebra		_____
MAT122	Intermediate Algebra		_____
MAT126	Intermediate Algebra with Review		_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area		3	_____
Natural Sciences			_____
PHY101	Introduction to Physics	4	_____

Aircraft Maintenance Technology - Airframe, Certificate of Completion

Certificate of Completion: CCL 5668
32-51 Credits
Program Contact
Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

Program Description

The Certificate of Completion (CCL) in Aircraft Maintenance Technology-Airframe program is designed to prepare students to enter careers in aircraft (fixed-wing and rotorcraft) structural manufacturing and maintenance. Graduates can potentially work in general, corporate, commercial, or military sectors. Students who complete this certificate are eligible to apply for relevant Federal Aviation Administration (FAA) written, oral, and practical exams. An Associate in Applied Science (AAS) in Aircraft Maintenance Technology-Airframe is also available.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Admission Criteria

Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+ or higher.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-19	_____

AMT124 & AMT126 & AMT128	Aircraft Forms, Regulations, Weight and Balance, Drawings and Ground Operations and Fundamentals of Mathematics and Electricity and Physics for Aviation, Corrosion Control, Materials, Hardware, Processes, Fluid Lines and Fittings		_____
Hold a valid FAA Airframe or Powerplant Certificate			_____
AMT220	Fundamentals of Bonded Composite and Wooden Aircraft Structures, Fabric Coverings and Finishes	3	_____
AMT222	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems	4	_____
AMT224	Aircraft Metallic Structures	5	_____
AMT226	Aircraft Hydraulics, Pneumatics, Fuel, Landing Gear, Positioning and Warning Systems	7	_____
AMT228	Aircraft Electrical, Instruments, Communication and Navigation Systems	7	_____
AMT230	Airframe Assembly and Inspection	6	_____
Total Credits		**32-51**	_____

Aircraft Maintenance Technology - Powerplant, Associate in Applied Science

Associate in Applied Science: AAS 3665
60-83 Credits
Program Contact
Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Aircraft Maintenance Technology - Powerplant degree is designed to provide students with strong General Education skills in support of their aviation maintenance knowledge. This degree prepares students to enter careers in aircraft (fixed-wing and rotorcraft), powerplant manufacturing and maintenance. Students who complete this degree can potentially work in general, corporate, commercial, manufacturing, and military sectors. Graduates are eligible to apply for relevant Federal Aviation Administration (FAA) written, oral, and practical exams. A Certificate of Completion (CCL) in Aircraft Maintenance Technology - Powerplant is also available.

Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-19	_____
AMT124 & AMT126 & AMT128	Aircraft Forms, Regulations, Weight and Balance, Drawings and Ground Operations and Fundamentals of Mathematics and Electricity and Physics for Aviation, Corrosion Control, Materials, Hardware, Processes, Fluid Lines and Fittings		_____

Hold a valid FAA Airframe or Powerplant Certificate			_____
AMT263	Aircraft Turbine Engines	5	_____
AMT264	Aircraft Reciprocating Engines	7	_____
AMT266	Engine Fuel Systems, Fuel Metering and Induction System	6	_____
AMT268	Engine Electrical, Ignition and Starter Systems	6	_____
AMT270	Engine Instruments, Fire Protection, Lubrication, Cooling, and Exhaust Systems	5	_____
AMT272	Propeller Systems and Engine Inspections	4	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Restricted Electives			_____
Complete up to four (0-4) credits to complete a minimum of sixty (60) total program credits. Consult with an AMT faculty advisor, program director, and/or academic advisor to identify coursework that best aligns with academic and professional goals.		0-4	_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT120	Intermediate Algebra		_____
MAT121	Intermediate Algebra		_____
MAT122	Intermediate Algebra		_____
MAT126	Intermediate Algebra with Review		_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area		3	_____
Natural Sciences			_____
PHY101	Introduction to Physics	4	_____

Aircraft Maintenance Technology - Powerplant, Certificate of Completion

APPLIED TECHNOLOGY

Certificate of Completion: CCL 5669
33-52 Credits
Program Contact
Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

Program Description

The Certificate of Completion (CCL) in Aircraft Maintenance Technology-Powerplant is designed to prepare students to enter careers in aircraft (fixed-wing and rotorcraft) powerplant manufacturing and maintenance. Students who complete this certificate can potentially work in general, corporate, commercial, manufacturing, and military sectors. Graduates are eligible to apply for relevant Federal Aviation Administration (FAA) written, oral, and practical exams. An Associate in Applied Science (AAS) in Aircraft Maintenance Technology-Powerplant is also available.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Admission Criteria

Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+ or higher.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-19	_____
AMT124 & AMT126 & AMT128	Aircraft Forms, Regulations, Weight and Balance, Drawings and Ground Operations and Fundamentals of Mathematics and Electricity and Physics for Aviation, Corrosion Control, Materials, Hardware, Processes, Fluid Lines and Fittings		_____
Hold a valid FAA Airframe or Powerplant Certificate			_____
AMT263	Aircraft Turbine Engines	5	_____
AMT264	Aircraft Reciprocating Engines	7	_____
AMT266	Engine Fuel Systems, Fuel Metering and Induction System	6	_____
AMT268	Engine Electrical, Ignition and Starter Systems	6	_____
AMT270	Engine Instruments, Fire Protection, Lubrication, Cooling, and Exhaust Systems	5	_____
AMT272	Propeller Systems and Engine Inspections	4	_____
Total Credits		**33-52**	_____

Airway Science Technology - Flight Emphasis, Associate in Applied Science

Associate in Applied Science: AAS 3707
65-85 Credits
Program Contact
Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Airway Science Technology, Flight Emphasis program is designed to prepare students to apply technical knowledge and skills to the flying of commercial, corporate, or private aircraft. Program content includes private, instrument, commercial single-engine, commercial multi-engine, and flight instructor certifications. The program develops students` willingness to learn, critical thinking, organizational skills, initiative, reliability, accountability, communication, and resource management skills. During the program, students will be provided the resources and training required for Federal Aviation Administration (FAA) written and practical examinations.

Program Notes

Flight Policies

Flight and simulator training costs are the responsibility of the student. These include hourly costs for aircraft and flight instruction, tuition, fees, and other expenses. Once students have commenced flight training within the CGCC Airway Science, Flight Emphasis program, they will not receive college credit for flight instruction received at flight schools other than the school or schools with which Maricopa County Community College District has currently contracted for such instruction.

Students must meet FAA Aviation English Language Standards and complete Transportation Security Administration (TSA) Citizenship Verification (United States citizens) or Alien Flight School Program Application (non-United States citizens). By enrolling in this program, students agree to submit to random drug testing. Students must complete a security threat assessment for airport apron access.

Medical Certificates

A current medical certificate is required for all students planning to begin flight training. The physical examination must be performed by a medical doctor who is a designated Aviation Medical Examiner. Students are advised to obtain their medical certificates well in advance of beginning the flight program. This will ensure that medical problems or physical limitations that may alter career plans can be addressed before entering flight courses.

There are three types of medical certificates - Class III, Class II, and Class I, but students are advised to obtain a Class I certificate if they are planning a career in professional flight.

Students using Veteran Affairs education benefits must have at least a Class II medical certificate, but Class I is recommended, before beginning 200-level flight courses.

Flight labs must be taken concurrently with the appropriate ground courses. Attendance is mandatory in the aviation ground school courses in accordance with Federal Aviation Regulation (FAA) Part 141. Failure to meet these attendance requirements will disqualify the student for FAA pilot certification.

Aviation and related courses from other colleges and universities may transfer to CGCC. All aviation courses, flight or non-flight, are reviewed by the Aviation Program Coordinator for applicability.

Transfer of Pilot Ratings

Students who have pilot certificates or ratings from a college level program may apply for prior learning assessment. Students should complete this process before enrolling in any 200-level ground or flight courses.

In all cases, it is the responsibility of the student to initiate the process.

After three failed attempts in any flight or ground course, excluding withdrawals, students must seek division approval for re-enrollment.

Students must earn a grade of C or better for all courses required within the program. Overall program minimum GPA = 2.50.

Admission Criteria

All students must currently possess a Valid FAA Medical Certificate

Program Prerequisites

Students must consult with a Program Director, as the program prerequisites may be waived as requirements to the program for those students who have FAA Private Pilot Certificates and/or have course equivalents as indicated by assessment.

Code	Title	Credits	Semester
A division/program approved FAA Pilot Certificate OR		0	_____
AET107 & AET110	Private Pilot Ground School and Private Pilot Flight	5-6	_____
or AET112	Private Pilot Flight-Test Course		_____

Program Requirements

Code	Title	Credits	Semester
Required Courses			_____
AET115	Aviation Meteorology	3	_____
AET207 & AET210 & AET217 & AET220	Attitude Instruments and Navigation and Commercial Flight Lab I and Instrument Procedures and Instrument Flight Lab	8	_____
AET208	Aviation Safety	3	_____
AET213 & AET221	Aerodynamics and Performance and Commercial Flight Lab II	4	_____
AET203 & AET222	Basic Airplane Systems and Commercial Flight Lab III	4	_____
AET229	Crew Resource Management	3	_____
AET237 & AET240	Multiengine Airplane Pilot Ground School and Multiengine Airplane Pilot Flight Lab	3	_____
AET227 & AET230	Certified Flight Instructor: Airplane, Single Engine Land Ground School and Certified Flight Instructor: Airplane, Single Engine Land Flight Lab	6	_____
AET225	Advanced Aircraft Systems	4	_____
AET239	Commercial Flight Lab IV	1	_____
UAS107	Uncrewed Aircraft Systems Operator Certification	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Recommended for Transfer: University of North Dakota		0-12	_____

PSY101 & SOC101 & POS140 & COM263	Introduction to Psychology and Introduction to Sociology and Comparative Government and Elements of Intercultural Communication		_____
General Education			_____
Core			_____
First-Year Composition		6	_____
Select two of the following:			_____
ENG101	First-Year Composition (Select two of the following:)		_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition		_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT120	Intermediate Algebra		_____
MAT121	Intermediate Algebra		_____
MAT122	Intermediate Algebra		_____
MAT126	Intermediate Algebra with Review		_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area		3	_____
Natural Sciences			_____
PHY101	Introduction to Physics	4	_____
Total Credits		**65-85**	_____

Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion

Certificate of Completion: CCL 5825N
4 Credits
Program Contact
Bashir Khalil | 480-988-8112 | bashir.khalil@cgc.edu

Program Description

The Certificate of Completion (CCL) in Certified Flight Instructor Instrument Airplane Rating program in Airway Science Technology, Flight Emphasis is designed to prepare students to apply technical knowledge and skills to the flying of airplanes as a Certified Flight Instructor-Instrument Rated, and to prepare students to sit for the Federal Aviation Administration (FAA) written and practical examinations.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
AET258	Certified Flight Instructor: Instrument Airplane Ground School	3	_____
AET270	Certified Flight Instructor: Instrument Airplane Flight Lab	1	_____
Total Credits		**4**	_____

Biological Sciences

Jacqueline Cala, Division Chair
(480) 732-7083 | jacqueline.cala@cgc.edu

Courses

Prefix	Course
BIO	Biology
ENV	Environmental Sciences
SSH	Sustainability Social Sciences
SUS	Sustainability/Natural Sciences

Career Programs

Sustainability

Academic Certificate

- Sustainability, Academic Certificate (p. 103)

General Biology

Cala, Jacqueline
Division Chair

- B.S., University of Arizona
- M.S., Arizona State University
- Ed.D., Grand Canyon University

Konatske, Jamie

- B.S., M.Ed., Arizona State University

Adlof, Cassidy

- B.S., B.A., California State University Channel Islands
- M.S., California State University Northridge

Human Anatomy & Physiology

Foureman, Polly

- A.B., Brown University
- M.S, Ph.D., University of Wisconsin-Madison
- D.V.M., Cornell University

Greer, Kimberly

- B.S., University of Tennessee
- M.S., Brigham Young University
- Ed.D., Northcentral University

Howard, Justin

- B.S., D.C., Logan College

Rauhalammi, Samuli

- M.S., University of Glasgow

Weaver, Melinda

- B.S., University of Kansas
- Ph.D., Arizona State University

Microbiology

Raymond, Jill

- Ph.D., University of California

Verma, Sandhya

- B.S., University of Delhi
- M.S., University of Baroda
- Ph.D., Illinois Institute of Technology

Environmental & Sustainability

Adlof, Cassidy

- B.S., B.A., California State University Channel Islands
- M.S., California State University Northridge

Biology (BIO)

BIO100 / Biology Concepts
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
This course will introduce students to the basic principles and concepts of biology, from the smallest molecules to the largest ecosystems. Students will learn about the methods of scientific inquiry that biologists use to study life. Prerequisites: None.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO105 / Environmental Biology
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Fundamentals of ecology and their relevance to human impact on natural ecosystems. Prerequisites: None.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO108 / Plants and Society
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
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.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO156 / Introductory Biology for Allied Health
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
An introductory biology course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics. Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college level chemistry is strongly recommended.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO160 / Introduction to Human Anatomy and Physiology
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
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.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO181 / General Biology (Majors) I
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics. Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly recommended.
SUN SUN# BIO 1181
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO182 / General Biology (Majors) II
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology. Prerequisites: A grade of C or better in BIO181, or BIO181XT, or permission of Department or Division.
SUN SUN# BIO 1182
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Biological Sciences

BIO201 / Human Anatomy and Physiology I
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Prerequisites: A grade of C or better in (BIO156, or BIO156XT, or BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.
SUN SUN# BIO 2201
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Biological Sciences

BIO202 / Human Anatomy and Physiology II
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Continuation of structure and function of the human body. Topics include endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems, pregnancy and development, and fluid and electrolyte balance. Prerequisites: A grade of C or better in BIO201 or BIO201XT.
SUN SUN# BIO 2202
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Biological Sciences

BIO205 / Microbiology
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Study of microorganisms and their relationship to health, ecology, and related fields. Prerequisites: A grade of C or better in (BIO156, or BIO156XT, or BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.
SUN SUN# BIO 2205
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Biological Sciences

BIO220 / Biology of Microorganisms
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Detailed study of microbial cells, their structure, genetics, physiology and taxonomy. Prerequisites: A grade of C or better in BIO181. Corequisites: (CHM152 and CHM152LL) or (CHM154 and CHM154LL).
Division: Biological Sciences

BIO290AA / Biology Internship
1 Credit **/ 0.0 Periods for Laboratory**
Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology. Course Notes: BIO290AA requires a minimum of 80 clock hours in the internship setting. BIO290AA may be repeated for a total of two (2) credit hours.
Division: Biological Sciences

BIO290AB / Biology Internship
2 Credits **/ 0.0 Periods for Laboratory**
Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology. Prerequisites: Permission of Instructor. Course Notes: BIO290AB requires a minimum of 160 clock hours in the internship setting. BIO290AB may be repeated for a total of four (4) credit hours.
Division: Biological Sciences

BIO290AC / Biology Internship
3 Credits **/ 0.0 Periods for Laboratory**
Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology. Prerequisites: Permission of Instructor. Course Notes: BIO290AC requires a minimum of 240 clock hours in the internship setting. BIO290AC may be repeated for a total of six (6) credit hours
Division: Biological Sciences

Environmental Sciences (ENV)

ENV101 / Introduction to Environmental Science
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduces the interconnected nature of environmental science and solutions to environmental issues. Prerequisites: None.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

ENV225 / Our Changing Planet
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Evaluates biogeochemical cycles and energy flows supporting life on Earth using the scientific method. Integrates core concepts of atmospheric science, geology, hydrology, ecology, and soil science to provide a foundational understanding of the critical zone and its relationship to environmental issues. Examines the influences of human activity on the functioning of the critical zone with consideration of management best practices and restoration actions for long-term sustainability. Emphasizes the communication of scientific information. Prerequisites: None.
Division: Biological Sciences

Sustainability/Social Science and Humanities (SSH)

SSH111 / Sustainable Cities
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Global Awareness [G]; Global Awareness [G]-in combo
Division: Biological Sciences

Sustainability/Natural Science (SUS)

SUS110 / Sustainable World
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Biological Sciences

SUS231 / Careers in Sustainability
1 Credit **/ 1.0 Periods for Lecture**
Introduction to career pathways in sustainability. Exploration of career paths, development of interview skills, and resume creation covered in addition to articulation of personal interests and values related to careers in sustainability. Also includes an introduction to networking skills and job search assistance. Prerequisites: None.
Division: Biological Sciences

SUS232 / Professional Skills in Sustainability Practice
3 Credits **/ 3.0 Periods for Lecture**
Introduction to professional skills in sustainability through interpersonal competence. Emphasis on teamwork, project management, stakeholder engagement, communication, and continuous learning. Prerequisites: A grade of C or better in SUS110, SSH111, and (ENG101 or ENG107).
Division: Biological Sciences

Sustainability, Academic Certificate

STEM

Academic Certificate: AC 6240N
15-18 Credits
Program Contact
Karen Wellner | 480-726-4111 | karen.wellner@cgc.edu

Program Description

The Academic Certificate (AC) in Sustainability is interdisciplinary and builds a strong academic expertise within a student's desired focus area of Sustainability. The focus areas are established within and among the foundational pillars of Sustainability (social / environmental / economic).

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Code	Title	Credits	Semester
Required Courses			_____
SSH111	Sustainable Cities	3	_____
SUS110	Sustainable World	3	_____
Restricted Electives			_____
Select three focus area classes:		9-12	_____
ASM104	Bones, Stones, and Human Evolution		_____
BIO105	Environmental Biology		_____
CHM107 & 107LL	Chemistry and Society and Chemistry and Society Laboratory		_____
COM263	Elements of Intercultural Communication		_____
FON135	Sustainable Cooking		_____
ECN212	Microeconomic Principles		_____
EPS150	Introduction to Entrepreneurship		_____
ENV101	Introduction to Environmental Science		_____
GLG110 & GLG111	Geological Disasters and the Environment and Geological Disasters and the Environment Lab		_____

GPH113	Physical Geography: Atmosphere, Lithosphere, Water, and Hazards		_____
PHI216	Environmental Ethics		_____
PSY132	Psychology and Culture		_____
SBU200	Society and Business		_____
SUS100	Introduction to Sustainability		_____
SCT100	Introduction to Sustainable Built Environments		_____
Total Credits		**15-18**	_____

Business & Computing Studies

Barbara Gonzalez, Division Chair
602-243-8044| barbara.gonzalez@cgc.edu

Courses

Prefix	Course
ACC	Accounting
BPC	Business-Personal Computers
CIS	Computer Information Systems
CLD	Cloud Computing
CNT	Cisco Network Technology
CSC	Computer Science
GBS	General Business
IBS	International Business
ITS	Information Technology Security
MGT	Management
MKT	Marketing
MST	Microsoft Technology
SBS	Small Business Management
SBU	Society and Business

Career Programs

Accounting
Adobe Foundations: Animation and Graphics Production
Amazon Web Services Cloud Associate
Amazon Web Services Cloud Practitioner
Amazon Web Services Cloud Specialist
Cisco Certified Network Professional Enterprise
Cisco Certified Network Professional: Enterprise Core
Cisco Network Administration and Security
Cisco Network Administration: CCNA
Cisco Network Administration: CCNP
Computer System Configuration and Support
Computer System Configuration and Support, Linux
Computer System Configuration and Support, Network
Computer System Configuration and Support, Security
Cyber Engineering
Cyber Operations
Cybersecurity
Cybersecurity Fundamentals
Data Analytics
Desktop Support
Financial Services: Pre-licensure
General Business
Information Technology
Linux Associate
Management
Microsoft Office Professional
Microsoft Office Specialist
Network and Systems Administration
Organizational Leadership
Organizational Management
Programming and Systems Analysis
Programming and Systems Analysis Level I
Programming and Systems Analysis Level II
Python Applications
Small Business Management
Social Media Marketing
Web App Development
Web Design
Web Design/Development
Web Development
Web Foundations

Associate in Applied Science (AAS)

- Accounting, Associate in Applied Science (p. 117)
- Cybersecurity, Associate in Applied Science (p. 127)
- Data Analytics, Associate in Applied Science (p. 130)
- General Business, Associate in Applied Science (p. 133)
- Information Technology, Associate in Applied Science (p. 135)
- Management, Associate in Applied Science (p. 146)
- Network and Systems Administration, Associate in Applied Science (p. 149)
- Organizational Management, Associate in Applied Science (p. 153)
- Programming and Systems Analysis, Associate in Applied Science (p. 156)
- Web Design/Development, Associate in Applied Science (p. 161)

Certificate of Completion (CCL)

- Accounting, Certificate of Completion (p. 118)
- Adobe Foundations: Animation and Graphics Production, Certificate of Completion (p. 119)
- Amazon Web Services Cloud Associate, Certificate of Completion (p. 119)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 120)
- Amazon Web Services Cloud Specialist, Certificate of Completion (p. 120)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-certified-network-professional-enterprise-core-ccl/)
- Cisco Certified Network Professional: Enterprise, Certificate of Completion (https://catalog.cgc.edu/educational-programs/

business-computing-studies/cisco-certified-network-professional-enterprise-ccl/)
- Cisco Network Administration and Security, Certificate of Completion (p. 121)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 122)
- Cisco Network Administration: CCNP, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-network-administration-ccnp-ccl/)
- Computer System Configuration and Support, Certificate of Completion (p. 122)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Security, Certificate of Completion (p. 124)
- Cyber Engineering, Certificate of Completion (p. 125)
- Cyber Operations, Certificate of Completion (p. 126)
- Cybersecurity Fundamentals, Certificate of Completion (p. 127)
- Data Analytics, Certificate of Completion (p. 131)
- Desktop Support, Certificate of Completion (p. 132)
- Financial Services: Pre-licensure, Certificate of Completion (p. 133)
- General Business, Certificate of Completion (p. 134)
- Linux Associate, Certificate of Completion (p. 145)
- Microsoft Office Professional, Certificate of Completion (p. 147)
- Microsoft Office Specialist, Certificate of Completion (p. 148)
- Organizational Leadership, Certificate of Completion (p. 152)
- Programming and Systems Analysis Level I, Certificate of Completion (p. 154)
- Programming and Systems Analysis Level II, Certificate of Completion (p. 155)
- Python Applications, Certificate of Completion (p. 158)
- Small Business Management Level I, Certificate of Completion (p. 159)
- Social Media Marketing, Certificate of Completion (p. 159)
- Web App Development, Certificate of Completion (p. 160)
- Web Design, Certificate of Completion (p. 160)
- Web Development, Certificate of Completion (p. 163)
- Web Foundations, Certificate of Completion (p. 164)

Microcert

- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 120)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-certified-network-professional-enterprise-core-ccl/)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 122)
- Computer System Configuration and Support, Certificate of Completion (p. 122)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 123)
- Linux Associate, Certificate of Completion (p. 145)
- Red Hat Linux Administrator, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/red-hat-linux-administrator-ccl/)
- Red Hat Linux Engineer, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/red-hat-linux-engineer-ccl/)
- Web App Development, Certificate of Completion (p. 160)

Accounting

Gonzalez, Barbara
Division Chair

- B.B.A., Accounting, University of New Mexico
- M.B.A., Accounting & Finance, Regis University
- Certified Public Accountant

Fisher, Matthew A.

- B.S., Brigham Young University
- M.Acc., University of Arizona; CPA

Business Personal Computers

Short, Lana
Business and Personal Computers & Computer Information Systems (BPC/CIS)

- AAS, Phoenix College
- M.Ed, St. Petersburg State Pedagogical University
- Ed.D., Northern Arizona University

Cisco Network Technology

Miller, Scott

- B.A., American Intercontinental University
- Masters in Information Systems, University of Phoenix

Computer Information Systems

Cherner, Elliot

- B.S., M.B.A., University of Phoenix
- Ed.D., North Central University

Grafel, Deidre

- B.A., University of Florida
- M.A., Jacksonville University
- MCSE, MCT, MCSD

Computer Science

Rayappa, Prema
Computer Science & Computer Information Systems

- OCA Oracle Developer Certified Associate
- B.S., Bangalore University (India)
- M.S., Arizona State University

Huber, Wade

- M.S., University of Texas at Dallas

General Business

Cojanu, Gabriela

- B.S., American University
- M.B.A., Xavier University
- Ed.D., Northern Arizona University

Goff, Jamie

- M.Ed., Northern Arizona University

Lopez, Ann

- B.A., B.S., University of Arizona

Lynn, Nicki

- B.S., Townson University
- M.B.A., University of Baltimore

Margolias, Joseph

B.S,. M.Acc., Arizona State University

Nuneviller, Beth

- B.S., Arkansas State University
- M.B.A., University of Arkansas

Information Technology Security

DeLano, Joshua

B.S., University of Phoenix

Rahman, Mizan

- B.S., Bangladesh University
- M.S., North Dakota State University
- M.B.A., Arizona State University

Accounting (ACC)

ACC105 / Payroll, Sales and Property Taxes
3 Credits **/ 3.0 Periods for Lecture**
Tax reporting for payroll, sales, and personal property. Prerequisites: None.
Division: Business and Computing Studies

ACC111 / Accounting Principles I
3 Credits **/ 3.0 Periods for Lecture**
Fundamental theory of accounting principles and procedures. Prerequisites: None.
Division: Business and Computing Studies

ACC112 / Accounting Principles II
3 Credits **/ 3.0 Periods for Lecture**
Continuation of the fundamental theory of accounting principles and procedures, including interpretation of general purpose financial statements. Prerequisites: ACC111 with a grade of "C" or better, or permission of Department or Division.
Division: Business and Computing Studies

ACC115 / Computerized Accounting
3 Credits **/ 3.0 Periods for Lecture & Lab**
Understanding of fundamental accounting principles and mastery of an accounting information systems including the general ledger, accounts receivable, accounts payable and payroll. Prerequisites: None.
Division: Business and Computing Studies

ACC121 / Individual Tax Preparation
3 Credits **/ 3.0 Periods for Lecture & Lab**
Theory and practice of accounting for individual taxation. Prerequisites: None.
Division: Business and Computing Studies

ACC211 / Financial Accounting
3 Credits **/ 3.0 Periods for Lecture**
Introduction to theory and practice in the preparation and interpretation of general purpose financial statements. Prerequisites: None.
SUN SUN# ACC 2201
Division: Business and Computing Studies

ACC212 / Managerial Accounting
3 Credits **/ 3.0 Periods for Lecture**
Development and analysis of accounting information for managerial planning and control. Prerequisites: A grade of "C" or better in (ACC111 and ACC112), or ACC211, and (CIS105 or permission of Department or Division).
SUN SUN# ACC 2202
Division: Business and Computing Studies

ACC219 / Intermediate Accounting I
3 Credits **/ 3.0 Periods for Lecture**
Continuation of the theory and practice of financial accounting, applicable to assets, liabilities, equity related problems of income determination and financial reporting. Prerequisites: A grade of C or better in ACC212 or ACC240 or permission of Department or Division.
Division: Business and Computing Studies

ACC221 / Tax Accounting
3 Credits **/ 3.0 Periods for Lecture**
Theory and practice of accounting for personal, corporate, and non-corporate taxation. Prerequisites: A grade of C or better in ACC111 or ACC211 or permission of Department or Division.
Division: Business and Computing Studies

ACC224 / Tax Practice Administration and Business Entity Analysis
3 Credits **/ 3.0 Periods for Lecture**
Federal income tax representation, practices, and procedures, including trust and estate income tax, exempt organizations, and retirement plans. Prerequisites: A grade of C or better in ACC121 or ACC221.
Division: Business and Computing Studies

Business-Personal Computers (BPC)

BPC110 / Computer Usage and Applications
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

BPC111AA / Computer Keyboarding I
1 Credit **/ 1.7 Periods for Lecture & Lab**
Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols. Prerequisites: None.
Crosslisted: OAS111AA
Division: Business and Computing Studies

BPC171 / Recycling Used Computer Technology
1 Credit **/ 2.0 Periods for Lecture & Lab**
Use of hardware maintenance knowledge and skills to refurbish used computers. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: BPC170 or permission of instructor. Course Notes: BPC171 may be repeated for a total of three (3) credit hours.
Division: Business and Computing Studies

BPC270 / A+ Exam Prep: Operating System Configuration and Support
3 Credits **/ 4.0 Periods for Lecture & Lab**
Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on OS installation, maintenance, mobile devices, security, software troubleshooting, and on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

Computer Information Systems (CIS)

CIS101 / Technician IT Fundamentals
3 Credits **/ 3.0 Periods for Lecture & Lab**
Survey of computer fundamentals. Focus on basic knowledge and skills, including components and hardware, word processing, presentations, spreadsheets, and email. Prerequisites: None.
Division: Business and Computing Studies

CIS102DA / IT Customer Support
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examines skills, tools and strategies necessary for becoming a computer help-desk or end-user support professional. Prerequisites: None.
Division: Business and Computing Studies

CIS103 / Introduction to Social Media
3 Credits **/ 4.0 Periods for Lecture & Lab**
Identify and explain social media and Web 2.0 technologies for personal, academic, professional, and business applications. Create and maintain accounts on various sites to socialize, write, and share multimedia, while understanding the related ethics, privacy and security issues. Prerequisites: None. Course Notes: Students must be 13 years or older to enroll in CIS103 as students are required to create social media accounts for course participation.
Division: Business and Computing Studies

CIS105 / Survey of Computer Information Systems
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
SUN SUN# CIS 1120
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS111 / Ethics in Information Technology
3 Credits **/ 3.0 Periods for Lecture**
Ethical issues that arise as a result of increasing use of computers, and the responsibilities of those who work with computers, either as computer science professionals or end users. Critical inquiry and review of ethical challenges in information technology business, including professional and corporate responsibility, government regulation, fiduciary responsibilities of information, infringement of intellectual property, security risk assessment, Internet crime, identity theft, employee surveillance, privacy, compliance, social networking, and the ethics of IT corporations. Prerequisites: None.
Division: Business and Computing Studies

CIS113DE / Microsoft Word: Word Processing
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Division: Business and Computing Studies

CIS114DE / Excel Spreadsheet
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Division: Business and Computing Studies

CIS117DM / Microsoft Access: Database Management
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to Microsoft Access. Emphasis on features, design, and database management. Prerequisites: None. Course Notes: CIS117DM combines the contents of CIS117AM, CIS117BM and CIS117CM. CIS117DM may be repeated for a total of nine (9) credit hours.
Division: Business and Computing Studies

CIS118DB / Desktop Presentation: PowerPoint
3 Credits **/ 4.0 Periods for Lecture & Lab**
Use of PowerPoint to produce professional-quality presentation visuals with animation and sound. Prerequisites: None.
Division: Business and Computing Studies

CIS119DO / Introduction to Oracle: SQL
3 Credits **/ 4.0 Periods for Lecture & Lab**
Use of Oracle tools and methodologies to fulfill real-world business information requirements. Hands-on exercises for designing, creating, and maintaining database structures to store, retrieve, update, and display data in a relational database using the SQL programming language. Creating and maintaining database objects. Advanced retrieval techniques. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS119DP / Oracle: Database Administration
3 Credits **/ 4.0 Periods for Lecture & Lab**
Basic administrative tasks performed by a database administrator (DBA). Conceptual understanding and hands-on applications of the Oracle database architecture and interaction of its components. Prerequisites: A grade of C or better in CIS119DO, or permission of Instructor. CIS126++ or CIS121++ is recommended.
Division: Business and Computing Studies

CIS120DB / Introduction to Adobe Illustrator
3 Credits **/ 4.0 Periods for Lecture & Lab**
Provides students with the knowledge and skills to use Adobe Illustrator graphics software on a computer. Basic foundation course in the use of electronic techniques to create, manipulate, and edit images, text, abstract art, graphics design, color graphics and business charts; determine file formats appropriate for web and print; utilize tools to optimize graphics and create a PDF file. Prerequisites: None.
Division: Business and Computing Studies

CIS120DC / Introduction to Adobe Animate
3 Credits **/ 4.0 Periods for Lecture & Lab**
Focuses on entry-level skill expectations for digital animation using Adobe Animate. Covers basic animation techniques used in the creation, manipulation, and editing of animation graphics. Prepares students for the Adobe certifications related to Adobe Animate. Prerequisites: None.
Division: Business and Computing Studies

CIS120DF / Introduction to Adobe Photoshop
3 Credits **/ 4.0 Periods for Lecture & Lab**
Focuses on entry-level skills and knowledge for digital imaging using Adobe Photoshop. Prepares students for the Adobe Certifications related to Photoshop. Prerequisites: None.
Division: Business and Computing Studies

CIS121AB / Microsoft Command Line Operations
1 Credit **/ 2.0 Periods for Lecture & Lab**
Use of the Microsoft command line interface: basic concepts, internal and external commands, subdirectories, and editor. Prerequisites: None.
Division: Business and Computing Studies

CIS121AE / Windows Operating System: Level I
1 Credit **/ 2.0 Periods for Lecture & Lab**
Specific topics include Windows basics, navigating and customizing the desktop, maintaining hardware and software, improving performance, configurations, securing your computer, taskbar, organizing, searching and managing folders and files, installing and uninstalling applications, Internet Explorer fine tuning, security, and searching, including advanced search techniques, keyboard shortcuts, and current topics. Prerequisites: None.
Division: Business and Computing Studies

CIS121AH / Microsoft PowerShell/Command Line Operations
3 Credits **/ 4.0 Periods for Lecture & Lab**
Day-to-day command line administration tasks of Microsoft Windows. PowerShell used to create scripts to administer Microsoft windows environment. Prerequisites: None. MST150 suggested but not required.
Division: Business and Computing Studies

CIS126DL / Linux Operating System
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Division: Business and Computing Studies

CIS126RH / Red Hat System Administration I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps prepare for the Red Hat certification exams using a hands-on, task-focused curriculum. Prerequisites: None.
Division: Business and Computing Studies

CIS133DA / Internet/Web Development Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Overview of the Internet/World Wide Web (WWW) and its resources. Hands-on experience with various Internet/WWW resource discovery, information retrieval, and social media tools. Design and Development of multi-page websites using current Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS) standards. Prerequisites: None.
Division: Business and Computing Studies

CIS150AB / Object-Oriented Programming Fundamentals
3 Credits **/ 4.0 Periods for Lecture & Lab**
Structured and Object-Oriented design and logic tools. Use of computer problems to demonstrate and teach concepts using an appropriate programming language. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS151 / Computer Game Development -Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to object-oriented game development, game design, and game theory. Use of computer software to demonstrate and teach concepts using an appropriate game development platform to model real-time simulations and create computer games using object oriented tools. Introduction to developing PC games, educational software, and training software using windows based object oriented developments tools. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS154 / Database Modeling and Design
3 Credits **/ 4.0 Periods for Lecture & Lab**
Top-down, systematic approach to defining a database design based on analysis of business information and requirements. Identifying and evaluating standard data model and design patterns. Developing an entity-relationship (ER) diagram that accurately reflects the business. Mapping the ER diagram to an initial database design and revising for complex entities, attributes, and relationships. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS156 / Python Programming: Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to Python programming. Includes general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS159 / Visual Basic Programming I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Use of the Visual Basic programming language to solve problems using suitable examples from business or other disciplines. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS162 / C Programming I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Beginning C programming. Includes features needed to construct programs, functions, pointers, input and output options, data types, structures, and unions, and disk file operations. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS162AB / C++: Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to C++ programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS162AD / C#: Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to C# programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS163AA / Java Programming: Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to Java programming. Includes features needed to construct Java Applets, Java Applications, control structures, methods, arrays, character and string manipulation, graphics, and object-oriented programming. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS164AB / Oracle: PL/SQL Programming
3 Credits **/ 4.0 Periods for Lecture & Lab**
Writing PL/SQL procedures, functions, and packages. Creating and managing PL/SQL program units and database triggers in Oracle development environment. Managing dependencies and manipulating large objects. Prerequisites: A grade of C or better in CIS119DO, or permission of the Instructor.
Division: Business and Computing Studies

CIS165 / Introduction to IOS Application Development
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to iOS device programming utilizing the XCode application, and the programming languages Objective-C and/or Swift, utilizing various iOS frameworks. Understand iOS hardware and feature basics. Go through the entire design process from concept to final product delivery. Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.
Division: Business and Computing Studies

CIS165DA / Introduction to Android Application Development
3 Credits **/ 4.0 Periods for Lecture & Lab**
Beginning with an overview of Android features, this class explores the required software tools and programming techniques for developing Android device applications from creating the user interface, working with activities, intents and views, to using databases, providing data persistence, accessing device services, to debugging and publishing applications. Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.
Division: Business and Computing Studies

CIS166AA / Introduction to Javascript
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to basic JavaScript programming concepts including syntax. Covers Hypertext Markup Language (HTML), programming logic and debugging, as well as forms manipulation and animation. Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.
Division: Business and Computing Studies

CIS190 / Introduction to Networking
3 Credits **/ 4.0 Periods for Lecture & Lab**
Overview of networks. Emphasis on the elements of a network, current issues and products, and use of a network. Includes terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Helps prepare students for the CompTIA Network+ examination. Prerequisites: None. Corequisites: CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS213DE / Advanced Microsoft Word: Word Processing
3 Credits **/ 4.0 Periods for Lecture & Lab**
Using advanced word processing software features to perform tasks such as mail merge, collaboration, web pages, math functions, macros, photo enhancements, graphics, tables, forms and manage long documents. Prerequisites: A grade of C or better in CIS113DE or (CIS113AE and CIS113BE and CIS113CE), or permission of Instructor.
Division: Business and Computing Studies

CIS214DE / Advanced Excel Spreadsheet: Level II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced Excel spreadsheet features including formatting techniques, macros and Visual Basic for applications. Templates, built-in functions and lists as well as analysis tools including Pivot Tables and Goal Seek covered. Import and export data, workgroup collaboration and Internet features of Excel emphasized. Prerequisites: A grade of C or better in CIS114DE, or permission of Instructor.
Division: Business and Computing Studies

CIS217AM / Advanced Microsoft Access: Database Management
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced database concepts including database design, primary and secondary key selection and relationships between tables. Queries, sub forms, macros, events, Visual Basic modules and Access Internet features also covered. Prerequisites: A grade of C or better in CIS117DM.
Division: Business and Computing Studies

CIS225AB / Object-Oriented Analysis and Design
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Division: Business and Computing Studies

CIS233DA / Internet/Web Development Level II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Plan, design and create web sites using HTML and Advanced Cascading Style Sheets (CSS). Expedite the development process using CSS frameworks and libraries. Enhance user experience and web site functionality using supporting technologies. Exploration of User Interface (UI) and User Experience (UX), best practices, accessibility, strategies, and careers in web design and development. Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.
Division: Business and Computing Studies

CIS235 / E-Commerce
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to Electronic Commerce on the Internet. Designing an electronic storefront including web page content and development, e-commerce site marketing, advertisement, legal and security considerations, credit card and other debit transaction covered. Also includes current issues in e-commerce. Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.
Division: Business and Computing Studies

CIS238DL / Linux System Administration
3 Credits **/ 4.0 Periods for Lecture & Lab**
Managing Linux Operating Systems including sophisticated manipulation of file structures, backup systems, printing processes, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, kernel customization, and system resource control. Preparation for industry certifications such as the CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1). Prerequisites: A grade of C or better in CIS126DL or CIS126RH or permission of Instructor.
Division: Business and Computing Studies

CIS238RH / Red Hat System Administration II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Continue to develop core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps to prepare students for the Red Hat certification exams using a hands-on, task-focused curriculum. Prerequisites: A grade of C or better in CIS126RH, or permission of Instructor.
Division: Business and Computing Studies

CIS239DL / Linux Shell Scripting
3 Credits **/ 4.0 Periods for Lecture & Lab**
Linux Shell Scripting syntax and methods including the automation of system tasks as well as interpreted user-level programming. Course includes the Linux Borne Again Shell (BASH) as well as a variety of industry competitors. Prerequisites: A grade of C or better in CIS238DL or CIS238RH or permission of Instructor.
Division: Business and Computing Studies

CIS240DL / Linux Network Administration
3 Credits **/ 4.0 Periods for Lecture & Lab**
In depth networking based on Linux servers and the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite. Integrating Linux servers and workstations into a network environment with multi-platform network operating systems including a variety of open-standard and proprietary protocols. Preparation for industry certifications such as the CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1). Prerequisites: A grade of C or better in CIS238DL or permission of Instructor.
Division: Business and Computing Studies

CIS240RH / Red Hat System Administration III
3 Credits **/ 4.0 Periods for Lecture & Lab**
Provides solid understanding of how to automate services on a Linux system. Covers use of Ansible to automate provisioning, configuration, application deployment, and orchestration on Red Hat Enterprise Linux 8. Content aligns with the Red Hat Certified Engineer (RHCE - EX294) exam, a professional certification. Prerequisites: A grade of C or better in CIS238RH or permission of Instructor.
Division: Business and Computing Studies

CIS250 / Management of Information Systems
3 Credits **/ 4.0 Periods for Lecture & Lab**
The study of business information systems and its management, communication, e-business strategies, emerging technologies, database concepts, and project management. Overview of systems analysis and design. Learn about the competitive and strategic uses of information systems and how they are transforming organizations and their management. Prerequisites: A grade of C or better in CIS105.
Division: Business and Computing Studies

CIS259 / Visual Basic Programming II
3 Credits **/ 4.0 Periods for Lecture**
Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines. Prerequisites: A grade of C or better in CIS159, or permission of Instructor.
Division: Business and Computing Studies

CIS263AA / Java Programming: Level II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Intermediate Java programming. Includes features needed to construct object-oriented programming, multithreading, multimedia, files, streams and data structure. Prerequisites: A grade of C or better in CIS163AA or permission of Instructor.
Division: Business and Computing Studies

CIS271DL / Linux Security
3 Credits **/ 4.0 Periods for Lecture & Lab**
Implementing in-depth security methods and techniques in a Linux-based network environment. Utilize programs, utilities and configuration techniques to provide user-level, file system, and network security. Gain knowledge in a variety of security cracking techniques and how to guard against them. In all aspects of security, the standard of practicing professional ethics seriously emphasized. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC. Prerequisites: A grade of C or better in CIS240DL or permission of Instructor.
Division: Business and Computing Studies

CIS290AA / Computer Information Systems Internship
1 Credit **/ 0.0 Periods for Laboratory**
Work experience in business or industry. Prerequisites: Permission of Instructor.
Division: Business and Computing Studies

CIS290AB / Computer Information Systems Internship
2 Credits **/ 0.0 Periods for Laboratory**
Work experience in business or industry. Prerequisites: Permission of Instructor.
Division: Business and Computing Studies

CIS290AC / Computer Information Systems Internship
3 Credits **/ 0.0 Periods for Laboratory**
Work experience in business or industry. Prerequisites: Permission of Instructor.
Division: Business and Computing Studies

CIS296WB / Cooperative Education
2 Credits **/ 0.0 Periods for Laboratory**
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.
Division: Business and Computing Studies

CIS296WC / Cooperative Education
3 Credits **/ 0.0 Periods for Laboratory**
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.
Division: Business and Computing Studies

CIS298AC / Special Projects
3 Credits **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Business and Computing Studies

Cloud Computing (CLD)

CLD110 / Amazon Web Services Cloud Foundations
3 Credits **/ 4.0 Periods for Lecture & Lab**
Provides a detailed overview of cloud concepts, Amazon Web Services (AWS) core services, security, architecture, pricing, and support. Intended for students who seek an overall understanding of cloud computing concepts, independent of specific technical roles. Helps to prepare students for the AWS Certified Cloud Practitioner exam. Prerequisites: None. CIS105 suggested but not required.
Division: Business and Computing Studies

CLD120 / Amazon Web Services Cloud Architect Associate
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamentals of building IT infrastructure on Amazon Web Services (AWS). Focus on how to optimize use of the AWS Cloud by understanding AWS services and best practices for the AWS Cloud and how they fit into cloud-based solutions. Covers design patterns for architecting optimal IT solutions on AWS, as well as strategies and services implemented on AWS. Prerequisites: A grade of C or better in CLD110 or permission of Instructor.
Division: Business and Computing Studies

Cisco Network Technology (CNT)

CNT140AB / Introduction to Networks
4 Credits **/ 6.0 Periods for Lecture & Lab**
Focus on the architecture, structure, functions, components, and models of the Internet and other computer networks. Principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Students will build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Preparation for Cisco certification examination. Prerequisites: None.
Division: Business and Computing Studies

CNT150AB / Switching, Routing, and Wireless Essentials
4 Credits **/ 6.0 Periods for Lecture & Lab**
Focus on configuring switches and routers for use in small and medium size networks. Including Virtual Local Area Networks (VLANs), VLAN trunking, Inter-VLAN routing, Spanning Tree Protocol (STP), EtherChannel, Dynamic Host Configuration Protocol (DHCP), First Hop Redundancy, Local area Network (LAN) and Switch security, and Static routing. Knowledge and skills needed to implement a Wireless Local Area Network (WLAN) is also covered. Preparation for Cisco certification examination. Prerequisites: A grade of C or better in CNT140AB or permission of Instructor.
Division: Business and Computing Studies

CNT160AB / Enterprise Networking, Security, and Automation
4 Credits **/ 6.0 Periods for Lecture & Lab**
Focus on the configuration of routers and switches within small and medium size networks for advanced functionality including Open Shortest Path First (OSPF), Network security, Access Control Lists (ACLs), Network Address Translation (NAT), Wide Area Network (WAN) concepts, Virtual Private Networks (VPNs), Quality of Service (QOS), network management, design, troubleshooting, virtualization, and automation. Preparation for Cisco certification examination. Prerequisites: A grade of C or better in CNT150AB or permission of Instructor.
Division: Business and Computing Studies

CNT202 / Cisco Secure Firewall Appliance Configuration
4 Credits **/ 5.0 Periods for Lecture & Lab**
Applications of Cisco Networking technologies in designing and implementing security solutions to reduce risk of revenue loss and vulnerability. Hands-on experience and skills in security policy design and management, security technologies, products and solutions, secure firewall design, installation, configuration and maintenance, Authentication, Authorization, and Accounting (AAA), Failover, and Virtual Private Network (VPN) implementation using firewalls. Prerequisites: A grade of C or better in CNT160AB or permission of Instructor.
Division: Business and Computing Studies

CNT205 / Cisco Certified Network Associate Security
4 Credits **/ 6.0 Periods for Lecture & Lab**
Associate-level knowledge and skills required to secure Cisco networks. Development of a security infrastructure, identification of threats and vulnerabilities to networks. Mitigation of security threats. Core security technologies. Installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Competency in the technologies that Cisco uses in its security structure. Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) certification, or permission of Instructor.
Division: Business and Computing Studies

CNT206 / Cisco Certified Network Associate Wireless
4 Credits **/ 6.0 Periods for Lecture & Lab**
Associate-level knowledge and skills required in Cisco wireless networks. Includes comprehensive hands-on labs to design, plan, implement, operate, secure, and troubleshoot wireless networks. Prerequisites: A grade of C or better in CNT160AB or permission of Instructor. 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.
Division: Business and Computing Studies

Computer Science (CSC)

CSC100 / Introduction to Computer Science (C++)
3 Credits **/ 3.0 Periods for Lecture & Lab**
Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC100AA / Introduction to Computer Science (C++)
3 Credits **/ 4.0 Periods for Lecture & Lab**
Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC100AB / Introduction to Computer Science (C++)
4 Credits **/ 4.0 Periods for Lecture & Lab**
Concepts of problem-solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC101 / Introduction to Computing with Python
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to computing using the Python programming language. Focus on basic concepts of computer science, algorithms, and the fundamentals of the Python programming language. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC110 / Introduction to Computer Science (Java)
3 Credits **/ 3.0 Periods for Lecture & Lab**
Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair. Course Notes: Students may receive credit for only one of the following: CSC110 OR CSC110AA OR CSC110AB.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC110AA / Introduction to Computer Science (Java)
3 Credits **/ 4.0 Periods for Lecture & Lab**
Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair. Course Notes: Students may receive credit for only one of the following: CSC110 OR CSC110AA OR CSC110AB.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC110AB / Introduction to Computer Science (Java)
4 Credits **/ 4.0 Periods for Lecture & Lab**
Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair. Course Notes: Students may receive credit for only one of the following: CSC110 OR CSC110AA OR CSC110AB.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC120 / Digital Design Fundamentals
4 Credits **/ 6.0 Periods for Lecture & Lab**
Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, Read Only Memory (ROMs), Programmable Logic Device (PLDs), synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: None. Corequisites: CSC100 or (CSC110 or CSC110AB) or permission of Instructor or Division or Department Chair.
Crosslisted: EEE120
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC180AA / Computer Literacy
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC180AB / Computer Literacy
4 Credits **/ 4.0 Periods for Lecture**
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.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC181AA / Applied Problem Solving With Visual Basic
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC182AA / Principles Of Programming With C#.NET
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC205 / Object Oriented Programming and Data Structures
3 Credits **/ 3.0 Periods for Lecture & Lab**
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of Instructor. Course Notes: Students may receive credit for only one of the following: CSC205 OR CSC205AA OR CSC205AB OR CSC205AC OR CSC205AD
SUN# CSC 2205
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC205AA / Object Oriented Programming and Data Structures
3 Credits **/ 4.0 Periods for Lecture & Lab**
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of Instructor. Course Notes: Students may receive credit for only one of the following: CSC205 OR CSC205AA OR CSC205AB OR CSC205AC OR CSC205AD
SUN# CSC 2205
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC220 / Programming for Computer Engineering
3 Credits **/ 5.0 Periods for Lecture & Lab**
Introduction to procedural programming (C/C++) and hardware description language (VHDL). Prerequisites: A grade of C or better in (CSC/EEE120 and CSC205), or permission of Instructor or Division or Department Chair.
Crosslisted: EEE220
Division: Business and Computing Studies

CSC230 / Computer Organization and Assembly Language
4 Credits **/ 5.0 Periods for Lecture & Lab**
Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: A grade of C or better in [(CSC100 or CSC110 or CSC110AB) and CSC/EEE120], or permission of Instructor or Division or Department Chair.
Crosslisted: EEE230
Division: Business and Computing Studies

CSC240 / Introduction to Different Programming Languages
3 Credits **/ 5.0 Periods for Lecture & Lab**
Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.
Division: Business and Computing Studies

CSC240AA / Introduction to Different Programming Languages
4 Credits **/ 4.0 Periods for Lecture**
Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.
Division: Business and Computing Studies

CSC310 / Data Structures and Algorithms
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced algorithmic concepts and data structures, including algorithm analysis and design, trees, graphs, hashing, and advanced sorting techniques. Implementation of advanced algorithms and data structures in an object-oriented language. Prerequisites: A grade of C or better in [CSC240, and (MAT230 or MAT231), and MAT227], or permission of Program Director.
Division: Business and Computing Studies

CSC350 / Logic Programming for Artificial Intelligence
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to the fundamentals of logic and logic programming, a paradigm that uses formal logic to express computational algorithms. Focus on propositional and predicate logic, basics of proof techniques, principles of computational logic, and logic programming concepts using Prolog-based logic programming languages. Emphasis on application to artificial intelligence. Prerequisites: A grade of C or better in (CSC240++ and MAT227) or permission of Program Director.
Division: Business and Computing Studies

General Business (GBS)

GBS109 / Introduction to Esports Management
3 Credits **/ 3.0 Periods for Lecture**
Introduction to Esports will introduce the business, economics, operations and marketing of the Esports industry. Historical and cultural implications will be examined from the early days of competitive video gaming, to today's billion dollar industry. Global awareness and diverse cultural viewpoints and trends will be studied as they relate to the Esports industry. This course will introduce students to the numerous business opportunities to work and grow in the dynamic Esports industry. Prerequisites: None.
Division: Business and Computing Studies

GBS120 / Workplace Communication Skills
3 Credits **/ 3.0 Periods for Lecture & Lab**
Reviews planning, organization, development, and evaluation of written and oral communication in business settings, including informative and persuasive messages. Prerequisites: None.
Division: Business and Computing Studies

GBS131 / Business Calculations
3 Credits **/ 3.0 Periods for Lecture**
Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups. Prerequisites: None.
Division: Business and Computing Studies

GBS132 / Personal and Family Financial Security
3 Credits **/ 3.0 Periods for Lecture**
Principles and practices of personal and family financial planning, includes savings, budgeting, credit, buying versus renting, and general principles of consumerism. Prerequisites: None.
Division: Business and Computing Studies

GBS151 / Introduction to Business
3 Credits **/ 3.0 Periods for Lecture**
Characteristics and activities of current local, national, and international business. An overview of economics, marketing, management and finance. Prerequisites: None.
Division: Business and Computing Studies

GBS205 / Legal, Ethical, and Regulatory Issues in Business
3 Credits **/ 3.0 Periods for Lecture**
Legal theories, ethical issues and regulatory climate affecting business policies and decisions. Prerequisites: None.
Division: Business and Computing Studies

GBS220 / Quantitative Methods in Business
3 Credits **/ 3.0 Periods for Lecture**
Business applications of quantitative optimization methods in operations management decisions. Prerequisites: (A grade of C or better in MAT150 or MAT151 or MAT152) or satisfactory District math placement.
Division: Business and Computing Studies

GBS221 / Business Statistics
3 Credits **/ 3.0 Periods for Lecture**
Business applications of descriptive and inferential statistics, measurement of relationships, and statistical process management. Includes the use of spreadsheet software for business statistical analysis. Prerequisites: A grade of C or better in GBS220 or MAT217 or MAT218.
SUN SUN# BUS 2201
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

GBS233 / Business Communication
3 Credits **/ 3.0 Periods for Lecture**
Internal and external business communications, including verbal and nonverbal techniques. Prerequisites: ENG101 or ENG107 with grade of "C" or better, or permission of Department or Division.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Business and Computing Studies

GBS261 / Investments I
3 Credits **/ 3.0 Periods for Lecture**
Evaluation of various investment forms including study of inflation, taxation, government securities, stocks and bonds, real estate and retirement plans. Securities industry knowledge and skills for individuals to prepare for careers in Financial Services. Includes capital markets, types of products and their risks, trading, customer accounts, prohibited activities, and regulatory agencies and their functions. Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for entry-level positions in the security industry. Prerequisites: None. Corequisites: Concurrent enrollment in GBS261LL recommended but not required. Course Notes: Students interested in taking the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination should also enroll in the GBS261LL Securities Industry Essentials (SIE) Exam Prep course.
Division: Business and Computing Studies

GBS261LL / Securities Industry Essentials (SIE) Exam Prep
1 Credit **/ 1.0 Periods for Lecture & Lab**
Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for prospective securities industry professionals. Focuses on reviewing key concepts, practicing skills, and preparing to successfully demonstrate existing knowledge on the SIE certification exam. The course is designed to provide an overview of exam topics and study and test-taking strategies. It also will include structured study time, group discussions, and the use of practice exams to assess test readiness. Prerequisites: None. Corequisites: Concurrent enrollment in GBS261 recommended but not required. Course Notes: GBS261 is recommended for students who are not already employed in the financial services industry and need more in-depth content related to the SIE exam.
Division: Business and Computing Studies

International Business (IBS)

IBS101 / Introduction to International Business
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Business and Computing Studies

Information Technology Security (ITS)

ITS110 / Information Security Fundamentals
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental concepts of information technology security. Topics include authentication methods, access control, cryptography, Public Key Infrastructure (PKI), network attack and defense methods, hardening of operating systems and network devices, securing remote access and wireless technologies and securing infrastructures and topologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and Microsoft (MS) Windows and Linux Administration. Prerequisites: A grade of C or better in CIS126DL, or CIS126RH, or permission of Program Director. Corequisites: BPC270 or MST150++.
Division: Business and Computing Studies

ITS240 / Ethical Hacking and Network Defense
3 Credits **/ 4.0 Periods for Lecture & Lab**
Preparation for the EC-Council Certified Ethical Hacking examination. In-depth exploration of how to effectively protect computer networks from risks ranging from malicious infiltration to cyber-warfare. Includes examination of ethical hacking, relevant tools and methodologies, and its importance to network security. Resources to identify new computer network vulnerabilities and counter security strategies will be discussed as well as an overview of relevant computer crime laws and penalties. Prerequisites: A grade of C or better in ITS110, or CNT205, or CIS270, or permission of Instructor.
Division: Business and Computing Studies

ITS291 / Computer Forensics Foundations
4 Credits **/ 5.0 Periods for Lecture & Lab**
Development of foundational computer forensic skills. Introduction to preserving, identifying, extracting, interpreting, and documenting computer data as part of a forensically sound analysis. Examination of the physical and logical structure of hard drives. Study of the logical structure of Windows-based file systems and common applications. Introduction to the logical structure of Unix/Linux-based file systems and common applications of commercial forensic tools. Prerequisites: A grade of C or better in BPC170 and ITS110 or permission of Instructor.
Division: Business and Computing Studies

ITS292 / Advanced Computer Forensics
4 Credits **/ 5.0 Periods for Lecture & Lab**
Advanced computer forensics analysis techniques with commercial tools. Introduction to open-source forensic tools. Emphasis on data recovery from complex applications and media types. Study of the logical structure of Unix/Linux-based file systems. Advanced search techniques. Analysis of unallocated space, compound files, and NTFS artifacts. Prerequisites: A grade of C or better in ITS291 or permission of Instructor.
Division: Business and Computing Studies

Management (MGT)

MGT101 / Techniques of Supervision
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Business and Computing Studies

MGT126 / Customer Service Skills and Strategies
3 Credits **/ 3.0 Periods for Lecture & Lab**
Explores strategies to help improve job performance and develop a service-oriented philosophy. Uses practical training concepts and techniques to demonstrate how superior customer service can lead to competitive advantage and profitability in business. Focuses on both internal and external customers, interactions among people, processes, and systems within the organization and how to integrate these areas into a total quality delivery program. Prerequisites: None.
Division: Business and Computing Studies

MGT175 / Business Organization and Management
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Business and Computing Studies

MGT229 / Management and Leadership I
3 Credits **/ 3.0 Periods for Lecture**
Covers management concepts and applications for business, industry, and government organizations. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Business and Computing Studies

MGT251 / Human Relations in Business
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Business and Computing Studies

MGT253 / Owning and Operating a Small Business
3 Credits **/ 3.0 Periods for Lecture**
Starting, organizing, and operating a small business, including location, finance management processes, advertisement and promotion, credit, inventory control and ethics. Prerequisites: None.
Division: Business and Computing Studies

Marketing (MKT)

MKT101 / Introduction to Public Relations
3 Credits **/ 3.0 Periods for Lecture**
Emphasizes public relations techniques used both within and outside the business organization, including operation of a PR counseling firm. Prerequisites: None.
Division: Business and Computing Studies

MKT110 / Marketing and Social Networking
3 Credits **/ 3.0 Periods for Lecture**
Theory and practice in the use of social media in marketing. Topics may include a history of social media, preparation for social marketing, the power of collective influence, and how to engage with social media. Reviews social mediums, social networks, platforms and other marketing tools used to create a social media campaigns. Prerequisites: None.
Division: Business and Computing Studies

MKT111 / Applied Marketing and Social Networking
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of the strategic use of digital and social media marketing platforms and tools for global communication and networking, including analysis of various digital and social media platforms and tools for developing brands, creating professional networks and creating engaging content. Hands-on use of social media platforms and tools to conduct research, develop strategies for creating, integrating, and evaluating social media marketing campaigns, and development of metrics to measure effectiveness. Prerequisites: A grade of C or better in MKT110.
Division: Business and Computing Studies

MKT112 / Retail Customer Service
1 Credit **/ 1.0 Periods for Lecture**
Introduction to the field of retail sales. Emphasis on customer service and sales techniques. Prerequisites: None.
Division: Business and Computing Studies

MKT114 / Retail Inventory Control
1 Credit **/ 1.0 Periods for Lecture**
Retail inventory control procedures. Emphasis on the role of the professional sales associate within a retail company and in the handling of merchandise. Prerequisites: A grade of C or better in MKT112.
Division: Business and Computing Studies

MKT267 / Principles of Sales
3 Credits **/ 3.0 Periods for Lecture**
Analyzes and applies the steps and techniques used in personal selling. Highlights the role of the professional sales representative and his/her functions as they relate to the company's mission and customer expectations. Prerequisites: None.
Division: Business and Computing Studies

MKT271 / Principles of Marketing
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Business and Computing Studies

MKT280AB / Marketing Internship
2 Credits **/ 0.0 Periods for Lecture & Lab**
Marketing work experience in a business or industry. Prerequisites: Permission of Department or Division.
Division: Business and Computing Studies

Microsoft Technology (MST)

MST150WT / Installing and Configuring Microsoft Windows 10
3 Credits **/ 4.0 Periods for Lecture & Lab**
In-depth exploration of how to effectively install and configure Windows 10. Includes features of Windows 10, virtualization improvements, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. Designed to prepare students for the Microsoft Windows 10 certification examination. Prerequisites: None. CIS190 or CNT140AB suggested but not required.
Division: Business and Computing Studies

Small Business Management (SBS)

SBS200 / Small Business Operations
2 Credits **/ 2.0 Periods for Lecture**
In-depth analysis of and individual plan development for the "day-to-day" problems encountered in the operation of a small business. Includes the development of an individual business operations plan including finance, purchasing, production scheduling, maintenance, shipping/receiving,personnel management and insurance/risk management requirements. Investigation of daily problems related to inventory control and business expansion. Prerequisites: None.
Division: Business and Computing Studies

SBS213 / Hiring and Managing Employees
1 Credit **/ 1.0 Periods for Lecture**
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.
Division: Business and Computing Studies

SBS214 / Small Business Customer Relations
1 Credit **/ 1.0 Periods for Lecture**
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.
Division: Business and Computing Studies

SBS220 / Internet Marketing for Small Business
2 Credits **/ 2.0 Periods for Lecture**
Focuses on "e-Commerce"-doing business on the Internet and planning a web site. Topics include: how the Internet can help growth and success of business; examples of successful marketing on the Internet; availability of Internet services; necessary hardware and software for marketing on the Internet; determining products/services appropriate for Internet marketing; budget constraints and ongoing operations of the Internet site. Prerequisites: None.
Division: Business and Computing Studies

SBS230 / Financial and Tax Management for Small Business
2 Credits **/ 2.0 Periods for Lecture**
An overview of accounting and recordkeeping for the successful management of a small business. Develops an understanding of the accounting cycle and preparation of financial statements. Includes section on tax consequences and the choice of legal entity choice based on taxation. Prerequisites: None.
Division: Business and Computing Studies

Society and Business (SBU)

SBU200 / Society and Business
3 Credits **/ 3.0 Periods for Lecture**
The study and scientific inquiry of issues and demands placed on business enterprise by owners, customers, government, employees and society. Included are social, ethical and public issues and analysis of the social impact of business responses. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Business and Computing Studies

Accounting, Associate in Applied Science

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Associate in Applied Science: AAS 3149
62-73 Credits
Program Contacts
Barbara Gonzalez | 602-243-8044 |barbara.gonzalez@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Accounting program is designed to provide fundamental skills for individuals planning to enter the field of accounting. Possible entry-level jobs for this program include accounting clerk, accounts payable/receivable clerk, claims clerk, payroll clerk, credit clerk, bookkeeper, accounting intern, tax preparation or comparable positions. This program may prepare students for certification in Certified Bookkeeper (CB), Enrolled Agent (EA), and Certified Payroll Professional (CPP). Certificates of Completion (CCL) in Accounting and Enrolled Agent are available.

Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

Consultation with an academic advisor is recommended for course selection.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
Select one of the following:		6-9	
ACC111 & ACC230 & ACC240	Accounting Principles I and Uses of Accounting Information I and Uses of Accounting Information II		
ACC111 & ACC112 & ACC212	Accounting Principles I and Accounting Principles II and Managerial Accounting		
ACC211 & ACC212	Financial Accounting and Managerial Accounting		
ACC105	Payroll, Sales and Property Taxes	3	
or ACC222	Payroll Accounting		
ACC115	Computerized Accounting	3	
ACC121	Individual Tax Preparation	3	
or ACC221	Tax Accounting		
ACC219	Intermediate Accounting I	3	
CIS114DE	Excel Spreadsheet	3	
CIS105	Survey of Computer Information Systems	3	
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
GBS151	Introduction to Business	3	
GBS205	Legal, Ethical, and Regulatory Issues in Business	3	
GBS120	Workplace Communication Skills	3	
or GBS233	Business Communication		
Restricted Electives			
Select six (6) credits from the following:		6	
ACC+++	Any ACC Accounting course(s) [1]		
GBS131	Business Calculations		
GBS220	Quantitative Methods in Business		
GBS221	Business Statistics		
GBS261	Investments I		
MGT101	Techniques of Supervision		
or MGT175	Business Organization and Management		
or MGT229	Management and Leadership I		
General Education			
First-Year Composition			
ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		

ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Equivalent by assessment			_____
Mathematics			_____
Any approved general education course from the Mathematics area		3-6	_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Select one of the following:		3	_____
ECN211	Macroeconomic Principles		_____
ECN212	Microeconomic Principles		_____
SBU200	Society and Business		_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences area		4	_____
Total Credits		**62-73**	_____

[1] Except ACC111 Accounting Principles I, ACC112 Accounting Principles II, ACC211 Financial Accounting, ACC212 Managerial Accounting, ACC230 Uses of Accounting Information I, ACC240 Uses of Accounting Information II

Accounting, Certificate of Completion

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Certificate of Completion: CCL 5665
24-27 Credits
Program Contact

Barbara Gonzalez | 602-243-8044 |barbara.gonzalez@cgc.edu

Program Description

The Certificate of Completion (CCL) in Accounting program is designed for students seeking to gain skills and knowledge in the field of accounting and tax. Possible entry-level positions for this program include accounting clerk, accounts payable/receivable clerk, claims clerk, credit clerk, bookkeeper, accounting intern, or comparable positions. An Associate in Applied Science (AAS) in Accounting and a Certificate of Completion (CCL) in Enrolled Agent are also available.

Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

Consultation with an Academic Advisor is recommended for course selection.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		6-9	_____
ACC111 & ACC230 & ACC240	Accounting Principles I and Uses of Accounting Information I and Uses of Accounting Information II		_____
ACC111 & ACC112 & ACC212	Accounting Principles I and Accounting Principles II and Managerial Accounting		_____
ACC211 & ACC212	Financial Accounting and Managerial Accounting		_____
ACC105	Payroll, Sales and Property Taxes	3	_____
or ACC222	Payroll Accounting		_____
ACC121	Individual Tax Preparation	3	_____
or ACC221	Tax Accounting		_____
ACC115	Computerized Accounting	3	_____
CIS114DE	Excel Spreadsheet	3	_____
CIS105	Survey of Computer Information Systems	3	_____

GBS151	Introduction to Business	3	_____
Total Credits		**24-27**	_____

Adobe Foundations: Animation and Graphics Production, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5167N
9 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Certificate of Completion (CCL) in Adobe Foundations: Animation and Graphics Production program helps prepare students to create, edit, and enhance digital images, graphics, and animation for use in web, print, and video. A Certificate of Completion in Adobe Foundations: Video and Audio Production and an Associate in Applied Science (AAS) in Web Design and Development are also available.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
CIS120DB	Introduction to Adobe Illustrator	3	_____
CIS120DC	Introduction to Adobe Animate	3	_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
Total Credits		**9**	_____

Amazon Web Services Cloud Associate, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5330N
3-6 Credits
Program Contact
Scott Miller | 480-857-5536 | scott.miller@cgc.edu

Program Description

The Certificate of Completion (CCL) in Amazon Web Services (AWS) Cloud Associate builds the knowledge and skills to design, plan, and implement a cloud solution architecture. Students will be introduced to concepts and hands-on opportunities to manage cloud systems/architectures for real world-applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the AWS Certified Solutions Architect – Associate examination, which is the second level of the AWS certifications.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience such as database, Linux, information security, networking, programming, and DevOps who are interested in expanding their knowledge in the area of cloud computing to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, CLD, CNT, ITS, and MST.

Students must earn a grade of C"" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

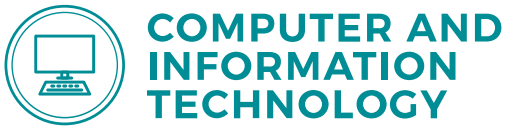
Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-3	_____
CLD110	Amazon Web Services Cloud Foundations		_____
Certificate of Completion in Amazon Web Services Cloud Practitioner (5141N)			_____
AWS Certified Cloud Practitioner certification badge			_____
Permission of Program Director			_____

CLD120	Amazon Web Services Cloud Architect Associate	3	_____
Total Credits		**3-6**	_____

Amazon Web Services Cloud Practitioner, Certificate of Completion



Certificate of Completion: CCL 5141N
3 Credits
Program Contact
Scott Miller | 480-857-5536 | scott.miller@cgc.edu (scott.miller@cgc.edu)

Program Description

The Certificate of Completion (CCL) in Amazon Web Services Cloud Practitioner builds the practical knowledge and skills of cloud computing. Cloud computing provides reliable, scalable, secure, and flexible technology solutions for personal and business use. This CCL will introduce students new to or interested in cloud computing to the fundamental concepts of cloud services as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the Amazon Web Services (AWS) Certified Cloud Practitioner exam, which is the first level of the AWS certification.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C"" or better for all courses required within the program. Overall program minimum GPA = 2.00.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience such as database, Linux, information security, networking, programming, and DevOps who are interested in expanding their knowledge in the area of cloud computing to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

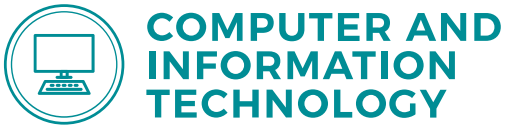
++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
CLD110	Amazon Web Services Cloud Foundations	3	_____
Total Credits		**3**	_____

Amazon Web Services Cloud Specialist, Certificate of Completion



Certificate of Completion: CCL 5331N
3-9 Credits
Program Contact
Scott Miller | 480-857-5536 | scott.miller@cgc.edu

Program Description

The Certificate of Completion (CCL) in Amazon Web Services (AWS) Cloud Specialist builds the requisite knowledge and skills to perform core Amazon Web Services (AWS) services in a manner that is based on compute, data, security and requirements as well as AWS best practices. Students select a specialization in either Developer or SysOps. Developer focuses on developing, deploying and debugging cloud based applications using AWS. SysOps focuses on deploying, managing and operating scalable, highly available, and fault tolerant systems on AWS.

Students will have hands-on opportunities to manage cloud systems/architectures for real world-scenarios. Students with the requisite prior experience in the field who complete this CCL can pursue employment in a variety of information technology jobs.

This CCL also helps to prepare students for industry-standard certification as either AWS Certified Developer - Associate or AWS Certified SysOps Administrator - Associate based on their emphasis.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience such as database, Linux, information security, networking, programming, and DevOps who are interested in expanding their knowledge in the area of cloud computing to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the CCL to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Students must earn a grade of C"" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-3	_____
CLD110	Amazon Web Services Cloud Foundations		_____
AWS Cloud Practitioner Certification			_____
Permission of Program Director			_____
Select one of the following:		0-3	_____
CLD120	Amazon Web Services Cloud Architect Associate		_____
AWS Certified Solutions Architect - Associate certification			_____
Permission of Program Director			_____
Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.			_____
Specialization 1: AWS Certified Developer - Associate			_____
CLD130	Amazon Web Services Cloud Developing	3	_____
Specialization 2: AWS Certified SysOps Administrator - Associate			_____
CLD140	Amazon Web Services Cloud Operations	3	_____
Total Credits		3-9	_____

Cisco Network Administration and Security, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5036
16-19 Credits
Program Contact
Scott Millerr 480-857-5536| scott.miller@cgc.edu

Program Description

The Certificate of Completion (CCL) in Cisco Network Administration and Security provides training for those interested in working with Cisco network and Internet hardware with a particular emphasis on securing networks from threats and vulnerabilities. Knowledge and skills are developed to install, configure, and maintain Cisco routers and switches; configure routing protocols, and Local Area Networks (LANs); troubleshoot problems with various hardware and software configurations; perform administrative tasks in a network. Specific skills in maintaining integrity, accountability, and confidentiality of data are also developed. Taught by Cisco Certified professionals using the Cisco Network Academy program curriculum, courses are designed to help prepare students for the Cisco Certified Network Associate (CCNA) and Security examinations. Students who complete this program may seek employment in a variety of environments. An additional Certificate of Completion (CCL) in Cisco Certified Network Professional (CCNP), as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Complete one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of the Program Director			_____
CNT140AB	Introduction to Networks	4	_____
CNT150AB	Switching, Routing, and Wireless Essentials	4	_____
CNT160AB	Enterprise Networking, Security, and Automation	4	_____
CNT202	Cisco Secure Firewall Appliance Configuration	4	_____
or CNT205	Cisco Certified Network Associate Security		_____
Total Credits		**16-19**	_____

Cisco Network Administration: CCNA, Certificate of Completion

Certificate of Completion: CCL 5969N
12-15 Credits
Program Contact
Scott Miller | 480-857-5536 | scott.miller@cgc.edu

Program Description

The Certificate of Completion (CCL) in Cisco Network Administration: CCNA provides training for those interested in working with network and Internet hardware. Knowledge and skills are developed to install, configure, and maintain Cisco routers and switches; configure advanced routing protocols, and Local Area Networks (LANs); troubleshoot hardware and software configurations; perform administrative tasks in a network. Taught by Cisco Certified professionals using the Cisco Networking Academy program curriculum, courses are designed to help prepare students for the Cisco Certified Network Associate (CCNA) examination. Students who complete this program may seek employment in a variety of environments. Additional Certificates of Completion (CCLs) in Cisco Network Administration and Security and Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are available.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
Complete one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of Program Director			
CNT140AB	Introduction to Networks	4	
CNT150AB	Switching, Routing, and Wireless Essentials	4	
CNT160AB	Enterprise Networking, Security, and Automation	4	
Total Credits		**12-15**	

Computer System Configuration and Support, Certificate of Completion

Certificate of Completion: CCL 5038N
6-9 Credits
Program Contact
Scott Miller| 480-857-5536 | scott.miller@cgc.edu

Program Description

The Certificate of Completion (CCL) in Computer System Configuration and Support program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs. The classes focus on the development of knowledge and skills in computer technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on hardware installation, maintenance, mobile devices, hardware troubleshooting, proper use of tools, safety procedures, and professionalism. This program helps prepare students for the CompTIA A+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCL) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
Complete one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of program director			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	
Total Credits		**6-9**	

Computer System Configuration and Support, Linux, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5039N
9-12 Credits
Program Contact
Scott Miller | 480-857-5536 | scott.miller@cgc.edu

Program Description

The Certificate of Completion (CCL) in Computer System Configuration and Support, Linux program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on Linux. The classes focus on the development of knowledge and skills in computer and network technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on the Linux Operating system including knowledge and skills required to install, configure and troubleshoot a Linux-based workstation. This program helps prepare students for the CompTIA A+ and Linux+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of program director			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	
CIS126DL	Linux Operating System	3	
or CIS126RH	Red Hat System Administration I		
Total Credits		**9-12**	

Computer System Configuration and Support, Network, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5044N
9-13 Credits
Program Contact

Scott Miller | 480-857-5536 | scott.miller@cgc.edu

Program Description

The Certificate of Completion (CCL) in Computer System Configuration and Support, Network program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on networking. The courses focus on the development of knowledge and skills in computer and network technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on elements of a data network, network components, and use of a network. This program helps prepare students for the CompTIA A+ and Network+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
Permission of program director			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		
Total Credits		**9-13**	

Computer System Configuration and Support, Security, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5040N
9-16 Credits
Program Contact
Scott Miller | 480-857-5536 | scott.miller@cgc.edu

Program Description

The Certificate of Completion (CCL) in Computer System Configuration and Support, Security program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on security. The courses focus on the development of knowledge and skills in computer and security technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on preventing, identifying, and mitigating threats to the security of information systems and utilizing the basic tools for information security. This program helps prepare participants for the CompTIA A+, Security+, and certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of Program Director			_____
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
Specializations			_____
Select from one of the following areas of specialization:		3-7	_____
Specialization I (3-6 Credits)			_____
Select one of the following:			_____
CIS270	Essentials of Network and Information Security		_____
or ITS110 & CIS126DL	Information Security Fundamentals and Linux Operating System		_____
or CIS126RH	Red Hat System Administration I		_____
Specialization 2 (6-7 Credits)			_____
CNT140AB	Introduction to Networks		_____
or CIS190	Introduction to Networking		_____
CIS270	Essentials of Network and Information Security		_____
Total Credits		**9-16**	_____

Cyber Engineering, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5149
42-43 Credits
Program Contact
Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

Program Description

The Certificate of Completion (CCL) in Cyber Engineering program is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security technologies and structured languages. The Cyber Engineering program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government. An Associate in Applied Science (AAS) in Cybersecurity is also available.

Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
The following courses are required and included in the CCL in Cybersecurity Fundamentals			_____
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
or MST150WT	Installing and Configuring Microsoft Windows 10		_____
CIS105	Survey of Computer Information Systems	3	_____
CIS111	Ethics in Information Technology	3	_____
or ITS120	Legal, Ethical and Regulatory Issues		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____

CIS270	Essentials of Network and Information Security	3	_____
or ITS110	Information Security Fundamentals		_____
ITS240	Ethical Hacking and Network Defense	3	_____
The following courses are required in the CCL in Cyber Engineering.			_____
CIS119DO	Introduction to Oracle: SQL	3	_____
or CIS276DA	MySQL Database		_____
or CIS276DB	SQL Server Database		_____
or CIS276DC	NoSQL		_____
CIS162	C Programming I	3	_____
or CIS162AB	C++: Level I		_____
or CIS162AD	C#: Level I		_____
or CIS162RS	Rust Programming		_____
CIS227	Assembly Language	3	_____
CIS238DL	Linux System Administration	3	_____
or CIS238RH	Red Hat System Administration II		_____
CIS250	Management of Information Systems	3	_____
Total Credits		**39-40**	_____

Cyber Operations, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5165
41-42 Credits
Program Contact
Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

Program Description

The Certificate of Completion (CCL) in Cyber Operations program is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security technologies and structured languages. The Cyber Operations program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government. An Associate in Applied Science (AAS) in Cybersecurity is also available.

Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

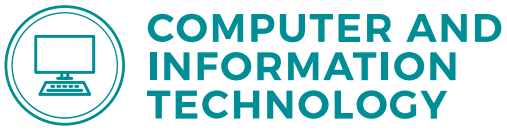
Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
The following courses are required and included in the CCL in Cybersecurity Fundamentals:			_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
MST150++	Any Microsoft Windows course		_____
CIS105	Survey of Computer Information Systems	3	_____
CIS111	Ethics in Information Technology	3	_____
or ITS120	Legal, Ethical and Regulatory Issues		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
ITS110	Information Security Fundamentals	3	_____
ITS240	Ethical Hacking and Network Defense	3	_____
The following courses are required in the CCL in Cyber Operations:			_____
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
CIS238DL	Linux System Administration	3	_____

or CIS238RH	Red Hat System Administration II		_____
CIS290AC	Computer Information Systems Internship	3	_____
or CIS298AC	Special Projects		_____
ITS291	Computer Forensics Foundations	4	_____
ITS292	Advanced Computer Forensics	4	_____
Total Credits		**41-42**	_____

Cybersecurity Fundamentals, Certificate of Completion



Certificate of Completion: CCL 5154
24-25 Credits
Program Contact
Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

Program Description

The Certificate of Completion (CCL) in Cybersecurity Fundamentals is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to provide applied skills necessary for government and industry employees. The program covers a variety of information security technologies and structured languages. The Cybersecurity program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government. An Associate in Applied Science (AAS) in Cybersecurity is also available.

Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

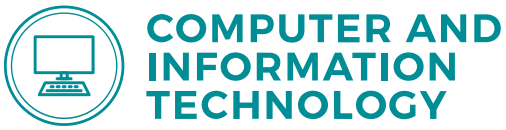
++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
MST150++	Any Microsoft Windows courses		_____
CIS105	Survey of Computer Information Systems	3	_____
CIS111	Ethics in Information Technology	3	_____
or ITS120	Legal, Ethical and Regulatory Issues		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS270	Essentials of Network and Information Security	3	_____
or ITS110	Information Security Fundamentals		_____
ITS240	Ethical Hacking and Network Defense	3	_____
Total Credits		**24-25**	_____

Cybersecurity, Associate in Applied Science



Associate in Applied Science : AAS 3197
62-77 Credits
Program Contact
Mizan Rahman | 480-732-7109 | mizan.rahman@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Cybersecurity is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security technologies and structured languages. The Cybersecurity program also focuses on the skills needed

for internationally recognized IT certifications and high demands in business, industry, and government. Certificates of Completion (CCLs) are also available in the following areas: Cybersecurity Fundamentals, Cyber Operations, Linux System Administration, Microsoft, Cisco Networking CCNA Security, Cyber Engineering, and Critical Infrastructure.

Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	
or MST150WT	Installing and Configuring Microsoft Windows 10		
MST150++ required for Cloud System Administration specialization and Critical Infrastructure specialization			
CIS105	Survey of Computer Information Systems	3	
CIS111	Ethics in Information Technology	3	
or ITS120	Legal, Ethical and Regulatory Issues		
CIS126DL	Linux Operating System	3	
or CIS126RH	Red Hat System Administration I		
CIS156	Python Programming: Level I	3	
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		
CNT140AB required for Cisco Network Administration and Security specialization and Critical Infrastructure specialization			
CIS270	Essentials of Network and Information Security	3	
or ITS110	Information Security Fundamentals		
ITS110 required for Cyber Operations specialization; CIS270 required for Critical Infrastructure specialization			
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
ITS240	Ethical Hacking and Network Defense	3	
Restricted Electives			
Students must complete 12-18 credits from the following list of courses.		12-18	
Courses that are required for a specialization in Cyber Operations, Linux System Administration, Cloud System Administration, Cisco Network Administration and Security, Cyber Engineering, and/or Critical Infrastructure are noted. Courses cannot be repeated for credit.			
Specialization I: Cyber Operations (17 Credits)			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support		
CIS238DL	Linux System Administration		
or CIS238RH	Red Hat System Administration II		
CIS290AC	Computer Information Systems Internship		
or CIS298AC	Special Projects		
ITS291	Computer Forensics Foundations		
ITS292	Advanced Computer Forensics		
Specialization II: Linux System Administration (15 Credits)			
CIS238DL	Linux System Administration		
or CIS238RH	Red Hat System Administration II		
CIS239DL	Linux Shell Scripting		
CIS240DL	Linux Network Administration		
or CIS240RH	Red Hat System Administration III		
CIS271DL	Linux Security		

or CIS271RH	Red Hat System Administration IV	_____
CIS275DL	Linux Capstone	_____
Specialization III: Cloud System Administration (15-16 Credits)		_____
BPC274	Advanced Server Computer Maintenance: Server+ Prep	_____
CIS121AH	Microsoft PowerShell/ Command Line Operations	_____
CIS239DL	Linux Shell Scripting	_____
MST160	Azure Administrator	_____
or CLD110	Amazon Web Services Cloud Foundations	_____
MST260	Microsoft Azure Cloud Development and Operations	_____
or CLD120	Amazon Web Services Cloud Architect Associate	_____
Specialization IV: Cisco Network Administration and Security (12 Credits)		_____
CNT150AB	Switching, Routing, and Wireless Essentials	_____
CNT160AB	Enterprise Networking, Security, and Automation	_____
CNT202	Cisco Secure Firewall Appliance Configuration	_____
or CNT205	Cisco Certified Network Associate Security	_____
Specialization V: Cyber Engineering (18 Credits)		_____
CIS162	C Programming I	_____
or CIS162AB	C++: Level I	_____
or CIS162AD	C#: Level I	_____
or CIS162RS	Rust Programming	_____
Students intending to transfer to U of A South should take CIS162 C Programming		_____
CIS227	Assembly Language	_____
CIS238DL	Linux System Administration	_____
or CIS238RH	Red Hat System Administration II	_____
CIS250	Management of Information Systems	_____
Specialization VI: Critical Infrastructure (16 Credits)		_____
CIS143	Introduction to Critical Infrastructure Protection	_____
CIS201	Introduction to Operational Technology	_____
CIS202	Introduction to Smart Grid Security	_____
CIS203	Principles of the Risk Management Framework	_____
CNT150AB	Switching, Routing, and Wireless Essentials	_____
General Electives		_____
Select additional courses 100-level or higher to complete the minimum total program credits required for this degree. It is recommended to select from the Restricted Elective options. Consult with a faculty advisor, program director, and/ or academic advisor to identify coursework that best aligns with academic and professional goals.	0-3	_____
General Education		_____
Core		_____
First-Year Composition		_____
ENG101 First-Year Composition	3	_____
or ENG107 First-Year Composition for ESL		_____
ENG102 First-Year Composition	3	_____
or ENG108 First-Year Composition for ESL		_____
Oral Communication		_____
Select one of the following:	3	_____
COM100 Introduction to Human Communication [7]		_____
COM110 Interpersonal Communication		_____
COM225 Public Speaking		_____
COM230 Small Group Communication		_____
COM100 required for students intending to transfer to ASU West to earn a Bachelor of Science in Applied Computing Cybersecurity.		_____

Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Any approved general education course(s) in the Mathematics area		3-6	_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area		3	_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences area		4	_____
Total Credits		62-77	_____

Data Analytics, Associate in Applied Science

COMPUTER AND INFORMATION TECHNOLOGY

Associate in Applied Science: AAS 3212
62-70 Credits
Program Contact
Lana Short | 480-732-7191 | lana.short@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Data Analytics is designed to prepare students to apply principles and concepts in data analytics and model, synthesize, analyze, and present large data sets for business decision making. Courses will focus on the software development techniques and computer applications used in industry to extract data from various data sources, model and integrate that data, and then visualize this data for business decision making and intelligence gathering. This program prepares students for industry recognized certifications such as the Microsoft Power BI Data Analyst, Tableau Certified Analyst, and Microsoft Office Specialist for Excel and Access. Graduates may pursue employment in a variety of information technology environments.

Program Notes

Students must earn a grade of C or better in each course in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Students who have completed GBS221 can use this course in lieu of GBS220.

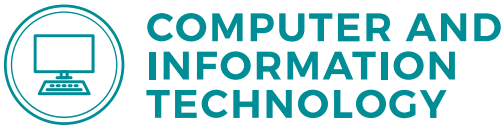
Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
CIS105	Survey of Computer Information Systems	3	_____
CIS111	Ethics in Information Technology	3	_____
CIS114DE	Excel Spreadsheet	3	_____
CIS117DM	Microsoft Access: Database Management	3	_____
CIS156	Python Programming: Level I	3	_____
CIS215	Foundations of Data Analytics and Programming	3	_____
CIS214DA	Advanced Excel for Data Analytics	3	_____
CIS276DA	MySQL Database	3	_____
or CIS276DB	SQL Server Database		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
CIS256DA	Python for Data Analysis	3	_____
CIS260BI	Data Visualization: Power Business Intelligence (BI)	3	_____
or CIS260TB	Data Visualization: Tableau		_____
COM225	Public Speaking	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
GBS151	Introduction to Business	3	_____

GBS220	Quantitative Methods in Business	3	_____
or GBS221	Business Statistics		_____
PHI103	Introduction to Logic	3	_____
SBU200	Society and Business	3	_____
General Education			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
Select one of the following:		3	_____
ENG102	First-Year Composition		_____
or ENG108	First-Year Composition for ESL		_____
ENG111	Technical and Professional Writing		_____
Oral Communication			_____
Met by COM225 in Required Courses.		0	_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Any higher approved general education course in the Mathematics area			_____
Distribution			_____
Humanities, Arts and Design			_____
Met by PHI103 Introduction to Logic in Required Courses.		0	_____
Social and Behavioral Sciences			_____
Met by SBU200 Society and Business in Required Courses.		0	_____
Natural Sciences			_____
Any approved course in the Natural Sciences area.		4	_____
Total Credits		**62-70**	_____

Data Analytics, Certificate of Completion



Certificate of Completion: CCL 5884
18-24 Credits
Program Contact
Lana Short | 480-732-7191 | lana.short@cgc.edu

Program Description

The Certificate of Completion (CCL) in Data Analytics is designed to prepare students to model, synthesize, analyze, and present large data sets for business decision making. Courses will focus on the techniques and computer software used in industry to extract data from various data sources, model and integrate that data, and then visualize this data for business decision making and intelligence gathering. This program prepares students for industry certification and is embedded (can be used to fulfill requirements) in the Associate of Applied Science (AAS) in Data Analytics available at MCCCD.

Program Notes

Students must earn a grade of C or better in all courses within the program. Overall program minimum GPA = 2.00.

CIS214DE is not equivalent to CIS214DA for the purposes of this certificate and should not be used to complete program requirements. Students who have completed GBS221 can use this course in lieu of GBS220.

Computer Information System (CIS) courses required by this program are not applicable if taken more than eight (8) years prior to the completion of the program of study. Consult with an Academic Advisor for complete information.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
CIS114DE	Excel Spreadsheet	3	_____
CIS117DM	Microsoft Access: Database Management	3	_____
CIS214DA	Advanced Excel for Data Analytics	3	_____

CIS217AM	Advanced Microsoft Access: Database Management	3	_____
or CIS276DA	MySQL Database		_____
or CIS276DB	SQL Server Database		_____
GBS151	Introduction to Business	3	_____
GBS220	Quantitative Methods in Business	3	_____
or GBS221	Business Statistics		_____
Select one of the following:		0-6	_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Satisfactory District math placement			_____
Total Credits		**18-24**	_____

Desktop Support, Certificate of Completion

Certificate of Completion: CCL 5043
19-22 Credits
Program Contact
Scott Miller | 480-857-5536 | scott.miller@cgc.edu

Program Description

The Certificate of Completion (CCL) in Desktop Support program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs. The classes focus on the development of knowledge and skills in computer, network, and security technologies, as well as the interpersonal skills in customer service/technical support needed to be successful within the industry. Depending on course selection, this program helps prepare students for the CompTIA A+, CompTIA Network+, and/or CompTIA Linux+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
CIS102DA	IT Customer Support	3	_____
CIS105	Survey of Computer Information Systems	3	_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
Select one of the following:		3-4	_____
CIS190	Introduction to Networking		_____
CNT140AB	Introduction to Networks [1]		_____
Restricted Electives			_____
Select one to three credits from the following:		1-3	_____
BPC171	Recycling Used Computer Technology		_____
CIS290AA	Computer Information Systems Internship		_____
CIS290AB	Computer Information Systems Internship		_____

CIS290AC	Computer Information Systems Internship		_____
CIS296WB	Cooperative Education		_____
CIS296WC	Cooperative Education		_____
CIS298AA	Special Projects		_____
CIS298AB	Special Projects		_____
CIS298AC	Special Projects		_____
Total Credits		**19-22**	_____

[1] CNT140AB Introduction to Networks is recommended for students interested in pursuing their Cisco Network Administration Certification

Financial Services: Pre-licensure, Certificate of Completion

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Certificate of Completion: CCL 5931N
4 Credits
Program Contacts
Ann Lopez | ann.lopez@cgc.edu

Program Description

The Certificate of Completion (CCL) in Financial Services: Pre-licensure is designed to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for entry-level positions in the security industry.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
GBS261	Investments I	3	_____
GBS261LL	Securities Industry Essentials (SIE) Exam Prep	1	_____
Total Credits		**4**	_____

General Business, Associate in Applied Science

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Associate in Applied Science: AAS 3148
62-69 Credits
Program Contact
Ann Lopez| 480-726-4179| ann.lopez@cgc.edu

Program Description

The Associate in Applied Science (AAS) in General Business program is designed to meet the needs of students who wish a broad overview of business and desire not to enroll in a specialized curriculum in business. The program is designed to acquaint students with major subject areas of business, to improve the student`s business vocabulary, and to provide students with an understanding of influencing factors in business decision making and activities. In addition, this program may aid a student in recognizing a specific business field to be pursued in future studies. A Certificate of Completion (CCL) is also available.

Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
ACC111	Accounting Principles I	3	_____
CIS105	Survey of Computer Information Systems	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
GBS120	Workplace Communication Skills	3	_____
or GBS233	Business Communication		_____
GBS151	Introduction to Business	3	_____
GBS205	Legal, Ethical, and Regulatory Issues in Business	3	_____

MGT175	Business Organization and Management	3	_____
or MGT251	Human Relations in Business		_____
MKT271	Principles of Marketing	3	_____
Restricted Electives			_____
Students should select eighteen credits from the following courses.		18	_____
Any 100/200 level prefixed courses may be selected, except courses used to satisfy the Required Courses area.			_____
ACC+++	Any ACC Accounting course(s)		_____
CIS114DE	Excel Spreadsheet		_____
CIS117DM	Microsoft Access: Database Management		_____
CIS133DA	Internet/Web Development Level I		_____
EPS+++	Any EPS Entrepreneurial Studies course(s)		_____
GBS+++	Any GBS General Business course(s)		_____
IBS+++	Any IBS International Business course(s)		_____
MGT+++	Any MGT Management course(s)		_____
MKT+++	Any MKT Marketing course(s)		_____
REA+++	Any REA Real Estate course(s)		_____
SBS+++	Any SBS Small Business Management course(s)		_____
TQM+++	Any TQM Total Quality Management course(s)		_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Any approved general education course from the Mathematics area.		3-5	_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course in the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Select one of the following:		3	_____
ECN211	Macroeconomic Principles		_____
ECN212	Microeconomic Principles		_____
SBU200	Society and Business		_____
Natural Sciences			_____
Any approved general education course in the Natural Sciences area		4	_____
Total Credits		**62-69**	_____

General Business, Certificate of Completion

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Certificate of Completion: CCL 5683
21 Credits
Program Contact
Ann Lopez| 480-726-4179| a (ann.lopez@cgc.edu)nn.lopez@cgc.edu (ann.lopez@cgc.edu)

Program Description

The Certificate of Completion (CCL) in General Business is designed to provide business training for various entry-level positions in business. The courses include an introduction to business concepts, accounting and computer principles, and legal issues related to business. An Associate in Applied Science (AAS) is also available.

Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
ACC111	Accounting Principles I	3	_____
CIS105	Survey of Computer Information Systems	3	_____
GBS151	Introduction to Business	3	_____
GBS205	Legal, Ethical, and Regulatory Issues in Business	3	_____
Restricted Electives			_____
Select nine credits from the following:		9	_____
Any 100/200 level prefixed courses may be selected, except courses used to satisfy the Required Courses area			_____
ACC+++	Any ACC Accounting courses(s)		_____
CIS114DE	Excel Spreadsheet		_____
CIS117DM	Microsoft Access: Database Management		_____
CIS133DA	Internet/Web Development Level I		_____
EPS+++	Any EPS Entrepreneurial Studies course(s)		_____
GBS+++	Any GBS General Business course(s)		_____
MGT+++	Any MGT Management course(s)		_____
MKT+++	Any MKT Marketing course(s)		_____
IBS+++	Any IBS International Business course(s)		_____
REA+++	Any REA Real Estate course(s)		_____
SBS+++	Any SBS Small Business Management course(s)		_____
TQM+++	Any TQM Total Quality Management course(s)		_____
Total Credits		**21**	_____

Information Technology, Associate in Applied Science

Associate in Applied Science: AAS 3196
60-69 Credits
Program Contacts
Scott Miller | 480-857-5536 | scott.miller@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Information Technology (IT) program is designed to provide students with skills to meet information technology needs across industries. This program includes instruction in the principles of computer hardware components and business software, programming, databases, networking, customer service, web development, and information systems and project management. Coursework helps prepare students for a variety of industry-recognized examinations and certifications. Students will earn one or more of the following Certificates of Completion (CCLs):

- CCL/5154 Cybersecurity Fundamentals
- CCL/5083 Database Development
- CCL/5043 Desktop Support
- CCL/5793 Foundations of Mobile App Development
- CCL/5132 Microsoft Office Professional
- CCL/5031 Microsoft System Administration
- CCL/5048 Programming and Systems Analysis Level I
- CCL/5183N Oracle Database Operations
- CCL/5050N Red Hat Linux Engineer
- CCL/5984 Web Foundations

Program Notes

CCL 5183N, and 5050N are not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None
Required Courses: 33-41 Credits

Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.

Code	Title	Credits	Semester
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____

Specialization 1: Cybersecurity Fundamentals

Credits: 33-34

Code	Title	Credits	Semester
Information Technology Core			_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
MST150++	Any Microsoft Windows course		_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
Select one of the following:		3	_____
CIS224	Project Management Microsoft Project for Windows		_____
CIS250	Management of Information Systems [1]		_____
Cybersecurity Fundamentals			_____
CIS111	Ethics in Information Technology	3	_____
or ITS120	Legal, Ethical and Regulatory Issues		_____
CIS270	Essentials of Network and Information Security	3	_____
or ITS110	Information Security Fundamentals		_____
ITS240	Ethical Hacking and Network Defense	3	_____
Related Area Credits			_____
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:		0-5	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 2: Database Development

Credits: 36-38

Code	Title	Credits	Semester
Information Technology Core			_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
CIS105	Survey of Computer Information Systems	3	_____
CIS119DO	Introduction to Oracle: SQL	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
Database Development			_____
CIS117DM	Microsoft Access: Database Management	3	_____
or CIS154	Database Modeling and Design		_____
CIS150++	Programming Fundamentals	3	_____
Select one of the following:		3	_____
CIS164AB	Oracle: PL/SQL Programming		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS217AM	Advanced Microsoft Access: Database Management	3	_____
or CIS276DB	SQL Server Database		_____
CIS225AB	Object-Oriented Analysis and Design	3	_____
Related Area Credits			_____
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-2	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 3: Desktop Support

Credits: 32-38

Code	Title	Credits	Semester
Information Technology Core			_____
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____

CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
Desktop Support			_____
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
CIS102DA	IT Customer Support	3	_____
Related Area Credits			_____
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		2-8	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 4: Foundations of Mobile App Development

Credits: 33-38

Code	Title	Credits	Semester
Information Technology Core			_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS162++	Any C Programming: Level I course	3	_____

CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
Foundations of Mobile App Development			_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS165	Introduction to IOS Application Development	3	_____
CIS165DA	Introduction to Android Application Development	3	_____
CIS165DB	C#/VB.NET: Windows 8 App Development	3	_____
or CIS165DC	Xamarin/C# Cross-Platform Development		_____
Related Area Credits			_____
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-5	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 5: Microsoft Office Professional

Credits: 31-38

Code	Title	Credits	Semester
Information Technology Core			_____
CIS105	Survey of Computer Information Systems	3	_____
CIS117DM	Microsoft Access: Database Management	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
Select one of the following:		3	_____
MST150++	Microsoft Windows		_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
Microsoft Office Professional			_____
Select one of the following:		0-1	_____
BPC/ OASOR111AA	Computer Keyboarding I		_____
or Permission from Program Director			_____
CIS113DE	Microsoft Word: Word Processing	3	_____
CIS114DE	Excel Spreadsheet	3	_____
CIS118DB	Desktop Presentation: PowerPoint	3	_____

CIS124AA & CIS124BA	Project Management Software: Level I and Project Management Software: Level II	2-3	_____
or CIS224	Project Management Microsoft Project for Windows		_____
Related Area Credits			_____
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-8	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 6: Microsoft Server

Credits: 36-38

Code	Title	Credits	Semester
Information Technology Core			_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
MST150++	Microsoft Windows	3	_____
Microsoft Server			_____
CIS121AH	Microsoft PowerShell/ Command Line Operations	3	_____
MST155DC	Installation, Storage, and Compute with Windows Server	4	_____
MST157DC	Networking with Windows Server	4	_____
MST158DC	Identity Management with Windows Server 2016	4	_____
Related Area Credits			_____
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-2	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____

CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 7: Oracle Database Operations

Credits: 32-38

Code	Title	Credits	Semester
Information Technology Core			_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
CIS105	Survey of Computer Information Systems	3	_____
CIS119DO	Introduction to Oracle: SQL	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
Oracle Database Operations			_____
CIS119DP	Oracle: Database Administration	3	_____
CIS154	Database Modeling and Design	3	_____
CIS164AB	Oracle: PL/SQL Programming	3	_____
Related Area Credits			_____
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		2-8	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 8: Programming and Systems Analysis Level 1

Credits: 32-38

Code	Title	Credits	Semester
Information Technology Core			_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____

CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
Select one of the following:		3	_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS150AB	Object-Oriented Programming Fundamentals	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
Programming and Systems Analysis			_____
Select one of the following:		3	_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CIS166++	Any Web Scripting course	3	_____
GBS151	Introduction to Business	3	_____
Related Area Credits			_____
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		1-8	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 9: Redhat Linux Engineer

Credits: 32-38

Code	Title	Credits	Semester
Information Technology Core			_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS126RH	Red Hat System Administration I	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____

CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
Redhat Linux Engineer			_____
CIS238RH	Red Hat System Administration II	3	_____
CIS240RH	Red Hat System Administration III	3	_____
Related Area Credits			_____
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		5-11	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 10: Web Foundations

Credits: 36-38

Code	Title	Credits	Semester
Information Technology Core			_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
Web Foundation			_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS136	Content Management Systems: WordPress	3	_____
CIS166AA	Introduction to Javascript	3	_____
CIS233DA	Internet/Web Development Level II	3	_____
CIS235	E-Commerce	3	_____

Related Area Credits			_____
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-2	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 11: A Related Certificate of Completion (CCL) At the Discretion of the Program Director

Credits: 21-22

A related Certificate of Completion (CCL) at the discretion of the Program Director (minimum of 11 credits) AND the following core courses with permission of the Program Director.

Code	Title	Credits	Semester
Information Technology Core			_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____

General Education

Code	Title	Credits	Semester
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____

COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
Equivalent or higher level mathematics course in the Mathematical Applications (MA) area			_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design (HU) area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course from the Social and Behavioral Sciences (SB) area		3	_____
Natural Sciences			_____
Any approved general education course from the Natural Science (SG) or (SQ) area		4	_____
Total Credits		**22-28**	_____

Linux Associate, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5046N
6-9 Credits
Program Contact
Mizan Rahman | 480-732-7109| mizan.rahman@cgc.edu

Program Description

The Certificate of Completion (CCL) in Linux Associate program is designed to help prepare students for employment or to improve current professional skills. The program includes Linux operating system basics and management 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. This program helps prepare students for the Linux Professional Institute Certification (LPIC-1) and CompTIA Linux + certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Program Notes

Please note that this program is currently on moratorium. Please contact the program lead for more information.

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 Survey of Computer Information Systems as indicated in the required courses. Students with the requisite skills may have the CIS105 Survey of Computer Information Systems requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Complete one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of program director			_____
CIS126DL	Linux Operating System	3	_____
CIS238DL	Linux System Administration	3	_____
Total Credits		**6-9**	_____

Management, Associate in Applied Science

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Associate in Applied Science: AAS 3070
62-69 Credits
Program Contacts
Barbara Gonzalez | 602-243-8044 |barbara.gonzalez@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Management program is designed to provide skills for management careers. Students completing this program are better equipped to apply competencies needed for successful performance in management occupations such as manufacturing, wholesaling, retailing, and service industries. The Certificate of Completion (CCL) in Management is fully embedded in this AAS. The following Certificates of Completion (CCL) are also available based on chosen restricted electives: Human Resources Management, Project Management, Business Administration, Supervision and Management, and Organizational Leadership.

Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
ACC111	Accounting Principles I	3	
BPC110	Computer Usage and Applications	3	
or CIS105	Survey of Computer Information Systems		
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
GBS120	Workplace Communication Skills	3	
GBS151	Introduction to Business	3	
GBS205	Legal, Ethical, and Regulatory Issues in Business	3	
MGT229	Management and Leadership I	3	
MGT251	Human Relations in Business	3	
Restricted Electives			
Students should select eighteen (18) credits from the following courses in consultation with a Department Advisor. Courses cannot be shared with Required Courses.		18	
ACC110 & ACC112	Understanding And Using Accounting Systems and Accounting Principles II		
CIS114DE	Excel Spreadsheet		
CIS224	Project Management Microsoft Project for Windows		
GBS131	Business Calculations		
IBS101	Introduction to International Business		
MKT271	Principles of Marketing		
MGT+++	Any MGT Management course(s) (except courses used to satisfy Required Courses area)		
TQM230	Teamwork Dynamics		
TQM240	Project Management In Quality Organizations		
General Education			
Core			
First-Year Composition			
ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
ENG102	First-Year Composition	3	
or ENG108	First-Year Composition for ESL		
Oral Communication			
Select one of the following:		3	
COM100	Introduction to Human Communication		

COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Equivalent as indicated by assessment			_____
Mathematics			_____
Any approved general education course from the Mathematics [MA] area.		3-5	_____
Humanities, Arts and Design			_____
Any approved general education course from the Humanities, Arts and Design [HU] area.		3	_____
Social and Behavioral Sciences			_____
SBU200	Society and Business	3	_____
Natural Sciences			_____
Any approved general education course in the Natural Sciences (Quantitative) [SQ] area or the Natural Sciences (General) [SG] area.		4	_____
Total Credits		**62-69**	_____

Microsoft Office Professional, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5132
16-22 Credits
Program Contact
Lana Short | 480-732-7191 | lana.short@cgc.edu

Program Description

The Certificate of Completion (CCL) in Microsoft Office Professional emphasizes training on word processing, spreadsheet, database, and presentation software for business purposes. This certificate provides students with the knowledge and skills requisite of various business settings. This certificate helps with initial preparation for the Microsoft examinations for certification as a Microsoft Office Specialist (MOS). This certificate embeds into the Associate in Applied Science (AAS) degree in Information Technology and Certificate of Complete (CCL) in Microsoft Office Specialist.

Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-1	_____
BPC/ OASOR111AA	Computer Keyboarding I		_____
Permission of Program Director			_____
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of Program Director			_____
CIS113DE	Microsoft Word: Word Processing	3	_____
CIS114DE	Excel Spreadsheet	3	_____
CIS117DM	Microsoft Access: Database Management	3	_____
CIS118DB	Desktop Presentation: PowerPoint	3	_____
Select one of the following:		2-3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS121AE & CIS122AE	Windows Operating System: Level I and Windows Operating System: Level II		_____
MST150++	Microsoft Windows		_____
Select one of the following:		2-3	_____
CIS124AA & CIS124BA	Project Management Software: Level I and Project Management Software: Level II		_____

CIS224	Project Management Microsoft Project for Windows		_____
Total Credits		**16-22**	_____

Microsoft Office Specialist, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5137
25-31 Credits
Program Contact
Lana Short | 480-732-7191 | lana.short@cgc.edu

Program Description

The Certificate of Completion (CCL) in Microsoft Office Specialist emphasizes advanced training on word processing, spreadsheet, and database software for business purposes. This certificate builds upon the knowledge and skills gained by the CCL in Microsoft Office Professional for use in various business settings. This certificate helps prepare students for the Microsoft Office Specialist (MOS) certification examinations. This certificate embeds into the Associate in Applied Science (AAS) degree in Information Technology.

Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

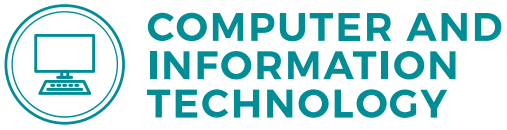
++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
The following courses are required and included in Microsoft Office Professional CCL			_____
Select one of the following:		0-1	_____
BPC/ OASOR111AA	Computer Keyboarding I		_____
Permission of Program Director			_____
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of Program Director			_____
CIS113DE	Microsoft Word: Word Processing	3	_____
CIS114DE	Excel Spreadsheet	3	_____
CIS117DM	Microsoft Access: Database Management	3	_____
CIS118DB	Desktop Presentation: PowerPoint	3	_____
Select one of the following:		2-3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS121AE & CIS122AE	Windows Operating System: Level I and Windows Operating System: Level II		_____
MST150++	Microsoft Windows		_____
Select one of the following:		2-3	_____
CIS124AA & CIS124BA	Project Management Software: Level I and Project Management Software: Level II		_____
CIS224	Project Management Microsoft Project for Windows		_____
The following courses are required in Microsoft Office Specialist CCL.			_____
CIS213DE	Advanced Microsoft Word: Word Processing	3	_____
CIS214DE	Advanced Excel Spreadsheet: Level II	3	_____
CIS217AM	Advanced Microsoft Access: Database Management	3	_____
Total Credits		**25-31**	_____

Network and Systems Administration, Associate in Applied Science



Associate in Applied Science: AAS 3189
61-74 Credits
Program Contact
Scott Miller | 480-726-4131 | scott.miller@cgc.edu (scott.miller@cgc.edu)

Program Description

The Associate in Applied Science (AAS) in Network and Systems Administration program provides students with a solid, hands-on skill set of computer, networking, and internetworking systems technology principles and desktop support. Students gain an understanding of the interaction between microcomputer software and hardware, network and internetworking operating systems software and hardware, local area network administration and management, the use of troubleshooting techniques, troubleshooting hardware and software tools, as well as interpersonal/customer service skills. Students have the opportunity to specialize in specific information technology areas based on their interests and professional goals and leading to industry recognized certifications through an embedded Certificate of Completion (CCL) including, but not limited to, Desktop (Desktop Support, Computer System Configuration and Support, Computer System Configuration and Support, Network, Computer System Configuration and Support, Security, Computer System Configuration and Support, Linux), Cisco (Cisco Network CCNA, Cisco Network CCNP, Cisco Network CCNA Security), Linux (Red Hat Linux Engineer, Linux Associate, Red Hat Linux Administrator, Linux System Administration), Microsoft (Microsoft System Administration, Microsoft Desktop Associate), and VMware (VMware Network Administrator, VMware Foundations, VMware System Administrator). Graduates may pursue employment in a variety of information technology environments and/or transfer to a university.

Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Students may receive credit for courses within the program based on current industry certifications.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Required Courses

Code	Title	Credits	Semester
Required Courses			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	
CIS102DA	IT Customer Support	3	
CIS105	Survey of Computer Information Systems	3	
CIS126DL	Linux Operating System	3	
or CIS126RH	Red Hat System Administration I		
Select one of the following:		3-4	
CIS190	Introduction to Networking		
CNT140AB	Introduction to Networks [1]		
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
Total Credits		**19-22**	

[1] CNT140AB Introduction to Networks is required for students on the Cisco emphasis

Specializations

12-24 Credits

Students must also select from one of the following areas of emphasis based on their career goals.

Specialization 1: Cisco System Administration (CCNA) and Security

Code	Title	Credits	Semester
CNT150AB	Switching, Routing, and Wireless Essentials	4	
CNT160AB	Enterprise Networking, Security, and Automation	4	

CNT202	Cisco Secure Firewall Appliance Configuration	4	_____
or CNT205	Cisco Certified Network Associate Security		_____
Total Credits		**12**	_____

Specialization 2: Cisco System Administration (CCNP)

Code	Title	Credits	Semester
CNT150AB	Switching, Routing, and Wireless Essentials	4	_____
CNT160AB	Enterprise Networking, Security, and Automation	4	_____
CNT240	Cisco Certified Network Professional: Enterprise Core	8	_____
or CNT240AA & CNT240AB	Cisco Certified Network Professional: Enterprise Core I and Cisco Certified Network Professional: Enterprise Core II		_____
CNT250	Cisco Certified Network Professional: Enterprise Advanced Routing and Services	8	_____
or CNT250AA & CNT250AB	Cisco Certified Network Professional: Enterprise Advanced Routing and Services I and Cisco Certified Network Professional: Enterprise Advanced Routing and Services II		_____
Total Credits		**24**	_____

Specialization 3: Linux System Administration

Code	Title	Credits	Semester
CIS238DL	Linux System Administration	3	_____
CIS239DL	Linux Shell Scripting	3	_____
CIS240DL	Linux Network Administration	3	_____
CIS275DL	Linux Capstone	3	_____
Total Credits		**12**	_____

Specialization 4: Red Hat Enterprise Linux Administration

Code	Title	Credits	Semester
CIS238RH	Red Hat System Administration II	3	_____
CIS239DL	Linux Shell Scripting	3	_____
CIS240RH	Red Hat System Administration III	3	_____
CIS271RH	Red Hat System Administration IV	3	_____
CIS275DL	Linux Capstone	3	_____
Total Credits		**15**	_____

Specialization 5: Microsoft System Administration

Code	Title	Credits	Semester
CIS121AH	Microsoft PowerShell/ Command Line Operations	3	_____
MST150	Any Microsoft Windows Operating System course	3	_____
MST155DC	Installation, Storage, and Compute with Windows Server	4	_____
MST157DC	Networking with Windows Server	4	_____
MST158DC	Identity Management with Windows Server 2016	4	_____
Total Credits		**18**	_____

Specialization 6: VMware Network Administrator

Code	Title	Credits	Semester
CIS293	VMware ESXI Server Enterprise	4	_____
CIS294	VMware vSphere Operate, Scale and Secure	4	_____
CIS295	VMware NSX: Install, Configure, Manage	4	_____
Total Credits		**12**	_____

Restricted Electives

0-8 Credits

Students are to select enough Restricted Elective credits to meet a minimum of 60 credits not used to satisfy Required Courses or selected area of emphasis within the Required Courses. Consult with an Academic, Program, or Faculty Advisor to pick courses that align with your career goals.

Cisco Electives

Code	Title	Credits	Semester
CNT140AB	Introduction to Networks [1]	4	_____

CNT150AB	Switching, Routing, and Wireless Essentials	4	_____
CNT160AB	Enterprise Networking, Security, and Automation	4	_____
CNT171	CCNA Exam Prep	1	_____
CNT202	Cisco Secure Firewall Appliance Configuration	4	_____
or CNT205	Cisco Certified Network Associate Security		_____
CNT206	Cisco Certified Network Associate Wireless	4	_____

[1] CNT140AB Introduction to Networks is required for students on the Cisco emphasis

Linux Electives

Code	Title	Credits	Semester
CIS238DL	Linux System Administration	3	_____
CIS238RH	Red Hat System Administration II	3	_____
CIS239DL	Linux Shell Scripting	3	_____
CIS240DL	Linux Network Administration	3	_____
CIS240RH	Red Hat System Administration III	3	_____
CIS275DL	Linux Capstone	3	_____

Microsoft Electives

Code	Title	Credits	Semester
MST	Any MST Microsoft Technology Course		_____
CIS121AB	Microsoft Command Line Operations	1	_____
CIS121AH	Microsoft PowerShell/ Command Line Operations	3	_____

Security Electives

Code	Title	Credits	Semester
CIS270	Essentials of Network and Information Security	3	_____
ITS110	Information Security Fundamentals	3	_____

VMware Electives

Code	Title	Credits	Semester
CIS293	VMware ESXI Server Enterprise	4	_____
CIS294	VMware vSphere Operate, Scale and Secure	4	_____
CIS295	VMware NSX: Install, Configure, Manage	4	_____

Other Information Technology Electives

Code	Title	Credits	Semester
BPC171	Recycling Used Computer Technology	1	_____
CIS111	Ethics in Information Technology	3	_____
CIS124AA	Project Management Software: Level I	1	_____
CIS124BA	Project Management Software: Level II	1	_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3	_____
CIS224	Project Management Microsoft Project for Windows	3	_____
CIS250	Management of Information Systems	3	_____
CIS266	Network Integration Capstone	4	_____
CIS290	Computer Information Systems Internship	1-3	_____
CIS296	Cooperative Education	1-4	_____
CIS298	Special Projects	1-3	_____
ITS120	Legal, Ethical and Regulatory Issues	3	_____

General Education

Core and Distribution

Code	Title	Credits	Semester
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
Select one of the following:		3	_____
ENG102	First-Year Composition		_____
or ENG108	First-Year Composition for ESL		_____
ENG111	Technical and Professional Writing (does not count as an ENG Transfer option)		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking (recommended for students transferring to Northern Arizona University)		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
Equivalent or higher level mathematics course in the Mathematical Applications (MA) area			_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design (HU) area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course from the Social and Behavioral Sciences (SB) area		3	_____
Natural Sciences			_____
Any approved general education course from the Natural Sciences (SG) or (SQ) area		4	_____
Total Credits		**22-28**	_____

Organizational Leadership, Certificate of Completion

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Certificate of Completion: CCL 5731
18 Credits
Program Contact
Jamie Goff | 480-726-4377 | jamie.goff@cgc.edu

Program Description

The Certificate of Completion (CCL) in Organizational Leadership is designed to prepare students with knowledge and skills needed in today`s changing workplace. The program provides leadership and communication skills and techniques for planning, organizing, leading and controlling business situations. This program also emphasizes procedures for effective resource allocation. The CCL in Organizational Leadership is fully embedded in an Associate in Applied Science (AAS) in Organizational Management.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
BPC110	Computer Usage and Applications	3	_____
or CIS105	Survey of Computer Information Systems		_____

GBS110	Human Relations in Business and Industry	3	_____
or MGT251	Human Relations in Business		_____
GBS120	Workplace Communication Skills	3	_____
GBS151	Introduction to Business	3	_____
MGT175	Business Organization and Management	3	_____
or TQM240	Project Management In Quality Organizations		_____
MGT101	Techniques of Supervision	3	_____
or MGT229	Management and Leadership I		_____
Total Credits		**18**	_____

Organizational Management, Associate in Applied Science

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Associate in Applied Science: AAS 3727
61-68 Credits
Program Contact
Jamie Goff | 480-726-4377 | jamie.goff@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Organizational Management program is designed with a customized curriculum specific to the student's individual needs in addition to the knowledge and skills needed in today's changing workplace. The program provides leadership and communication skills and techniques for planning, organizing, leading and controlling business situations. This program also emphasizes procedures for effective resource allocation. A Certificate of Completion (CCL) in Organizational Leadership is fully embedded in this AAS.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Certificate of Completion in Organizational Leadership (5731) Requirements listed below.			_____
BPC110	Computer Usage and Applications	3	_____
or CIS105	Survey of Computer Information Systems		_____
GBS110	Human Relations in Business and Industry	3	_____
or MGT251	Human Relations in Business		_____
GBS120	Workplace Communication Skills	3	_____
GBS151	Introduction to Business	3	_____
MGT175	Business Organization and Management	3	_____
or TQM240	Project Management In Quality Organizations		_____
MGT101	Techniques of Supervision	3	_____
or MGT229	Management and Leadership I		_____
Restricted Electives			_____
Students must choose 20 industry/job related course credits from any MCCCD occupational program and/or Academic Certificate.		20	_____
Industry/job related course credits must include a minimum of 9 credits with a common subject or theme. Program of study must be approved by the business department chair or designee.			_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Any approved General Education course from the Oral Communication area		3	_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent by assessment			_____

Mathematics		_____
Any approved general education course(s) in the Mathematics area	3-5	_____
Distribution		_____
Humanities, Arts and Design		_____
Any approved general education course(s) from the Humanities, Arts and Design area	3	_____
Social and Behavioral Sciences		_____
Any approved general education course from the Social and Behavioral Sciences (SB) area	3	_____
Natural Sciences		_____
Any approved general education course(s) in the Natural Sciences (Quantitative) (SQ) area or the Natural Sciences (General) (SG) area.	4	_____
Total Credits	**61-68**	_____

Programming and Systems Analysis Level I, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5048
24 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Certificate of Completion (CCL) in Programming and Systems Analysis Level I provides an exploration of different computer language and technical skills. The CCL includes, but is not limited to the following: operating systems, local area networks, business communication, team roles, and dynamics. A Certificate of Completion (CCL) in Programming and Systems Analysis Level II, Certificate of Completion (CCL) in iOS App Development and an Associate in Applied Science (AAS) in Programming and Systems Analysis are also available.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Consultation with an Academic Advisor is recommended for course selection.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

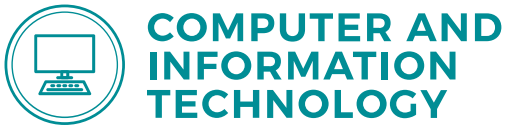
++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
Select one of the following:		3	_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Any Microsoft Windows course		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS150	Programming Fundamentals	3	_____
or CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS166++	Any Web Scripting course(s)	3	_____
GBS151	Introduction to Business	3	_____
Select a programming language from below that best aligns with academic and professional goals in one of the following areas:		3	_____
CIS156	Python Programming: Level I		_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
Total Credits		**24**	_____

Programming and Systems Analysis Level II, Certificate of Completion



Certificate of Completion: CCL 5962
36-37 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Certificate of Completion (CCL) in Programming and Systems Analysis Level II provides an in-depth exploration of different computer language and technical skills. This CCL includes, but is not limited to the following: local area networks, team roles, and dynamics. A Certificate of Completion (CCL) in iOS App Development and an Associate in Applied Science (AAS) in Programming and Systems Analysis are available.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Consultation with an Academic Advisor is recommended for course selection.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
The following courses are required and included in CCL Programming and Systems Analysis Level I			_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
Select one of the following:		3	_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Any Microsoft Windows course		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS150	Programming Fundamentals	3	_____
or CIS150AB	Object-Oriented Programming Fundamentals		_____
Select one of the following:		3	_____
CIS156	Python Programming: Level I		_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CIS166++	Any Web Scripting course(s)	3	_____
GBS151	Introduction to Business	3	_____
The following courses are required for CCL Programming and Systems Level II			_____
Select one of the following:		3-4	_____
CIS190	Introduction to Networking		_____
CNT140AB	Introduction to Networks		_____
MST140	Microsoft Networking Essentials		_____
Select one of the following:		3	_____
CIS225AB	Object-Oriented Analysis and Design		_____
CIS250	Management of Information Systems		_____
Select a programming language from below that best aligns with academic and professional goals in one of the following areas:		3	_____
CIS256	Python Programming Level II		_____
CIS259	Visual Basic Programming II		_____

CIS262++	Any C Programming: Level II course		_____
CIS263AA	Java Programming: Level II		_____
CIS265	Advanced iOS Application Development		_____
Restricted Electives			_____
Select one of the courses below that best aligns with academic and professional goals :		3-4	_____
Students may not choose courses they have taken from the Required Courses area			_____
CIS151	Computer Game Development - Level I		_____
CIS156	Python Programming: Level I		_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CIS224	Project Management Microsoft Project for Windows		_____
CIS251	Computer Game Development - Level II		_____
CIS256	Python Programming Level II		_____
CIS259	Visual Basic Programming II		_____
CIS262++	Any C Programming: Level II course		_____
CIS263AA	Java Programming: Level II		_____
CIS265	Advanced iOS Application Development		_____
CIS267	Pega System Architect Essentials		_____
GBS211	Legal, Ethical and Regulatory Issues of the Internet Studies		_____
Total Credits		**36-38**	_____

Programming and Systems Analysis, Associate in Applied Science

COMPUTER AND INFORMATION TECHNOLOGY

Associate in Applied Science: AAS 3844
62-71 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Programming and Systems Analysis program provides an in-depth exploration of different computer language and technical skills. The AAS includes, but is not limited to the following: operating systems, local area networks, business communication, team roles, and dynamics. Certificate of Completions (CCLs) in Programming and Systems Analysis Level I and Level II and iOS App Development are also available.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Consultation with an Academic Advisor is recommended for course selection.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

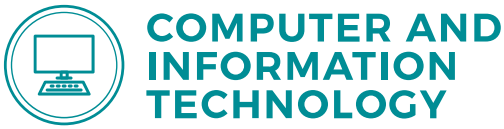
Code	Title	Credits	Semester
Required Courses			_____
CIS105	Survey of Computer Information Systems	3	_____
GBS151	Introduction to Business	3	_____
Select one of the following:		3	_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____

MST150++	Any Microsoft Windows course		_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150	Programming Fundamentals		_____
CIS150AB	Object-Oriented Programming Fundamentals [1]		_____
CIS166++	Any Web Scripting course(s)	3	_____
Select one of the following:		3-4	_____
CIS190	Introduction to Networking		_____
CNT140AB	Introduction to Networks		_____
MST140	Microsoft Networking Essentials		_____
Select one of the following:		3	_____
CIS225AB	Object-Oriented Analysis and Design		_____
CIS250	Management of Information Systems		_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Select a programming language from below that best aligns with academic and professional goals (2 courses for a total of 6 credits) in one of the following areas:		6	_____
CIS156 & CIS256	Python Programming: Level I and Python Programming Level II		_____
CIS159 & CIS259	Visual Basic Programming I and Visual Basic Programming II		_____
CIS162++	Any C Programming: Level I course		_____
& CIS262++	Any C Programming: Level II course		_____
CIS163AA & CIS263AA	Java Programming: Level I and Java Programming: Level II		_____
CIS265	Advanced iOS Application Development		_____
& CIS165++	Any Mobile Application Development course		_____
Restricted Electives			_____
Students may not use courses from the Required Courses Area.			_____
Select two of the following:		6	_____
CIS224	Project Management Microsoft Project for Windows		_____
CIS151	Computer Game Development - Level I		_____
CIS156	Python Programming: Level I		_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CIS251	Computer Game Development - Level II		_____
CIS256	Python Programming Level II		_____
CIS259	Visual Basic Programming II		_____
CIS262++	Any C Programming: Level II course		_____
CIS263AA	Java Programming: Level II		_____

CIS265	Advanced iOS Application Development		_____
GBS211	Legal, Ethical and Regulatory Issues of the Internet Studies		_____
General Electives			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Any approved General Education course from the Oral Communication area		3	_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design (HU) area		3	_____
Social and Behavioral Sciences			_____
Select one of the following:		3	_____
ECN211	Macroeconomic Principles		_____
ECN212	Microeconomic Principles		_____
SBU200	Society and Business		_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences (Quantitative) (SQ) area or the Natural Sciences (General) (SG) area.		4	_____
Total Credits		**62-71**	_____

[1] Students interested in pursuing an iOS Certificate of Completion (CCL) are recommended to take CIS150AB Object-Oriented Programming Fundamentals

Python Applications, Certificate of Completion



Certificate of Completion: CCL 5340N
12-22 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Certificate of Completion (CCL) in Python Applications is designed to provide students with a set of skills necessary to successfully perform Python related programming projects. The courses consist of both practical knowledge and hands-on experience with the Python language and the programming techniques used in the industry. Through the elective courses, students will be able to apply the knowledge obtained to specific areas of interest using Python.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Required Courses and Restricted Electives must be taken within five (5) years prior to completion of the program to be applied toward this award.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of Program Director			_____
Select one of the following:		0-3	_____

CIS150AB	Object-Oriented Programming Fundamentals		_____
Permission of Program Director			_____
CIS119DO	Introduction to Oracle: SQL	3	_____
or CIS276DA	MySQL Database		_____
or CIS276DB	SQL Server Database		_____
CIS156	Python Programming: Level I	3	_____
CIS256	Python Programming Level II	3	_____
Restricted Electives			_____
Select one of the following:		3-7	_____
Specialization 1: Cybersecurity and Networking			_____
CNT140AB	Introduction to Networks		_____
CIS256CN	Python for Cybersecurity and Networking		_____
Specialization 2: Data Analytics			_____
CIS256DA	Python for Data Analysis		_____
Total Credits		**12-22**	_____

Small Business Management Level I, Certificate of Completion

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Certificate of Completion: CCL 5153N
10-12 Credits
Program Contacts
Jamie Goff | 480-726-4377 | jamie.goff@cgc.edu

Program Description

The Certificate of Completion (CCL) in Small Business Management Level I program is designed to meet the needs of individuals who wish to own and/or manage a small business. Prepares students to acquire the skills, tools and knowledge necessary for successful start-up and operations of a business.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.
Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.
+ indicates course has prerequisites and/or corequisites

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
EPS195	Business Start-Up and Planning	2-3	_____
or SBS216	Planning for a Small Business		_____
or MGT253	Owning and Operating a Small Business		_____
SBS200	Small Business Operations	2	_____
SBS202 & SBS203	Small Business Bookkeeping And Tax Preparation and Financing and Cash Management for a Small Business	2	_____
or SBS230	Financial and Tax Management for Small Business		_____
SBS204	Small Business Marketing and Advertising	2-3	_____
or SBS220	Internet Marketing for Small Business		_____
or MKT271	Principles of Marketing		_____
SBS213	Hiring and Managing Employees	1	_____
SBS214	Small Business Customer Relations	1	_____
Total Credits		**10-12**	_____

Social Media Marketing, Certificate of Completion

BUSINESS, ENTREPRENEURIALISM, AND MANAGEMENT

Certificate of Completion: CCL 5830
17-18 Credits
Program Contacts
Nicki Lynn | 480-732-7394 | nicki.lynn@cgc.edu

Program Description

The Certificate of Completion (CCL) in Social Media Marketing is designed to provide useful skills important in a variety of strategic marketing areas, e.g., social media, digital communications, integrated marketing, media relations, and brand management. An Associate in Applied Science (AAS) in Marketing and Sales is also available.

Program Notes

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
CIS103	Introduction to Social Media	3	_____
GBS120	Workplace Communication Skills	3	_____
MKT110	Marketing and Social Networking	3	_____
MKT111	Applied Marketing and Social Networking	3	_____
MKT271	Principles of Marketing	3	_____
Restricted Electives			_____
Select one of the following:		2-3	_____
MKT101	Introduction to Public Relations		_____
MKT280AB	Marketing Internship		_____
MKT298AB	Special Projects		_____
Total Credits		**17-18**	_____

Web App Development, Certificate of Completion

Certificate of Completion: CCL 5835N
9-12 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Certificate of Completion (CCL) in Web App Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on web apps. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificates of Completion (CCL) in Mobile App Development and Cross-Platform App Development.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses within the program. Overall program minimum GPA = 2.00.

Students should consult with a Department Advisor in arranging their schedule.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
Permission of Program Director, Department or Division Chair			_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS166AA	Introduction to Javascript	3	_____
CIS233DA	Internet/Web Development Level II	3	_____
Total Credits		**9-12**	_____

Web Design, Certificate of Completion

Certificate of Completion: CCL 5986
38-43 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Certificate of Completion (CCL) in Web Design provides students with comprehensive and focused studies in web design, including advanced image manipulation, vector graphics, page layout, video editing and design principles. An Associate in Applied Science (AAS) in Web Design/Development and CCL's in Web Foundations and Web Development are also available.

Program Notes

Students must earn a grade of "C" or better in each course in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
The following courses are required for the CCL in Web Foundations:			_____
CIS105	Survey of Computer Information Systems	3	_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS136	Content Management Systems: WordPress	3	_____
CIS166AA	Introduction to Javascript	3	_____
CIS233DA	Internet/Web Development Level II	3	_____
CIS235	E-Commerce	3	_____
The following courses are required for the CCL in Web Design :			_____
Select one of the following:		3-4	_____
AVC183	Digital Graphic Arts I		_____
AVC100 & AVC181	Introduction to Digital Arts and Graphic Design I		_____
ART112	Two-Dimensional Design		_____
CIS120DA	Introduction to Adobe Premiere	3	_____
or CIS120DK	Introduction to Digital Video Editing		_____
CIS120DB	Introduction to Adobe Illustrator	3	_____
CIS120DC	Introduction to Adobe Animate	3	_____
or CIS220DF	Adobe Photoshop Level II: Advanced Digital Imaging		_____
CIS138DA	Desktop Design and Publishing Using Adobe InDesign	3	_____
Restricted Electives			_____
Select two to six (2-6) credits in consultation with your program advisor to further develop skills in the areas of Adobe, Art, Social Media, Marketing, Business, and/or Multimedia.		2-6	_____
Total Credits		**38-43**	_____

Web Design/Development, Associate in Applied Science

COMPUTER AND INFORMATION TECHNOLOGY

Associate in Applied Science : AAS 3185
61-74 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Web Design/Development prepares students to design, create, and administer interactive and professional web sites. Courses focus on "hands-on" experience with web publishing, web graphics preparation, scripting, content management systems and e-commerce solutions. The program provides students a pathway to either develop advanced skills in Web Design or Web Development. Certificates of Completion (CCLs) in Foundational Web Technologies, Web Design and Web Development are also available.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
In addition to the required course work students must consult with a program advisor to select one of the specializations within the Restricted Electives area.			_____

CIS105	Survey of Computer Information Systems	3	_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS136	Content Management Systems: WordPress	3	_____
CIS166AA	Introduction to Javascript	3	_____
CIS233DA	Internet/Web Development Level II	3	_____
CIS235	E-Commerce	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Restricted Electives			_____
Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.		17-22	_____
Specialization I: Web Design (17-22 Credits) *(p. 163)*			_____
Specialization II: Web Development (18 Credits) *(p. 163)*			_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Any approved General Education course from the Oral Communication area		3	_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Any approved general education course(s) in the Mathematics area [1]		3-6	_____
College Mathematics:			_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
College Algebra/Functions:			_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Higher Math Course:			_____
Higher math course with the Mathematical Applications (MA) general education designation recommended for students intending to transfer to a four-year institution.			_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area [2]		3	_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences area		4	_____
Total Credits		**61-74**	_____

[1] MAT187 Precalculus is recommended for students intending to transfer to ASU (Tempe campus) to earn a BS in Graphic Information Technology.

[2] PSY101 Introduction to Psychology is recommended for students intending to transfer to ASU (Polytechnic campus) to earn a BS

in Technical Communication (User Experience) or to ASU (Tempe campus) to earn a BS in Graphic Information Technology

Specializations

Specialization I: Web Design

Code	Title	Credits	Semester
Select one of the following:		3-4	_____
AVC183	Digital Graphic Arts I		_____
AVC181 & AVC100	Graphic Design I and Introduction to Digital Arts		_____
ART112	Two-Dimensional Design		_____
CIS120DA	Introduction to Adobe Premiere	3	_____
or CIS120DK	Introduction to Digital Video Editing		_____
CIS120DB	Introduction to Adobe Illustrator	3	_____
CIS120DC	Introduction to Adobe Animate	3	_____
or CIS220DF	Adobe Photoshop Level II: Advanced Digital Imaging		_____
CIS138DA	Desktop Design and Publishing Using Adobe InDesign	3	_____
Students must select 2 to 6 credits in consultation with your program advisor to further develop skills in the areas of Adobe, Art, Social Media, Marketing, Business and/or Multimedia.		2-6	_____
Total Credits		**17-22**	_____

Specialization II: Web Development

Code	Title	Credits	Semester
CIS119DO	Introduction to Oracle: SQL (or CIS276++ Any Database Management Systems course)	3	_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS166AE	Web Scripting with PHP. Hypertext Preprocessor (PHP)	3	_____
Programming Language: Select two of the following:		6	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CIS256	Python Programming Level II		_____
CIS262AD	C# Level II		_____
CIS263AA	Java Programming: Level II		_____
CIS265++	Advanced iOS Application Development		_____
Students must select 3 credits of any course with a CIS prefix in consultation with their program advisor to further develop skills in the areas of Databases, Information Systems, Programming, and/or Operating Systems.		3	_____
Total Credits		**18**	_____

Web Development, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5988
39 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Certificate of Completion (CCL) in Web Development prepares students to create and administer interactive and professional websites. The program provides students with knowledge and skills in developing dynamic websites, client and server side programs, database structures, and object-oriented design. A Certificate of Completion (CCL) in Web Design and an Associate in Applied Science (AAS) in Web Design/ Development are also available.

Program Notes

Students must earn a grade of "C" or better in each course in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
The following courses are required and included in the CCL in Web Foundations:			_____
CIS105	Survey of Computer Information Systems	3	_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS136	Content Management Systems: WordPress	3	_____
CIS166AA	Introduction to Javascript	3	_____
CIS233DA	Internet/Web Development Level II	3	_____
CIS235	E-Commerce	3	_____
The following courses are required for the CCL in Web Development:			_____
CIS166AE	Web Scripting with PHP: Hypertext Preprocessor (PHP)	3	_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276++	Any Database Management Systems course		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
Programming Language			_____
Select two of the following:		6	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CIS256	Python Programming Level II		_____
CIS262AD	C# Level II		_____
CIS263AA	Java Programming: Level II		_____
CIS265++	Any Advanced Application Development course		_____
Restricted Electives			_____
Students should select any course with a CIS prefix in consultation with their program advisor to further develop skills in the areas of Databases, Information Systems, Programming, and/or Operating Systems.		3	_____
Total Credits		**39**	_____

Web Foundations, Certificate of Completion

COMPUTER AND INFORMATION TECHNOLOGY

Certificate of Completion: CCL 5984
21 Credits
Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description

The Certificate of Completion (CCL) in Web Foundations introduces students to designing and developing web pages. This CCL prepares students for entry level web positions. Certificates of Completion (CCL) in

Web Design and Web Development are available. An Associate in Applied Science (AAS) degree in Web Design/Development is also available.

Program Notes

Students must earn a grade of "C" or better in each course in the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
CIS105	Survey of Computer Information Systems	3	_____
CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS136	Content Management Systems: WordPress	3	_____
CIS166AA	Introduction to Javascript	3	_____
CIS233DA	Internet/Web Development Level II	3	_____
CIS235	E-Commerce	3	_____
Total Credits		**21**	_____

Communication & Fine Arts

Micaela Church, Division Chair
480-732-7136 | micaela.church@cgc.edu

Courses

Prefix	Course
ARH	Art Humanities
ART	Art
AVC	Art and Visual Communication
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
STO	Storytelling
THE	Theatre
THF	Theatre and Film
THO	Theatre Occupational
THP	Theater Performance/Production

Career Programs

Illustration
Illustration and Sequential Art
Photography
Sequential Art

Associate in Applied Science (AAS)

- Illustration and Sequential Art, Associate in Applied Science (p. 192)
- Photography, Associate in Applied Science (p. 193)

Certificate Of Completion (CCL)

- Illustration, Certificate of Completion (p. 191)
- Sequential Art, Certificate of Completion (p. 196)

Art

Ceschiat, Michael
Ceramics

- B.F.A., Columbus College of Art and Design
- M.F.A., University of New Mexico

Mendoza, Louis
Studio Art

- B.F.A, M.F.A., Arizona State University

Sullivan, Ryan (Buzzy)
Photography

- B.F.A., Oregon College of Art & Craft
- M.F.A., Arizona State University

Art History

Najafi, Roja

- B.Tech, Tehran University of Art
- M.A., Brooklyn College
- Ph.D., University of Texas at Austin

Communication

Agee, Vanessa

- A.A. Merritt Community College
- B.A., M.S., Grand Canyon University
- M.A., Arizona State University

Braaten, Anthony

- B.S., M.Ed., Northern Arizona University

Bryant, Michael

- M.S E.D Northern Arizona University

Sanchez, Aaron

- B.A., M.A., California State University, San Bernardino
- Ph.D., Arizona State University

Williams, Jade

- B.S., M.S., University of Florida
- Ph.D., Arizona State University

Zamila, Mariam

- B.A., M.A., Texas State University

Dance

Church, Micaela
Division Chair

- B.A., B.M., Alma College
- M.F.A., Arizona State University

Music Performance

Johnston, Joseph

- B.A., M.A., Northern Arizona University
- D.M.A., Arizona State University

Kalo, Michele

- M.A., Arizona State University

Roberts, Adam

- B.M., Northern Arizona University
- M.M., New England Conservatory of Music

Theatre Performance/Production

Reynolds, Shalynn

- B.A., M.F.A., Arizona State University

Art Humanities (ARH)

ARH100 / Introduction to Art
3 Credits **/ 3.0 Periods for Lecture**
Understanding and enjoyment of visual art through the study of art media, design elements, techniques and processes, and cultural contexts. Building awareness of the meaning, functions, and significance of art. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH101 / Art from Prehistory Through Middle Ages
3 Credits **/ 3.0 Periods for Lecture**
History of art from the Paleolithic period through the Middle Ages.
SUN SUN# ART 1101
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH102 / Art from Renaissance to Modernism
3 Credits **/ 3.0 Periods for Lecture**
History of art from the Renaissance through Modernism.
SUN SUN# ART 1102
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH112 / Introduction to Modern and Contemporary Art
3 Credits **/ 3.0 Periods for Lecture**
Study of art and theory from the mid-nineteenth century to the present. Focus on European and American modern and contemporary art while considering other regions of the world. Examination of the historical, social, and cultural contexts of artistic developments. Application of various interpretive models to examine modern and contemporary art. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH115 / History of Photography
3 Credits **/ 3.0 Periods for Lecture**
Survey of history of photography from beginning to present. Emphasizes the reciprocal relationship between the medium's development and reception, society, and other visual arts. Technical developments, photographic practices, and sociocultural themes are studied. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH203 / Art of Ancient Egypt
3 Credits **/ 3.0 Periods for Lecture**
The art and culture of ancient Egypt from prehistoric through the Greco-Roman period. Prerequisites: None.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH217 / Mexican Art History
3 Credits **/ 3.0 Periods for Lecture**
Art of Mexico and related cultures, from the prehistoric to the contemporary period. Prerequisites: None.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

Art (ART)

ART111 / Drawing I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Fundamental principles of drawing. Emphasis on composition and facility in objective and expressive representation, using variety of drawing media. Prerequisites: None.
SUN SUN# ART 1111
Division: Communication & Fine Arts

ART112 / Two-Dimensional Design
3 Credits **/ 6.0 Periods for Lecture & Lab**
Study of fundamental elements and principles of two-dimensional design. Prerequisites: None.
SUN SUN# ART 1112
Division: Communication & Fine Arts

ART113 / Color
3 Credits **/ 6.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

ART115 / Three-Dimensional Design
3 Credits **/ 6.0 Periods for Lecture & Lab**
Fundamental principles of three-dimensional design. Prerequisites: None.
SUN SUN# ART 1115
Division: Communication & Fine Arts

ART116 / Life Drawing I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Use of form, structure and anatomy of draped and undraped human figure to develop basic principles of sound draftsmanship. Prerequisites: None.
Division: Communication & Fine Arts

ART117 / Life Drawing II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Further study of form, structure, and anatomy of the draped and undraped human figure with emphasis on composition. Prerequisites: ART116.
Division: Communication & Fine Arts

ART122 / Drawing and Composition II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Emphasis on composition and exploration of drawing media. Prerequisites: A grade of C or better in ART111.
Division: Communication & Fine Arts

ART131 / Photography I
3 Credits **/ 6.0 Periods for Lecture & Lab**
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 Notes: Camera required.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ART132 / Photography II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Advanced camera and darkroom techniques. Aesthetic awareness with personal expression. Prerequisites: A grade of C or better in ART131 or permission of Instructor.
Division: Communication & Fine Arts

ART133 / Photography III
3 Credits **/ 6.0 Periods for Lecture & Lab**
Refinement of aesthetic and technical aspects producing convincing images of highest quality. Prerequisites: A grade of C or better in ART132 or permission of Instructor.
Division: Communication & Fine Arts

ART137 / Alternative Photographic Processes
3 Credits **/ 6.0 Periods for Lecture & Lab**
This course focuses on the 19th-century photographic processes including new picture-making technologies. Discussing the history of photography in relation with techniques taught in class. Students encouraged to explore historical processes in combination with contemporary technologies. Through technical demonstrations, hands-on workshops, and technical assignments, students develop a working knowledge of a range of processes while developing their own visual language. Prerequisites: None.
Division: Communication & Fine Arts

ART151 / Sculpture I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Exploration of sculptural form and expression in clay, plaster, stone, wood and metal. Prerequisites: None.
Division: Communication & Fine Arts

ART161 / Ceramics I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Introduction to ceramic materials and techniques of hand construction, decorating, glazing and throwing on potters' wheel. Prerequisites: None.
Division: Communication & Fine Arts

ART162 / Ceramics II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Major emphasis on wheel throwing, glaze making and decorating techniques. Prerequisites: A grade of C or better in ART161.
Division: Communication & Fine Arts

ART165 / Watercolor Painting I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Transparent and Gouache watercolor painting. Prerequisites: A grade of C or better in (ART111 and ART112), or permission of Instructor.
Division: Communication & Fine Arts

ART166 / Watercolor Painting II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Painting in water soluble media. Emphasis on individual techniques and design. Prerequisites: A grade of C or better in ART165.
Division: Communication & Fine Arts

ART167 / Painting I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Exploration of technical and expressive possibilities of various media in painting. Prerequisites: A grade of C or better in (ART111 and ART112), or permission of Instructor.
Division: Communication & Fine Arts

ART168 / Painting II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Continued refinement of painting skills and investigation of new possibilities in painting. Prerequisites: A grade of C or better in ART167 or permission of Instructor.
Division: Communication & Fine Arts

ART234 / Color Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Basic principles of color theory, camera and input and output techniques using analog or digital photography. Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor. Course Notes: Film or digital camera is required.
Division: Communication & Fine Arts

ART255 / Art Marketing
3 Credits **/ 3.0 Periods for Lecture**
Career goals, presentation of artist and art work (portfolio, resume, business cards, catalog), pricing and selling works, networking, establishing a studio, promotion and publicity, writing press releases, proposal writing, business ethics, artist rights, copyright law, contracts and agreements, royalties, record keeping, and communication skills. Prerequisites: None.
Division: Communication & Fine Arts

ART290AC / Studio Art
3 Credits **/ 6.0 Periods for Lecture & Lab**
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. ART290AC may be repeated for credit.
Division: Communication & Fine Arts

ART290BC / Studio Art: Drawing
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART111 or permission of Instructor. Course Notes: ART290BC may be repeated for credit.
Division: Communication & Fine Arts

ART290DC / Studio Art: Life Drawing
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART117 or permission of Instructor. Course Notes: ART290DC may be repeated for credit.
Division: Communication & Fine Arts

ART290EC / Studio Art: Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART132 or permission of Instructor. Course Notes: ART290EC may be repeated for credit.
Division: Communication & Fine Arts

ART290GC / Studio Art: Ceramics
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART162 or permission of Instructor. Course Notes: ART290GC may be repeated for credit.
Division: Communication & Fine Arts

ART290JC / Studio Art: Color
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART113 or permission of Instructor. Course Notes: ART290JC may be repeated for credit.
Division: Communication & Fine Arts

ART290MC / Studio Art: Digital Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in AVC143 or permission of Instructor. Course Notes: ART290MC may be repeated for credit.
Division: Communication & Fine Arts

ART290PC / Studio Art: Painting
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART168 or permission of Instructor. Course Notes: ART290PC may be repeated for credit.
Division: Communication & Fine Arts

Art and Visual Communication (AVC)

AVC100 / Introduction to Digital Arts
1 Credit **/ 2.0 Periods for Lecture & Lab**
Foundation course in digital arts and design, with emphasis in the production of art using the computer. Prerequisites: None.
Division: Communication & Fine Arts

AVC120 / Inking for Sequential Art
3 Credits **/ 6.0 Periods for Lecture & Lab**
Development of inking materials and techniques used in sequential art. Emphasis on the types of tools used in the industry and the various means of employing them. Understanding the duties of the inker and the process of computer finishing. Prerequisites: None.
Division: Communication & Fine Arts

AVC142 / Introduction to Digital Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Fundamentals of digital photography. Includes camera operations, exposure techniques, introduction to digital output, and theory of digital photography. Prerequisites: None. Course Notes: Digital camera required.
Division: Communication & Fine Arts

AVC143 / Intermediate Digital Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Intermediate theory and techniques of digital photography. Aesthetic awareness and personal expression from image capture through intermediate techniques in the digital darkroom. Introduction to high-resolution digital output. Prerequisites: A grade of C or better in AVC142 or permission of Instructor. Course Notes: Semi-adjustable, high-resolution digital camera is required.
Division: Communication & Fine Arts

AVC169 / 2D Media Design
3 Credits **/ 6.0 Periods for Lecture & Lab**
Generation of two-dimensional (2D) images, designs, and media using digital and traditional methods of visual problem solving. Understanding digital and design-based techniques and workflows. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC177 / Digital Photographic Imaging I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Introduction to multiple elements of digital imaging. Basic foundation in photographic manipulation of images, with special attention to aesthetic foundations underlying photographic composition. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC178 / Digital Arts Studies
3 Credits **/ 6.0 Periods for Lecture & Lab**
Designed for broad overview of the digital arts. Experience in digital based media, creative problem solving, design and aesthetics. Prerequisites: A grade of C or better in AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC181 / Graphic Design I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Basic understanding of design principles and the stages of graphic design, with an emphasis on final product and presentation. Prerequisites: A grade of C or better in AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC183 / Digital Graphic Arts I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Graphic design use in microcomputer; black and white graphics, standard and color brushes, lines, shapes, area fills and fonts. Application to illustration, advertising graphics, typography, and video interaction. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC219 / Coloring, Toning and Lettering for Sequential Art
3 Credits **/ 6.0 Periods for Lecture & Lab**
Understanding of the digital rules and programs used in coloring, toning and lettering comics, and the problems presented therein within the sequential narrative. Emphasis on rules and guidelines within the industry, and digital coloring and lettering. Prerequisites: A grade of C or better in (AVC100 and AVC119) or permission of Instructor. AVC120 recommended.
Division: Communication & Fine Arts

AVC270 / Digital Photographic Imaging II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Intermediate digital photographic imaging techniques. Refinement of aesthetic awareness and personal expression. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC177.
Division: Communication & Fine Arts

AVC274 / Digital Photographic Imaging III
3 Credits **/ 6.0 Periods for Lecture & Lab**
Advanced digital photographic imaging techniques. Advanced manipulation techniques of photographic images and time-based media. Continued development of aesthetic awareness and personal expression. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC270.
Division: Communication & Fine Arts

AVC280AA / Digital Media Arts and Design Capstone
1 Credit **/ 2.0 Periods for Lecture & Lab**
Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design. Prerequisites: Permission of Program Director or Instructor. Course Notes: AVC280AA requires 80 clock hours of designated work per credit hour.
Division: Communication & Fine Arts

Communication (COM)

COM095 / Basic Oral Communication Skills
3 Credits **/ 3.0 Periods for Lecture**
Listening, speaking, and related academic performance skills, including note taking. Emphasis on activities designed to improve and synthesize these skills. Prerequisites: None.
Division: Communication & Fine Arts

COM100 / Introduction to Human Communication
3 Credits **/ 3.0 Periods for Lecture**
Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication. Prerequisites: None.
SUN SUN# COM 1100
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

COM110 / Interpersonal Communication
3 Credits **/ 3.0 Periods for Lecture**
Theory and practice of interpersonal communication skills which affect day-to-day social interactions with other persons. May include using verbal and nonverbal symbols, active listening, resolving interpersonal conflict, understanding cultural perspectives, and developing and maintaining personal and professional relationships. Prerequisites: None.
SUN SUN# COM 1110
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

COM207 / Introduction to Communication Inquiry
3 Credits **/ 3.0 Periods for Lecture**
Overview of theory and methodological practice in communication with particular attention to scholarly writing skills. Emphasis on development of critical thinking skills through active participation in the research process. Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent, and COM100 or equivalent, or permission of Instructor. Course Notes: Recommended for the communication major.
Division: Communication & Fine Arts

COM225 / Public Speaking
3 Credits **/ 3.0 Periods for Lecture**
Designed to enhance the student's ability to present public speeches confidently and competently. Also designed to improve information literacy and critical thinking skills. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Communication & Fine Arts

COM230 / Small Group Communication
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# COM 2271
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

COM250 / Introduction to Organizational Communication
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the study of communication in organizations including identification of variables, roles and patterns influencing communication in organizations. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

COM259 / Communication in Business and Professions
3 Credits **/ 3.0 Periods for Lecture**
Interpersonal, organizational, intercultural, group, and public communication in business and professional organizations. Emphasis on oral communication and the effective use of technology and new media. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Division: Communication & Fine Arts

COM263 / Elements of Intercultural Communication
3 Credits **/ 3.0 Periods for Lecture**
Diverse cultural contexts are explored through basic concepts, principles, and theories of intercultural communication. Discovering effective interaction and appropriate communication in a global community is emphasized. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

Dance Humanities (DAH)

DAH100 / Introduction to Dance in the United States
3 Credits **/ 3.0 Periods for Lecture**
Overview of the field of dance focusing on origins, historical development, cultural characteristics of the various styles of dance and their contemporary practice in the United States, and dance as a vital part of the human experience. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

DAH201 / Dance, Culture, and Global Contexts
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the study of dance as culture in diverse global contexts.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

DAH250 / Dance in Popular Culture
3 Credits **/ 3.0 Periods for Lecture**
Interdisciplinary approach investigating diverse cultural dance practices that have shaped American popular culture from the late 19th century to the present. Highlights issues of power, class, race, ethnicity, gender, age and sexuality. Emphasis is on revealing diverse cultural influences in U.S. popular culture.Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Communication & Fine Arts

DAH255 / Hip Hop: Arts, Aesthetic and Culture
3 Credits **/ 3.0 Periods for Lecture**
Selective survey and historico-cultural analysis of hip hop arts, aesthetics and culture organized around the founding elements of DJing, MCing, B-boy and B-girling, graffiti arts and knowledge. Prerequisites: A grade of C or better in ENG101 or ENG107.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

Dance (DAN)

DAN129 / Musical Theatre Dance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

DAN130 / Musical Theatre Dance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of musical theatre dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN129 or permission of Instructor. Course Notes: DAN130 may be repeated for credit.
Division: Communication & Fine Arts

DAN131 / Ballet I
1 Credit **/ 3.0 Periods for Lecture & Lab**
Level one ballet theory and practice. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN131 may be repeated for credit.
Division: Communication & Fine Arts

DAN131PA / Ballet I: Community
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Level one ballet theory and practice. Prerequisites: None. Prior dance experience suggested but not required. Course Notes: DAN131PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN132 / Modern Dance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

DAN133 / Jazz Dance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN133 may be repeated for credit.
Division: Communication & Fine Arts

DAN134 / Ballet II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Level two ballet theory and practice. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN131 or permission of Instructor. Course Notes: DAN134 may be repeated for credit.
Division: Communication & Fine Arts

DAN134PA / Ballet II: Community
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Level two ballet theory and practice. Prerequisites: A grade of C or better in DAN131PA or permission of Department or Division. Course Notes: DAN134PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN135 / Modern Dance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of modern dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN132 or permission of Instructor. Course Notes: DAN135 may be repeated for credit.
Division: Communication & Fine Arts

DAN136 / Jazz Dance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of jazz dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN133 or permission of Instructor. Course Notes: DAN136 may be repeated for credit.
Division: Communication & Fine Arts

DAN140 / Tap Dance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
An introduction to the theory and practice of tap dance. Prerequisites: None. Course Notes: DAN140 may be repeated for credit.
Division: Communication & Fine Arts

DAN141 / Dance Workshop
1 Credit **/ 3.0 Periods for Lecture & Lab**
An intensive experience in the process of choreography, performance, and production elements. Prerequisites: None. Course Notes: DAN141 may be repeated for credit.
Division: Communication & Fine Arts

DAN145 / Tap Dance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of tap dance at an advanced beginning level. Prerequisites: A grade of C or better in DAN140 or permission of Instructor. Course Notes: DAN145 may be repeated for credit.
Division: Communication & Fine Arts

DAN150 / Dance Performance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
An introduction to the process and practice of dance performance. Prerequisites: None. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN150 may be repeated for credit.
Division: Communication & Fine Arts

DAN155 / Dance Performance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continued study of the process and practice of dance performance at advanced beginning level. Prerequisites: A grade of C or better in DAN150 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN155 may be repeated for credit.
Division: Communication & Fine Arts

DAN210 / Dance Production I
3 Credits **/ 3.0 Periods for Lecture & Lab**
Introduction to the elements of pre-production and production, including but not limited to production organization, production management, lighting design, and sound design as they relate to the art of dance. Prerequisites: None.
Division: Communication & Fine Arts

DAN221 / Rhythmic Awareness I
3 Credits **/ 3.0 Periods for Lecture**
Exploration of rhythm in dance performance, choreography and pedagogy. Emphasis on the basic understanding of rhythm and cultivating awareness of rhythm in everyday life. Prerequisites: None.
Division: Communication & Fine Arts

DAN229 / Musical Theatre Dance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of musical theatre dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN130 or permission of Instructor. Course Notes: DAN229 may be repeated for credit.
Division: Communication & Fine Arts

DAN230 / Musical Theatre Dance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of musical theatre dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN229 or permission of Instructor. Course Notes: DAN230 may be repeated for credit.
Division: Communication & Fine Arts

DAN231 / Ballet III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Level three ballet theory and practice. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN134 or permission of Instructor. Course Notes: DAN231 may be repeated for credit.
Division: Communication & Fine Arts

DAN232 / Modern Dance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN135 or permission of Instructor. Course Notes: DAN232 may be repeated for credit.
Division: Communication & Fine Arts

DAN233 / Jazz Dance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of jazz dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN136 or permission of Instructor. Course Notes: DAN233 may be repeated for credit.
Division: Communication & Fine Arts

DAN234 / Ballet IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Level four ballet theory and practice. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN231 or permission of Instructor. Course Notes: DAN234 may be repeated for credit.
Division: Communication & Fine Arts

DAN235 / Modern Dance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of modern dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN232 or permission of Instructor. Course Notes: DAN235 may be repeated for credit.
Division: Communication & Fine Arts

DAN236 / Jazz Dance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of jazz dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN233 or permission of Instructor. Course Notes: DAN236 may be repeated for credit.
Division: Communication & Fine Arts

DAN237 / Ballet Pointe I
1 Credit **/ 1.0 Periods for Lecture & Lab**
An introduction to the theory and practice of level one pointe work. Development of strength and movement quality. Prerequisites: A grade of C or better in DAN134 or permission of Instructor. Corequisites: DAN231 or DAN234. Course Notes: DAN237 may be repeated for credit.
Division: Communication & Fine Arts

DAN240 / Tap Dance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of tap dance at a beginning intermediate level. Prerequisites: A grade of C or better in DAN145 or permission of Instructor. Course Notes: DAN240 may be repeated for credit.
Division: Communication & Fine Arts

DAN245 / Tap Dance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of tap dance at an intermediate level. Prerequisites: A grade of C or better in DAN240 or permission of Instructor. Course Notes: DAN245 may be repeated for credit.
Division: Communication & Fine Arts

DAN250 / Dance Performance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continued study of the process and practice of dance performance at beginning intermediate level. Prerequisites: A grade of C or better in DAN155 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN250 may be repeated for credit.
Division: Communication & Fine Arts

DAN255 / Dance Performance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continued study of the process and practice of dance performance at the intermediate level. Prerequisites: A grade of C or better in DAN250 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN255 may be repeated for credit.
Division: Communication & Fine Arts

DAN264 / Choreography I
3 Credits **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

DAN265 / Choreography II
3 Credits **/ 3.0 Periods for Lecture & Lab**
Exploration of choreography at the intermediate level. Experimentation with the various approaches to creative practice as established by 20th and 21st century artists. Prerequisites: A grade of C or better in DAN264 or permission of Instructor.
Division: Communication & Fine Arts

DAN280 / Dance Practicum
2 Credits **/ 3.0 Periods for Lecture & Lab**
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. Course Notes: DAN280 may be repeated for credit.
Division: Communication & Fine Arts

Mass Communications (MCO)

MCO120 / Media and Society
3 Credits **/ 3.0 Periods for Lecture**
Study of historical and contemporary roles of media and its pervasiveness in society as it relates to culture, politics and education. Prerequisites: Eligibility for ENG101 or ENG107 or permission of Instructor.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

Music History/Literature (MHL)

MHL140 / Survey of Music History
3 Credits **/ 3.0 Periods for Lecture**
Study of composers, compositions, styles, and periods in music history. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

MHL143 / Music in World Cultures
3 Credits **/ 3.0 Periods for Lecture**
Non-European musical traditions including the study of music in rituals, musical instruments and the impact of cultures on musical styles. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

MHL145 / American Jazz and Popular Music
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Communication & Fine Arts

MHL153 / Rock Music and Culture
3 Credits **/ 3.0 Periods for Lecture**
History of Rock music and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Communication & Fine Arts

MHL155 / Survey of American Music
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Communication & Fine Arts

MHL204 / Hip-Hop Music and Culture
3 Credits **/ 3.0 Periods for Lecture**
A history of Hip-Hop's musical and artistic elements and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: A grade of C or better in ENG101 or ENG107, or permission of Instructor.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

MHL242 / Music History and Literature 1750 to Present
3 Credits **/ 3.0 Periods for Lecture**
In-depth study of music history from the Classical period through the Contemporary period. Prerequisites: A grade of C or better in MHL241 or permission of instructor.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

Music Theory/Composition (MTC)

MTC101 / Introduction to Music Theory
3 Credits **/ 3.0 Periods for Lecture**
Designed to develop written and aural skills necessary for advanced study of music theory and skills. Recommended for music majors. Prerequisites: None.
Division: Communication & Fine Arts

MTC105 / Music Theory I
3 Credits **/ 3.0 Periods for Lecture**
The chronological study of music theory including: harmony, melody, texture, structure and timbre through analysis, original compositions and basic exercises to demonstrate musical concepts. Prerequisites: A grade of C or better in MTC101 or permission of instructor. Corequisites: MTC106.
Division: Communication & Fine Arts

MTC106 / Aural Perception I
1 Credit **/ 2.0 Periods for Lecture & Lab**
The development of listening and performing skills through dictation, sight-singing and keyboard harmony. Prerequisites: None. Corequisites: MTC105.
Division: Communication & Fine Arts

MTC130 / Jazz Theory
2 Credits **/ 2.0 Periods for Lecture**
Develop written and aural theory skills necessary in the jazz idiom. Prerequisites: A grade of C or better in (MTC101 and MTC103), or permission of Instructor. Course Notes: MTC130 is recommended for students taking jazz improvisation, jazz composition and jazz combo.
Division: Communication & Fine Arts

MTC155 / Music Theory II
3 Credits **/ 3.0 Periods for Lecture**
A continuation of Music Theory I with emphasis on harmony and part-writing procedures. Prerequisites: A grade of C or better in MTC105. Corequisites: MTC156.
Division: Communication & Fine Arts

MTC156 / Aural Perception II
1 Credit **/ 2.0 Periods for Lecture & Lab**
A continuation of Aural Perception I, including harmonic practices. Prerequisites: A grade of C or better in MTC106. Corequisites: MTC155.
Division: Communication & Fine Arts

MTC205 / Music Theory III
3 Credits **/ 3.0 Periods for Lecture**
The study of chromatic harmony and melody, modulation techniques and expanded chords. The analysis of formal structure. Prerequisites: A grade of C or better in MTC155. Corequisites: MTC206.
SUN SUN# MUS 2222
Division: Communication & Fine Arts

MTC206 / Aural Perception III
1 Credit **/ 2.0 Periods for Lecture & Lab**
A development of listening and performing skills, including an introduction of chromatic harmonic techniques and concepts of style. Prerequisites: A grade of C or better in MTC156. Corequisites: MTC205.
SUN SUN# MUS 2222
Division: Communication & Fine Arts

MTC240 / Composition
3 Credits **/ 0.6 Periods for Lecture & Lab**
Introduction to the basics of music composition, stressing techniques and procedures for developing original ideas. Prerequisites: A grade of C or better in (MTC105 and MTC106 or equivalent) and permission of Instructor. Course Notes: MTC240 may be repeated for a total of twelve (12) credit hours.
Division: Communication & Fine Arts

MTC255 / Music Theory IV
3 Credits **/ 3.0 Periods for Lecture**
A continuation of Music Theory III, including 20th century theories and techniques. Prerequisites: A grade of C or better in MTC205. Corequisites: MTC256.
SUN SUN# MUS 2223
Division: Communication & Fine Arts

MTC256 / Aural Perception IV
1 Credit **/ 2.0 Periods for Lecture & Lab**
A continuation of Aural Perception III, including extended chords. Prerequisites: A grade of C or better in MTC206. Corequisites: MTC255.
SUN SUN# MUS 2223
Division: Communication & Fine Arts

Music Commercial/Business (MUC)

MUC109 / Music Business: Content Creation and Copyright
3 Credits **/ 3.0 Periods for Lecture**
Designed to provide an overview of content creation and copyright considerations within the Music Industry. Topics include songwriting and music creation, copyright, publishing and licensing, studio production, media applications of music, business ownership and operations, and emerging technologies. Prerequisites: None.
Division: Communication & Fine Arts

MUC110 / Music Business: Marketing and Monetization
3 Credits **/ 3.0 Periods for Lecture**
Designed to provide an overview of the marketing and monetization of music. Topics include music label operations; contracts; marketing, promotion, and merchandising; agents, managers, and attorneys; concert promotion and touring; and unions and guilds. Prerequisites: None.
Division: Communication & Fine Arts

MUC111 / Digital Audio Workstation I (DAW I)
3 Credits **/ 5.0 Periods for Lecture & Lab**
Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MUC195, or MUC195AA, or FMP105, or permission of Instructor.
Division: Communication & Fine Arts

MUC112 / Digital Audio Workstation II (DAW II)
3 Credits **/ 5.0 Periods for Lecture & Lab**
Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: A grade of C or better in MUC111, and (MUC195 or MUC195AA).
Division: Communication & Fine Arts

MUC140 / Songwriting
3 Credits **/ 3.0 Periods for Lecture**
An introduction to the art and craft of songwriting through the study and analysis of diverse songwriters and musical styles, and creation of original songs. Prerequisites: A grade of C or better in MTC101, or MTC105, or permission of Instructor. Course Notes: MUC140 may be repeated for a total of six (6) credits.
Division: Communication & Fine Arts

MUC180 / Computer Literacy for the Music Business
3 Credits **/ 3.0 Periods for Lecture & Lab**
Basic computer literacy, including business applications used in the Music Industry, with hands-on experience. Prerequisites: A grade of C or better in MUC109, or permission of Instructor or Department or Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Communication & Fine Arts

MUC195 / Studio Music Recording I
3 Credits **/ 5.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

MUC197 / Live Sound Reinforcement I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Basic principles of live sound engineering. Emphasis on signal flow, acoustic, sound reinforcement set-ups and installation, signal processing, microphone selections and placement. Includes setting up sound systems and mixing live music. Prerequisites: None.
Division: Communication & Fine Arts

Music Performance (MUP)

MUP101AA / Private Instruction: Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AA may be repeated for credit.
Division: Communication & Fine Arts

MUP101AD / Private Instruction: Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AD may be repeated for credit.
Division: Communication & Fine Arts

MUP101AM / Private Instruction: Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AM may be repeated for credit.
Division: Communication & Fine Arts

MUP101AP / Private Instruction: Trumpet
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AP may be repeated for credit.
Division: Communication & Fine Arts

MUP101AS / Private Instruction: French Horn
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AS may be repeated for credit.
Division: Communication & Fine Arts

MUP101AV / Private Instruction: Trombone
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AV may be repeated for credit.
Division: Communication & Fine Arts

MUP101AY / Private Instruction: Euphonium
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AY may be repeated for credit.
Division: Communication & Fine Arts

MUP101BB / Private Instruction: Tuba
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BB may be repeated for credit.
Division: Communication & Fine Arts

MUP101BE / Private Instruction: Flute
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BE may be repeated for credit.
Division: Communication & Fine Arts

MUP101BH / Private Instruction: Oboe
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BH may be repeated for credit.
Division: Communication & Fine Arts

MUP101BK / Private Instruction: Clarinet
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BK may be repeated for credit.
Division: Communication & Fine Arts

MUP101BN / Private Instruction: Bassoon
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BN may be repeated for credit.
Division: Communication & Fine Arts

MUP101BQ / Private Instruction: Saxophone
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP101BT / Private Instruction: Violin
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BT may be repeated for credit.
Division: Communication & Fine Arts

MUP101BW / Private Instruction: Viola
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BW may be repeated for credit.
Division: Communication & Fine Arts

MUP101BZ / Private Instruction: Violoncello
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP101CC / Private Instruction: Contrabass
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101CC may be repeated for credit.
Division: Communication & Fine Arts

MUP101CF / Private Instruction: Popular Music Bass Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CF may be repeated for credit.
Division: Communication & Fine Arts

MUP101CI / Private Instruction: Percussion
1 Credit **/ 0.6 Periods for Lecture & Lab**
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. Course Notes: MUP101CI may be repeated for credit.
Division: Communication & Fine Arts

MUP101CJ / Private Instruction: Harp
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP101CK / Private Instruction: Popular Music Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CK may be repeated for credit.
Division: Communication & Fine Arts

MUP101CL / Private Instruction: Popular Music Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CL may be repeated for credit.
Division: Communication & Fine Arts

MUP101CM / Private Instruction: Popular Music Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CM may be repeated for credit.
Division: Communication & Fine Arts

MUP101CN / Private Instruction: Popular Music Drum
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CN may be repeated for credit.
Division: Communication & Fine Arts

MUP102AA / Private Instruction: Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AA may be repeated for credit.
Division: Communication & Fine Arts

MUP102AD / Private Instruction: Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AD may be repeated for credit.
Division: Communication & Fine Arts

MUP102AM / Private Instruction: Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AM may be repeated for credit.
Division: Communication & Fine Arts

MUP102AP / Private Instruction: Trumpet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AP may be repeated for credit.
Division: Communication & Fine Arts

MUP102AS / Private Instruction: French Horn
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AS may be repeated for credit.
Division: Communication & Fine Arts

MUP102AV / Private Instruction: Trombone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AV may be repeated for credit.
Division: Communication & Fine Arts

MUP102AY / Private Instruction: Euphonium
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AY may be repeated for credit.
Division: Communication & Fine Arts

MUP102BB / Private Instruction: Tuba
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BB may be repeated for credit.
Division: Communication & Fine Arts

MUP102BE / Private Instruction: Flute
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BE may be repeated for credit.
Division: Communication & Fine Arts

MUP102BH / Private Instruction: Oboe
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BH may be repeated for credit.
Division: Communication & Fine Arts

MUP102BK / Private Instruction: Clarinet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BK may be repeated for credit.
Division: Communication & Fine Arts

MUP102BN / Private Instruction: Bassoon
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BN may be repeated for credit.
Division: Communication & Fine Arts

MUP102BQ / Private Instruction: Saxophone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP102BT / Private Instruction: Violin
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BT may be repeated for credit.
Division: Communication & Fine Arts

MUP102BW / Private Instruction: Viola
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BW may be repeated for credit.
Division: Communication & Fine Arts

MUP102BZ / Private Instruction: Violoncello
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP102CC / Private Instruction: Contrabass
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102CC may be repeated for credit.
Division: Communication & Fine Arts

MUP102CF / Private Instruction: Popular Music Bass Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CF may be repeated for credit.
Division: Communication & Fine Arts

MUP102CI / Private Instruction: Percussion
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102CI may be repeated for credit.
Division: Communication & Fine Arts

MUP102CJ / Private Instruction: Harp
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP102CK / Private Instruction: Popular Music Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CK may be repeated for credit.
Division: Communication & Fine Arts

MUP102CL / Private Instruction: Popular Music Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CL may be repeated for credit.
Division: Communication & Fine Arts

MUP102CM / Private Instruction: Popular Music Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CM may be repeated for credit.
Division: Communication & Fine Arts

MUP102CN / Private Instruction: Popular Music Drum
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CN may be repeated for credit.
Division: Communication & Fine Arts

MUP127 / Class Guitar I
1 Credit **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

MUP128 / Class Guitar II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Note-reading range including second position and parts of higher positions. Classical, popular, Latin, and other styles of music. Theory including scales, keys, and chord construction. Technical exercises of both hands. Prerequisites: A grade of C or better in MUP127 or permission of Instructor.
Division: Communication & Fine Arts

MUP131 / Class Piano I
1 Credit **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

MUP132 / Class Piano II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading. Prerequisites: A grade of C or better in MUP131 or permission of Instructor.
Division: Communication & Fine Arts

MUP133 / Class Voice I
1 Credit **/ 3.0 Periods for Lecture & Lab**
Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and performances in class of solo vocal literature. Prerequisites: None.
Division: Communication & Fine Arts

MUP134 / Class Voice II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continuation of Class Voice I including the elements of stage presence and diction. Prerequisites: A grade of C or better in MUP133 or permission of Instructor.
Division: Communication & Fine Arts

MUP150 / Community Chorus
1 Credit **/ 3.0 Periods for Lecture & Lab**
A mixed chorus with emphasis on college/community participation and preparation of a variety of choral literature for public performance. Auditions may be required. Prerequisites: None. Course Notes: MUP150 may be repeated for credit.
Division: Communication & Fine Arts

MUP151AA / Private Instruction: Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP101AA. Course Notes: MUP151AA may be repeated for credit.
Division: Communication & Fine Arts

MUP151AD / Private Instruction: Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP101AD. Course Notes: MUP151AD may be repeated for credit.
Division: Communication & Fine Arts

MUP151AM / Private Instruction: Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP101AM. Course Notes: MUP151AM may be repeated for credit.
Division: Communication & Fine Arts

MUP151BT / Private Instruction: Violin
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP101BT. Course Notes: MUP151BT may be repeated for credit.
Division: Communication & Fine Arts

MUP151CF / Private Instruction: Popular Music Bass Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CF. Course Notes: MUP151CF may be repeated for credit.
Division: Communication & Fine Arts

MUP151CK / Private Instruction: Popular Music Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CK. Course Notes: MUP151CK may be repeated for credit.
Division: Communication & Fine Arts

MUP151CL / Private Instruction: Popular Music Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CL. Course Notes: MUP151CL may be repeated for credit.
Division: Communication & Fine Arts

MUP151CM / Private Instruction: Popular Music Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CM. Course Notes: MUP151CM may be repeated for credit.
Division: Communication & Fine Arts

MUP151CN / Private Instruction: Popular Music Drum
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CN. Course Notes: MUP151CN may be repeated for credit.
Division: Communication & Fine Arts

MUP152AA / Private Instruction: Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AA. Course Notes: MUP152AA may be repeated for credit.
Division: Communication & Fine Arts

MUP152AD / Private Instruction: Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AD. Course Notes: MUP152AD may be repeated for credit.
Division: Communication & Fine Arts

MUP152AM / Private Instruction: Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AM. Course Notes: MUP152AM may be repeated for credit.
Division: Communication & Fine Arts

MUP152AP / Private Instruction: Trumpet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AP. Course Notes: MUP152AP may be repeated for credit.
Division: Communication & Fine Arts

MUP152AS / Private Instruction: French Horn
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AS. Course Notes: MUP152AS may be repeated for credit.
Division: Communication & Fine Arts

MUP152AV / Private Instruction: Trombone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AV. Course Notes: MUP152AV may be repeated for credit.
Division: Communication & Fine Arts

MUP152BB / Private Instruction: Tuba
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BB. Course Notes: MUP152BB may be repeated for credit.
Division: Communication & Fine Arts

MUP152BE / Private Instruction: Flute
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BE. Course Notes: MUP152BE may be repeated for credit.
Division: Communication & Fine Arts

MUP152BH / Private Instruction: Oboe
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BH. Course Notes: MUP152BH may be repeated for credit.
Division: Communication & Fine Arts

MUP152BK / Private Instruction: Clarinet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BK. Course Notes: MUP152BK may be repeated for credit.
Division: Communication & Fine Arts

MUP152BN / Private Instruction: Bassoon
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BN. Course Notes: MUP152BN may be repeated for credit.
Division: Communication & Fine Arts

MUP152BQ / Private Instruction: Saxophone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BQ. Course Notes: MUP152BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP152BT / Private Instruction: Violin
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BT. Course Notes: MUP152BT may be repeated for credit.
Division: Communication & Fine Arts

MUP152BW / Private Instruction: Viola
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BW. Course Notes: MUP152BW may be repeated for credit.
Division: Communication & Fine Arts

MUP152BZ / Private Instruction: Violoncello
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BZ. Course Notes: MUP152BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP152CC / Private Instruction: Contrabass
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102CC. Course Notes: MUP152CC may be repeated for credit.
Division: Communication & Fine Arts

MUP152CF / Private Instruction: Popular Music Bass Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CF. Course Notes: MUP152CF may be repeated for credit.
Division: Communication & Fine Arts

MUP152CI / Private Instruction: Percussion
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102CI. Course Notes: MUP152CI may be repeated for credit.
Division: Communication & Fine Arts

MUP152CJ / Private Instruction: Harp
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102CJ. Course Notes: MUP152CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP152CK / Private Instruction: Popular Music Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CK. Course Notes: MUP152CK may be repeated for credit.
Division: Communication & Fine Arts

MUP152CL / Private Instruction: Popular Music Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CL. Course Notes: MUP152CL may be repeated for credit.
Division: Communication & Fine Arts

MUP152CM / Private Instruction: Popular Music Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CM. Course Notes: MUP152CM may be repeated for credit.
Division: Communication & Fine Arts

MUP152CN / Private Instruction: Popular Music Drum
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CN. Course Notes: MUP152CN may be repeated for credit.
Division: Communication & Fine Arts

MUP153 / Concert Choir
1 Credit **/ 5.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

MUP154AA / Jazz Vocal Ensemble
1 Credit **/ 3.0 Periods for Lecture & Lab**
Practical and performing experience in vocal jazz. Includes music from the 1920's through the present. Prerequisites: Auditions required or permission of Instructor. Course Notes: MUP154AA may be repeated for credit.
Division: Communication & Fine Arts

MUP158 / Popular Music Ensemble
1 Credit **/ 2.0 Periods for Lecture & Lab**
Emphasizes instrumental and vocal techniques and the preparation of all styles of rock band literature. Introduces music business. Requires participation in public and private performances throughout the semester. Prerequisites: None. Auditions may be required. Course Notes: MUP158 may be repeated for a total of four (4) credits.
Division: Communication & Fine Arts

MUP159 / Community Orchestra
1 Credit **/ 3.0 Periods for Lecture & Lab**
Emphasis on college/community participation and the preparation of orchestral literature for public performance. Prerequisites: None. Course Notes: MUP159 may be repeated for credit. Auditions may be required.
Division: Communication & Fine Arts

MUP161 / Community Band
1 Credit **/ 3.0 Periods for Lecture & Lab**
Emphasis on college/community participation and the preparation of band literature for public performance. Prerequisites: None. Course Notes: MUP161 may be repeated for credit. Auditions may be required.
Division: Communication & Fine Arts

MUP163 / Jazz Ensemble
1 Credit **/ 3.0 Periods for Lecture & Lab**
Practical and performance experience in various jazz styles. Prerequisites: None. Course Notes: MUP163 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.
Division: Communication & Fine Arts

MUP164 / Jazz Improvisation I
2 Credits **/ 3.0 Periods for Lecture & Lab**
Theoretical and performance skills in many styles of jazz improvisation. Prerequisites: None. Course Notes: MUP164 may be repeated for a total of six (6) credit hours.
Division: Communication & Fine Arts

MUP165 / Jazz Improvisation II
2 Credits **/ 3.0 Periods for Lecture & Lab**
Intermediate theoretical and performance skills in many styles of jazz improvisation. Prerequisites: A grade of C or better in MUP164 or permission of Instructor. Course Notes: MUP165 may be repeated for a total of six (6) credit hours.
Division: Communication & Fine Arts

MUP171 / Opera Workshop
2 Credits **/ 5.0 Periods for Lecture & Lab**
A workshop in the study and performance of operatic literature. Prerequisites: None. Course Notes: MUP171 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.
Division: Communication & Fine Arts

MUP181 / Chamber Music Ensembles
1 Credit **/ 2.0 Periods for Lecture & Lab**
Practical and performance experience in instrumental, vocal, and mixed ensembles. Prerequisites: None. Course Notes: MUP181 may be repeated for credit.
Division: Communication & Fine Arts

MUP182 / Chamber Singers
1 Credit **/ 3.0 Periods for Lecture & Lab**
Practical and performance experience in various styles of vocal music. Prerequisites: None. Course Notes: MUP182 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.
Division: Communication & Fine Arts

MUP183 / Jazz Combo
1 Credit **/ 2.0 Periods for Lecture & Lab**
Jazz Combo participation provides an opportunity for students to develop improvisational skills in a variety of styles from historical and contemporary jazz practice, while offering a creative outlet for composers and arrangers. Prerequisites: None. Course Notes: MUP183 may be repeated for credit.
Division: Communication & Fine Arts

MUP190 / Percussion Ensemble
1 Credit **/ 3.0 Periods for Lecture & Lab**
Practical and performance experience in various percussion styles. Percussion literature from a diverse number of world musical traditions. Western European art music, various African traditions, Indian music, Japanese music, Indonesian music, Mexican, Central, and South American music, and percussion compositions from the American Experimental Tradition rehearsed and performed. Concerts presented throughout the semester. Percussion techniques are studied and refined as they relate to the literature performed. Emphasis placed on reading and listening skills, increased aesthetic discrimination. Informed performance practice and skills on all percussion instruments and traditions. Prerequisites: None. Course Notes: MUP190 may be repeated for credit.
Division: Communication & Fine Arts

MUP201AA / Private Instruction: Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, harp and percussion. Prerequisites: A grade of C or better in MUP151AA. Course Notes: MUP201AA may be repeated for credit.
Division: Communication & Fine Arts

MUP201AD / Private Instruction: Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP151AD. Course Notes: MUP201AD may be repeated for credit.
Division: Communication & Fine Arts

MUP201AM / Private Instruction: Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP151AM. Course Notes: MUP201AM may be repeated for credit.
Division: Communication & Fine Arts

MUP201CF / Private Instruction: Popular Music Bass Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CF. Course Notes: MUP201CF may be repeated for credit.
Division: Communication & Fine Arts

MUP201CK / Private Instruction: Popular Music Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CK. Course Notes: MUP201CK may be repeated for credit.
Division: Communication & Fine Arts

MUP201CL / Private Instruction: Popular Music Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CL. Course Notes: MUP201CL may be repeated for credit.
Division: Communication & Fine Arts

MUP201CM / Private Instruction: Popular Music Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CM. Course Notes: MUP201CM may be repeated for credit.
Division: Communication & Fine Arts

MUP201CN / Private Instruction: Popular Music Drum
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CN. Course Notes: MUP201CN may be repeated for credit.
Division: Communication & Fine Arts

MUP202AA / Private Instruction: Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AA. Course Notes: MUP202AA may be repeated for credit.
Division: Communication & Fine Arts

MUP202AD / Private Instruction: Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AD. Course Notes: MUP202AD may be repeated for credit.
Division: Communication & Fine Arts

MUP202AM / Private Instruction: Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AM. Course Notes: MUP202AM may be repeated for credit.
Division: Communication & Fine Arts

MUP202AP / Private Instruction: Trumpet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AP. Course Notes: MUP202AP may be repeated for credit.
Division: Communication & Fine Arts

MUP202AS / Private Instruction: French Horn
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AS. Course Notes: MUP202AS may be repeated for credit.
Division: Communication & Fine Arts

MUP202AV / Private Instruction: Trombone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AV. Course Notes: MUP202AV may be repeated for credit.
Division: Communication & Fine Arts

MUP202AY / Private Instruction: Euphonium
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AY. Course Notes: MUP202AY may be repeated for credit.
Division: Communication & Fine Arts

MUP202BB / Private Instruction: Tuba
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BB. Course Notes: MUP202BB may be repeated for credit.
Division: Communication & Fine Arts

MUP202BE / Private Instruction: Flute
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BE. Course Notes: MUP202BE may be repeated for credit.
Division: Communication & Fine Arts

MUP202BH / Private Instruction: Oboe
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BH. Course Notes: MUP202BH may be repeated for credit.
Division: Communication & Fine Arts

MUP202BK / Private Instruction: Clarinet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BK. Course Notes: MUP202BK may be repeated for credit.
Division: Communication & Fine Arts

MUP202BN / Private Instruction: Bassoon
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BN. Course Notes: MUP202BN may be repeated for credit.
Division: Communication & Fine Arts

MUP202BQ / Private Instruction: Saxophone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BQ. Course Notes: MUP202BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP202BT / Private Instruction: Violin
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BT. Course Notes: MUP202BT may be repeated for credit.
Division: Communication & Fine Arts

MUP202BW / Private Instruction: Viola
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BW. Course Notes: MUP202BW may be repeated for credit.
Division: Communication & Fine Arts

MUP202BZ / Private Instruction: Violoncello
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BZ. Course Notes: MUP202BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP202CC / Private Instruction: Contrabass
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152CC. Course Notes: MUP202CC may be repeated for credit.
Division: Communication & Fine Arts

MUP202CF / Private Instruction: Popular Music Bass Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CF. Course Notes: MUP202CF may be repeated for credit.
Division: Communication & Fine Arts

MUP202CI / Private Instruction: Percussion
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152CI. Course Notes: MUP202CI may be repeated for credit.
Division: Communication & Fine Arts

MUP202CJ / Private Instruction: Harp
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152CJ. Course Notes: MUP202CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP202CK / Private Instruction: Popular Music Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CK. Course Notes: MUP202CK may be repeated for credit.
Division: Communication & Fine Arts

MUP202CL / Private Instruction: Popular Music Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CL. Course Notes: MUP202CL may be repeated for credit.
Division: Communication & Fine Arts

MUP202CM / Private Instruction: Popular Music Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CM. Course Notes: MUP202CM may be repeated for credit.
Division: Communication & Fine Arts

MUP202CN / Private Instruction: Popular Music Drum
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CN. Course Notes: MUP202CN may be repeated for credit.
Division: Communication & Fine Arts

MUP209 / Elements of Conducting
2 Credits **/ 2.0 Periods for Lecture**
Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles. Prerequisites: None.
Division: Communication & Fine Arts

MUP217 / Music Theatre: Broadway Solos
1 Credit **/ 3.0 Periods for Lecture & Lab**
Study and in-class performance of scenes and solos from Broadway musical literature. Prerequisites: None.
Division: Communication & Fine Arts

MUP227 / Class Guitar III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Additional fingerboard positions. Ensemble techniques and performance. Prerequisites: A grade of C or better in MUP128 or permission of Instructor.
Division: Communication & Fine Arts

MUP228 / Class Guitar IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques. Prerequisites: A grade of C or better in MUP227 or permission of Instructor. Course Notes: MUP228 may be repeated for credit.
Division: Communication & Fine Arts

MUP231 / Class Piano III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants. Prerequisites: A grade of C or better in MUP132 or permission of Instructor.
Division: Communication & Fine Arts

MUP232 / Class Piano IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature. Prerequisites: A grade of C or better in MUP231 or permission of Instructor.
Division: Communication & Fine Arts

MUP233 / Class Voice III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications. Prerequisites: A grade of C or better in MUP134.
Division: Communication & Fine Arts

MUP234 / Class Voice IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Emphasis on the preparation of solo vocal literature for the purpose of evaluation and the integration of the music with the drama of the music. Prerequisites: A grade of C or better in MUP233 or permission of Instructor. Course Notes: MUP234 may be repeated for credit.
Division: Communication & Fine Arts

MUP250AA / Survey Of Diction For Singers (English)
1 Credit **/ 2.0 Periods for Lecture & Lab**
Introduction to the use of phonetics in the study of English song literature. Prerequisites: None.
Division: Communication & Fine Arts

MUP250AB / Survey Of Diction For Singers (Italian/Latin)
1 Credit **/ 2.0 Periods for Lecture & Lab**
Introduction to the use of phonetics in the study of Italian/Latin song literature. Prerequisites: None.
Division: Communication & Fine Arts

MUP251AA / Private Instruction: Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP201AA. Course Notes: MUP251AA may be repeated for credit.
Division: Communication & Fine Arts

MUP251AD / Private Instruction: Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP201AD. Course Notes: MUP251AD may be repeated for credit.
Division: Communication & Fine Arts

MUP251AM / Private Instruction: Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP201AM. Course Notes: MUP251AM may be repeated for credit.
Division: Communication & Fine Arts

MUP251CF / Private Instruction: Popular Music Bass Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CF. Course Notes: MUP251CF may be repeated for credit.
Division: Communication & Fine Arts

MUP251CK / Private Instruction: Popular Music Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CK. Course Notes: MUP251CK may be repeated for credit.
Division: Communication & Fine Arts

MUP251CL / Private Instruction: Popular Music Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CL. Course Notes: MUP251CL may be repeated for credit.
Division: Communication & Fine Arts

MUP251CM / Private Instruction: Popular Music Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CM. Course Notes: MUP251CM may be repeated for credit.
Division: Communication & Fine Arts

MUP251CN / Private Instruction: Popular Music Drum
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CN. Course Notes: MUP251CN may be repeated for credit.
Division: Communication & Fine Arts

MUP252AA / Private Instruction: Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AA. Course Notes: MUP252AA may be repeated for credit.
Division: Communication & Fine Arts

MUP252AD / Private Instruction: Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AD. Course Notes: MUP252AD may be repeated for credit.
Division: Communication & Fine Arts

MUP252AM / Private Instruction: Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AM. Course Notes: MUP252AM may be repeated for credit.
Division: Communication & Fine Arts

MUP252AP / Private Instruction: Trumpet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AP. Course Notes: MUP252AP may be repeated for credit.
Division: Communication & Fine Arts

MUP252AS / Private Instruction: French Horn
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AS. Course Notes: MUP252AS may be repeated for credit.
Division: Communication & Fine Arts

MUP252AV / Private Instruction: Trombone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AV. Course Notes: MUP252AV may be repeated for credit.
Division: Communication & Fine Arts

MUP252AY / Private Instruction: Euphonium
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AY. Course Notes: MUP252AY may be repeated for credit.
Division: Communication & Fine Arts

MUP252BH / Private Instruction: Oboe
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BH. Course Notes: MUP252BH may be repeated for credit.
Division: Communication & Fine Arts

MUP252BK / Private Instruction: Clarinet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BK. Course Notes: MUP252BK may be repeated for credit.
Division: Communication & Fine Arts

MUP252BQ / Private Instruction: Saxophone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BQ. Course Notes: MUP252BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP252BT / Private Instruction: Violin
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BT. Course Notes: MUP252BT may be repeated for credit.
Division: Communication & Fine Arts

MUP252BW / Private Instruction: Viola
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BW. Course Notes: MUP252BW may be repeated for credit.
Division: Communication & Fine Arts

MUP252BZ / Private Instruction: Violoncello
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BZ. Course Notes: MUP252BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP252CC / Private Instruction: Contrabass
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202CC. Course Notes: MUP252CC may be repeated for credit.
Division: Communication & Fine Arts

MUP252CF / Private Instruction: Popular Music Bass Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CF. Course Notes: MUP252CF may be repeated for credit.
Division: Communication & Fine Arts

MUP252CI / Private Instruction: Percussion
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202CI. Course Notes: MUP252CI may be repeated for credit.
Division: Communication & Fine Arts

MUP252CJ / Private Instruction: Harp
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202CJ. Course Notes: MUP252CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP252CK / Private Instruction: Popular Music Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CK. Course Notes: MUP252CK may be repeated for credit.
Division: Communication & Fine Arts

MUP252CL / Private Instruction: Popular Music Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CL. Course Notes: MUP252CL may be repeated for credit.
Division: Communication & Fine Arts

MUP252CM / Private Instruction: Popular Music Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CM. Course Notes: MUP252CM may be repeated for credit.
Division: Communication & Fine Arts

MUP252CN / Private Instruction: Popular Music Drum
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CN. Course Notes: MUP252CN may be repeated for credit.
Division: Communication & Fine Arts

MUP270 / Musical Theatre Workshop
2 Credits **/ 5.0 Periods for Lecture & Lab**
Workshop in the study and performance of Musical Theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: None. Course Notes: MUP/THO270 may be repeated for credit.
Crosslisted: THO270
Division: Communication & Fine Arts

MUP270AA / Musical Theatre Workshop
1 Credit **/ 3.0 Periods for Laboratory**
Workshop in the study and performance of musical theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: None. Course Notes: MUP/THO270AA may be repeated for a total of two (2) credits.
Crosslisted: THO270AA
Division: Communication & Fine Arts

MUP273 / Musical Theatre Production
1 Credit **/ 5.0 Periods for Laboratory**
Principles and techniques for musical theatre production performance. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: By audition.
Crosslisted: THP273
Division: Communication & Fine Arts

MUP298AA / Special Projects
1 Credit **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Communication & Fine Arts

Storytelling (STO)

STO292 / The Art of Storytelling
3 Credits **/ 3.0 Periods for Lecture**
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None.
Crosslisted: HUM292, EDU292
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

Theatre (THE)

THE111 / Introduction to Theatre
3 Credits **/ 3.0 Periods for Lecture**
A survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism. Prerequisites: None.
SUN SUN# THE 1100
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THE220 / Modern Drama
3 Credits **/ 3.0 Periods for Lecture**
Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright's structure and style. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
SUN SUN# THE 2220
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Communication & Fine Arts

Theatre and Film (THF)

THF205 / Introduction to Cinema
3 Credits **/ 3.0 Periods for Lecture**
Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.
Crosslisted: HUM205
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THF206 / Introduction to Television Arts
3 Credits **/ 3.0 Periods for Lecture**
History and development of electronic media and its impact on popular arts. Prerequisites: None.
Crosslisted: HUM206
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THF209 / Acting for the Camera
3 Credits **/ 4.0 Periods for Lecture & Lab**
Special technical aspects of acting before a camera. Prerequisites: A grade of C or better in THP112 or permission of Instructor.
Division: Communication & Fine Arts

THF210 / Contemporary Cinema
3 Credits **/ 3.0 Periods for Lecture**
A study of contemporary films, directors and critics with emphasis on evaluating film as an art form. Prerequisites: None.
Crosslisted: HUM210
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THF219 / Advanced Acting for the Camera
3 Credits **/ 4.0 Periods for Lecture & Lab**
Focuses on special technical aspects of advanced acting before a camera. Prerequisites: A grade of C or better in THF209 or permission of Instructor.
Division: Communication & Fine Arts

Theatre Occupational (THO)

THO115 / Makeup for Stage and Screen
3 Credits **/ 4.0 Periods for Lecture & Lab**
Purposes, materials, and techniques of makeup for stage and screen. Prerequisites: None.
Division: Communication & Fine Arts

THO203 / Technical Theatre Production
3 Credits **/ 6.0 Periods for Laboratory**
Designed to give college credit to the technical production crews of college theatre productions. Prerequisites: None. Course Notes: THO203 may be repeated for up to a maximum of nine (9) credits.
Division: Communication & Fine Arts

THO215 / Advanced Makeup Techniques for Stage and Screen
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced character analysis and makeup design for stage and screen. Technical application of makeup for stage and screen. Prerequisites: A grade of C or better in THO115.
Division: Communication & Fine Arts

Theater Performance/Production (THP)

THP112 / Acting I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization. Prerequisites: None.
Division: Communication & Fine Arts

THP131 / Stage Movement
3 Credits **/ 4.0 Periods for Lecture & Lab**
Movement skills for the actor to develop a flexible, expressive physical instrument. Includes pantomime, physical isolation, and awareness exercises. Prerequisites: None.
Division: Communication & Fine Arts

THP201AA / Theatre Production I
1 Credit **/ 2.0 Periods for Laboratory**
Designed to give college credit to the cast and technical production crews of college theatre productions. Prerequisites: None. Course Notes: THP201AA may be repeated for a total of four (4) credit hours.
Division: Communication & Fine Arts

THP201AB / Theatre Production II
2 Credits **/ 4.0 Periods for Laboratory**
Designed to give college credit to the cast and technical production crews of college theatre productions. Prerequisites: None. Course Notes: THP201AB may be repeated for a total of four (4) credit hours.
Division: Communication & Fine Arts

THP212 / Acting II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental techniques of acting through script analysis, rehearsal, and performance. Prerequisites: A grade of C or better in THP112 or permission of Department or Division.
Division: Communication & Fine Arts

THP213 / Introduction to Technical Theatre
4 Credits **/ 2.0 Periods for Laboratory, 4.0 Periods for Lecture**
Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties. Prerequisites: None.
Division: Communication & Fine Arts

THP217 / Introduction to Design Scenography
3 Credits **/ 4.0 Periods for Lecture & Lab**
The role of the theatre designer in creating scenic, lighting, costume, sound, and multimedia effects for stage productions. Elements of the design process and communication of dramatic themes and visions to the audience. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THP273 / Musical Theatre Production
1 Credit **/ 5.0 Periods for Laboratory**
Principles and techniques for musical theatre production performance. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: By audition.
Crosslisted: MUP273
Division: Communication & Fine Arts

Illustration, Certificate of Completion

VISUAL AND PERFORMING ARTS

Certificate of Completion: CCL 5174
31 Credits
Program Contact

Louis Mendoza | 480-732-7089 | louis.mendoza@cgc.edu

Program Description

The Certificate of Completion (CCL) in Illustration develops knowledge and skills in creating visual narratives through traditional and digital media. The program emphasizes art principles, knowledge, and skills needed to solve design and compositional problems. Areas of emphasis include graphic arts, publications, and storyboarding for animation, video, and media. This certificate prepares students for employment and upgrades the skills of persons employed in occupations such as freelance artist-designer, concept artist, visual development artist for gaming/film, and storyboarder. Students may also pursue an Associate in Applied Science (AAS) in Illustration and Sequential Art.

Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Code	Title	Credits	Semester
Required Courses			_____
AVC169	2D Media Design	3	_____
AVC177	Digital Photographic Imaging I	3	_____
AVC248	Design Self Promotion	3	_____
AVC289	Computer Illustration	3	_____
AVC100	Introduction to Digital Arts	1	_____
ART111	Drawing I	3	_____
ART113	Color	3	_____
or AVC114	Digital Color		_____
ART116	Life Drawing I	3	_____
AVC178	Digital Arts Studies	3	_____
Restricted Electives			_____
Students must select six credits from the following list of courses.		6	_____
Students may select from one emphasis or may select from different emphases to fulfill the six credit requirement			_____
Animation Emphasis			_____
AVC184	Digital Animation I		_____
AVC185	3D Modeling and Animation I		_____
Drawing Emphasis			_____
ART117	Life Drawing II		_____
ART118	Art Anatomy		_____
ART122	Drawing and Composition II		_____

Painting Emphasis			_____
ART165	Watercolor Painting I		_____
ART166	Watercolor Painting II		_____
ART167	Painting I		_____
ART168	Painting II		_____
ART263	Figure Painting		_____
Total Credits		**31**	_____

Illustration and Sequential Art, Associate in Applied Science

VISUAL AND PERFORMING ARTS

Associate in Applied Science : AAS 3203
61-74 Credits
Program Contact
Louis Mendoza | 480-732-7089 | louis.mendoza@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Illustration and Sequential Art is designed for the student who wishes to develop an area of specialization in illustration and comics and sequential art. Students will develop narratives through traditional and digital media. The program emphasizes art principles, knowledge, and skills needed to solve design and compositional problems. Areas of emphasis include comic book and sequential art, illustration for publications, and storyboarding. It allows for the development of an individual`s personal interest in this area, prepares students for employment, and upgrades skills of those already employed in this field. Employment opportunities are available in a variety of fields including, but not limited to, freelance artist-designer, concept artist, comics/sequential art, visual development artist for gaming/film, and storyboarder. A Certificate of Completion (CCL) in Illustration and in Sequential Art is also available.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
ART111	Drawing I	3	_____
AVC100	Introduction to Digital Arts	1	_____
AVC169	2D Media Design	3	_____
AVC177	Digital Photographic Imaging I	3	_____
AVC289	Computer Illustration	3	_____
ART113	Color	3	_____
or AVC114	Digital Color		_____
ART116	Life Drawing I	3	_____
AVC178	Digital Arts Studies	3	_____
Capstone/Internship Course:			_____
Select one of the following:		1-3	_____
AVC280AA	Digital Media Arts and Design Capstone		_____
or AVC280AB	Digital Media Arts and Design Capstone		_____
or AVC280AC	Digital Media Arts and Design Capstone		_____
AVC297AA	Commercial Art Internship		_____
or AVC297AB	Commercial Art Internship		_____
or AVC297AC	Commercial Art Internship		_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Restricted Electives			_____
Select from one of the following areas of specialization:		9-18	_____
Specialization 1: Sequential Art (18 credits)			_____
AVC119	Penciling for Sequential Art		_____
AVC120	Inking for Sequential Art		_____
AVC219	Coloring, Toning and Lettering for Sequential Art		_____
AVC220	Publishing for the Comic Industry		_____
AVC221	Comics Creation		_____
CRW172	Introduction to Comic Book Writing		_____
or CRW176	Writing Narrative for Video Games		_____
or CRW190	Introduction to Screenwriting		_____
Specialization 2: Illustration (9 credits)			_____
AVC248	Design Self Promotion		_____
or ART255	Art Marketing		_____
Students must select six credits from the following list of courses.			_____

Students may select from one emphasis or may select from different emphases to fulfill the six credit requirement.			_____
Animation Emphasis			_____
AVC184	Digital Animation I		_____
AVC185	3D Modeling and Animation I		_____
Drawing Emphasis			_____
ART117	Life Drawing II		_____
ART118	Art Anatomy		_____
ART122	Drawing and Composition II		_____
Painting Emphasis			_____
ART165	Watercolor Painting I		_____
ART166	Watercolor Painting II		_____
ART167	Painting I		_____
ART168	Painting II		_____
ART263	Figure Painting		_____
General Electives			_____
Select additional courses 100-level or higher to complete the minimum credits required for this degree. Consult with the Program Director or an Academic Advisor.		0-6	_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Select three to six credits from the following:		3-6	_____
Any approved general education course(s) in the Mathematics area			_____
MAT140	College Mathematics [1]		_____
MAT141	College Mathematics [1]		_____
MAT142	College Mathematics [1]		_____
MAT145	College Mathematics with Review [1]		_____
MAT146	College Mathematics with Review [1]		_____
Distribution			_____
Humanities, Arts and Design			_____
ARH101	Art from Prehistory Through Middle Ages	3	_____
or ARH102	Art from Renaissance to Modernism		_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area		3	_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences area		4	_____
Total Credits		61-74	_____

[1] Recommended for students planning to transfer to a four-year university.

Photography, Associate in Applied Science

VISUAL AND PERFORMING ARTS

Associate in Applied Science : AAS 3195
61-67 Credits
Program Contact
Buzzy Sullivan | 480-732-7291 | buzzy.sullivan@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Photography program is designed for the student who wishes to pursue a career in photography, either commercial or fine arts. Students will study digital and traditional film-based (darkroom) media, content and image selection, and the theory and practice of visual communication.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

There will be costs for supplies and equipment in this program.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
ARH101	Art from Prehistory Through Middle Ages	3	
or ARH102	Art from Renaissance to Modernism		
ARH115	History of Photography	3	
AVC100	Introduction to Digital Arts	1	
ART112	Two-Dimensional Design	3	
ART113	Color	3	
ART131	Photography I	3	
ART132	Photography II	3	
AVC142	Introduction to Digital Photography	3	
AVC143	Intermediate Digital Photography	3	
ART255	Art Marketing	1-3	
or ART255AB	The Portfolio		
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
Restricted Electives			
Complete all courses in the specialization below that best aligns with your academic and professional goals.		8-20	
Specialization I: Commercial Photography *(p. 195)*			
Specialization II: Fine Art Photography *(p. 195)*			
General Electives			
Select courses 100-level or higher to complete the minimum total program credits required for this degree. Consult with the Program Director or an Academic Advisor. [1]		0-7	
General Education			
Core			
First-Year Composition			
ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
ENG102	First-Year Composition	3	
or ENG108	First-Year Composition for ESL		
Oral Communication			
Select one of the following:		3	
COM100	Introduction to Human Communication		
COM110	Interpersonal Communication		
COM225	Public Speaking		
COM230	Small Group Communication		
Critical Reading			
Select one of the following:		0-3	
CRE101	College Critical Reading and Critical Thinking		
OR Equivalent as indicated by assessment			
Mathematics			
Select one of the following:		3-6	
MAT140	College Mathematics		
MAT141	College Mathematics		
MAT142	College Mathematics		
MAT145	College Mathematics with Review		
MAT146	College Mathematics with Review		
Any approved General Education course in the Mathematical Applications (MA) area			
Distribution			
Humanities, Arts and Design			
Met by Required Courses [2]		0	
Social and Behavioral Sciences			
Any approved general education course from the Social and Behavioral Sciences (SB) area		3	
Natural Sciences			

Any approved general education course(s) in the Natural Sciences (Quantitative) (SQ) area or the Natural Sciences (General) (SG) area.	4	_____
Total Credits	61-67	_____

[1] Recommend that students interested in transferring to a four-year institution to earn a bachelor`s degree take courses that fulfill any unmet Arizona General Education Curriculum (AGEC) requirements

[2] Met by ARH101 Art from Prehistory Through Middle Ages or ARH102 Art from Renaissance to Modernism or ARH115 History of Photography or ART131 Photography I in Required Courses

Specializations

Specialization I: Commercial Photography

Code	Title	Credits	Semester
AVC138	Commercial Photography I	3	_____
AVC139	Commercial Photography II	3	_____
AVC140	Portrait Photography	3	_____
or AVC237	Fashion Photography		_____
SBS200	Small Business Operations	2	_____
Select one of the following:		2-3	_____
MKT110	Marketing and Social Networking		_____
MKT263	Advertising Principles		_____
MKT271	Principles of Marketing		_____
SBS204	Small Business Marketing and Advertising		_____
In consultation with advisor or program coordinator, choose up to six (6) credits of coursework from the following list to best fulfill goals and complete the minimum total program credits required for this degree.		0-6	_____
AVC169	2D Media Design		_____
AVC177	Digital Photographic Imaging I		_____
ART111	Drawing I		_____
ART116	Life Drawing I		_____
ART137	Alternative Photographic Processes		_____
ART234	Color Photography		_____
ART290AC	Studio Art		_____
ART290EC	Studio Art: Photography		_____
AVC290DP	Art Studio: Digital Photography		_____
or AVC297AA	Commercial Art Internship		_____
ART295DA	Art Workshop/ Seminar: Photography		_____
ART295DB	Art Workshop/ Seminar: Photography		_____
ART295DC	Art Workshop/ Seminar: Photography		_____
AVC178	Digital Arts Studies		_____
AVC181	Graphic Design I		_____
AVC270	Digital Photographic Imaging II		_____
AVC297AA	Commercial Art Internship		_____
AVC297AB	Commercial Art Internship		_____
FMP108	Video Production		_____
Total Credits		**13-20**	_____

Specialization II: Fine Art Photography

Code	Title	Credits	Semester
ART133	Photography III	3	_____
ART137	Alternative Photographic Processes	3	_____
Select two to nine credits from the following:		2-9	_____
AVC169	2D Media Design		_____
AVC177	Digital Photographic Imaging I		_____
ART111	Drawing I		_____
ART116	Life Drawing I		_____
ART234	Color Photography		_____
ART250	Introduction to Printmaking		_____
ART134	Photography IV		_____
ART290AC	Studio Art		_____
ART290EC	Studio Art: Photography		_____
ART290MC	Studio Art: Digital Photography		_____
ART295DA	Art Workshop/ Seminar: Photography		_____

ART295DB	Art Workshop/ Seminar: Photography		_____
ART295DC	Art Workshop/ Seminar: Photography		_____
AVC178	Digital Arts Studies		_____
AVC270	Digital Photographic Imaging II		_____
AVC274	Digital Photographic Imaging III		_____
AVC297AA	Commercial Art Internship		_____
SBS200	Small Business Operations		_____
SBS204	Small Business Marketing and Advertising		_____
Total Credits		**8-15**	_____

Sequential Art, Certificate of Completion

VISUAL AND PERFORMING ARTS

Certificate of Completion: CCL 5177
40 Credits
Program Contact
Louis Mendoza | 480-732-7089 | louis.mendoza@cgc.edu

Program Description

The Certificate of Completion (CCL) in Sequential Art develops knowledge and skills in the area of sequential art, including but not limited to comics, graphic novels, anime, children`s books, self-publishing, digital illustration, and storyboarding for digital media. Students will develop diverse narratives that reflect cultural, historical, and social diversity. The program provides the student with an understanding of writing for sequential art, illustration techniques, and digital media tools for illustration, layout and publication. This certificate prepares students for employment and upgrades the skills of persons employed in occupations such as illustrator, comic book artist, storyboarder, cartoonist, penciler, inker, colorist, letterer, production artist, game designer, and comic book writer. An Associate in Applied Science (AAS) in Illustration and Sequential Art is also available.

Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
ART111	Drawing I	3	_____
AVC169	2D Media Design	3	_____
AVC177	Digital Photographic Imaging I	3	_____
AVC289	Computer Illustration	3	_____
AVC100	Introduction to Digital Arts	1	_____
ART113	Color	3	_____
or AVC114	Digital Color		_____
ART116	Life Drawing I	3	_____
AVC119	Penciling for Sequential Art	3	_____
AVC120	Inking for Sequential Art	3	_____
AVC178	Digital Arts Studies	3	_____
AVC219	Coloring, Toning and Lettering for Sequential Art	3	_____
AVC220	Publishing for the Comic Industry	3	_____
AVC221	Comics Creation	3	_____
Select one of the following:		3	_____
CRW172	Introduction to Comic Book Writing		_____
CRW176	Writing Narrative for Video Games		_____
CRW190	Introduction to Screenwriting		_____
Total Credits		**40**	_____

Composition, Creative Writing & Literature

David Finley, Division Chair
(480) 726-4125 |david.finley@cgc.edu

Courses

Prefix	Course
CRE	Critical Reading
CRW	Creative Writing
ENG	English
ENH	English Humanities
GST	Game Studies
HUM	Humanities
JRN	Journalism

RDG	Reading
WAC	Writing Across Curriculum

Creative Writing

Finn, Patrick

- A.A., Riverside Community College
- B.A., University of California, Riverside
- M.F.A., University of Arizona

English

Chardon, Diane

- B.A., Louisiana State University
- M.A., Ph.D., Arizona State University

Dean, John

- B.A., Arizona State University
- M.F.A., Texas State University

Fernandez, Miguel

- B.A., M.A., New York University

Fields, Gregg

- B.A, M.A., California State University - San Marcos
- Ph.D., Arizona State University

Finley, David
Division Chair

- B.A., Appalachian State University
- M.A., Arizona State University

Hope, Kate

- B.A., M.A., Northern Arizona University
- Ph.D., Arizona State University

Marsee, Michele

- B.A., Chapman University
- M.A., Ph.D., University of New Mexico

Moser, Teri

- B.A., M.A., Utah State University
- Ph.D., Arizona State University

Rodriguez, Maria

- B.A., Arizona State University
- M.A., Northern Arizona University

Rude, Renee

- B.S., M.E., Ph.D., Northern Arizona University

Soza, Robert

- B.A., Arizona State University
- Ph.D., University of California, Berkeley

Tinkle-Williams, Keziah

- A.A., Spokane Community College
- B.A., M.A., Eastern Washington University
- Ph.D., Grand Canyon University

Toms, Malik

- B.A., M.A., Iowa State University

Wilkowski, Colleen

- B.A., Rollins College
- M.A., Ph.D., Arizona State University

Williams, Patrick

- B.A., M.A., Eastern Washington University
- Ed.D., Northern Arizona University

Reading

Ohrnberger, Maryellen

- B.A., CUNY Queens College
- M.Ed., Arizona State University

Wicke, Tricia

- B.S., University of Arizona
- M.Ed., Northern Arizona University
- Ph.D., Arizona State University

Critical Reading (CRE)

CRE101 / College Critical Reading and Critical Thinking
3 Credits **/ 3.0 Periods for Lecture**
Develop and apply critical thinking skills through critically reading varied and challenging materials. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks. Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100, or RDG100LL, or RDG111, or RDG112, or RDG113)], or a grade of B or better in ALT100, or an appropriate district placement, or permission of Instructor. Course Notes: Students may only receive credit for one of the following: CRE101, CRE101AT, CRE101BM, CRE101BS, CRE101CS, CRE101CT, CRE101ED, CRE101HS, CRE101SM, CRE101VA.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

Creative Writing (CRW)

CRW150 / Introduction to Creative Writing
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the basic aesthetics and techniques in contemporary creative writing within a variety of genres. Introduction to the analytical concepts and terminology necessary to understand, interpret, and enact contemporary creative writing. Facilitation of writing practices and evaluation. Introduction to literature's role in society. Prerequisites: None.
Division: Composition, Creative Writing, and Literature

CRW160 / Introduction to Writing Poetry
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Composition, Creative Writing, and Literature

CRW170 / Introduction to Writing Fiction
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Composition, Creative Writing, and Literature

CRW172 / Introduction to Comic Book Writing
3 Credits **/ 3.0 Periods for Lecture**
Introduction to elements and techniques of comic book writing in its specific form; teaches terminology and concepts needed for the successful participation in writing workshops; focuses on proposal outline, planning, structure facilitates writing practice (including character study) and evaluation; offers individual suggestions in the student's development in this genre. Prerequisites:None.
Division: Composition, Creative Writing, and Literature

CRW176 / Writing Narrative for Video Games
3 Credits **/ 3.0 Periods for Lecture**
Provides an introduction to narrative theory as it relates to video game production. Delivers a variety of video game storylines, narrative theories, and processes for narrative development in video games. Terminology and video game industry standards are covered. Offers discussion of team building and the role of video games in society. Prerequisites: None.
Division: Composition, Creative Writing, and Literature

CRW180 / Introduction to Writing Nonfiction
3 Credits **/ 3.0 Periods for Lecture**
Practice in writing creative nonfiction, including autobiography and biography, the essay, reviews, and humor using a process of invention and discovery, writing, analysis, evaluation, and revision. Combines lecture, discussion, and workshop, leading to the production of marketable quality creative nonfiction. Prerequisites: None. CRW150 recommended but not required.
Division: Composition, Creative Writing, and Literature

CRW190 / Introduction to Screenwriting
3 Credits **/ 3.0 Periods for Lecture**
Overview of screenwriting elements and introduction to screenwriting techniques. Prerequisites: None. CRW150 recommended but not required.
Division: Composition, Creative Writing, and Literature

CRW200 / Readings for Writers
1 Credit **/ 0.0 Periods for Laboratory**
Close analysis and interpretation of selected literary texts designed to strengthen the students' own writing by extending their familiarity with the genre in which they write and their knowledge of selected literary elements. One-on-one meetings between student and instructor. Prerequisites: A grade of C or better in CRW150 or permission of Instructor. Course Notes: CRW200 may be repeated for a total of six (6) credits.
Division: Composition, Creative Writing, and Literature

CRW201 / Portfolio
1 Credit **/ 0.0 Periods for Laboratory**
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.
Division: Composition, Creative Writing, and Literature

CRW260 / Intermediate Poetry Writing
3 Credits **/ 3.0 Periods for Lecture**
Emphasis on writing a series of original poems; analysis and evaluation of the functions and effects of established works of poetry; concentration on evaluation and revising students' poetry through intensive workshops. Prerequisites: A grade of C or better in CRW160 or permission of Instructor.
Division: Composition, Creative Writing, and Literature

CRW272 / Planning and Structuring the Novel
3 Credits **/ 3.0 Periods for Lecture**
Focus on planning, structuring, and beginning a novel; prewriting, writing, analysis, evaluation, and revision of novel plans and excerpts. Prerequisites: A grade of C or better in CRW150 or permission of Instructor.
Division: Composition, Creative Writing, and Literature

English (ENG)

ENG101 / First-Year Composition
3 Credits **/ 3.0 Periods for Lecture**
Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ESL097 or WAC101), or (a grade of B or better in ALT100), or (a grade of C in ALT100 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+), or (a grade of C or better in ESL202 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+).
SUN SUN# ENG 1101
Fulfills: First-Year Composition (FYC)
Division: Composition, Creative Writing, and Literature

ENG102 / First-Year Composition
3 Credits **/ 3.0 Periods for Lecture**
Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total. Prerequisites: Grade of C or better in ENG101.
SUN SUN# ENG 1102
Fulfills: First-Year Composition (FYC)
Division: Composition, Creative Writing, and Literature

ENG111 / Technical and Professional Writing
3 Credits **/ 3.0 Periods for Lecture**
Introduces students to the genres, style, and design of technical documents that are used in various professional fields. Includes examining the role of workplace writing, preparing documents appropriate to diverse audiences, and integrating data and graphics into work-related documents. Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENG200 / Reading and Writing About Literature
3 Credits **/ 3.0 Periods for Lecture**
Emphasis on critical analysis of various genres of literature; includes study of necessary terminology, introduction to methods of literary criticism, and practice in interpretation and evaluation. Prerequisites: A grade of C or better in ENG102.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENG217 / Personal and Exploratory Writing
3 Credits **/ 3.0 Periods for Lecture**
Using writing to explore one's self and the world one lives in; emphasis on journal writing as a source and inspiration for public writing. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

English Humanities (ENH)

ENH110 / Introduction to Literature
3 Credits **/ 3.0 Periods for Lecture**
Introduction to international literature through various forms of literary expression; e.g., poetry, drama, essay, autobiographical fiction, short story, and novel. Provides a global overview of literature with special emphasis on diverse cultural contributions of women, African Americans, Asian Americans, Hispanic Americans, and Native Americans. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH111 / Literature and the American Experience
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the foundations and diversity of American culture through a survey of its literature, including minority and women writers. Exploration of various facets of American culture including frontier, regional, rural, and urban life; ethnic, racial, and immigrant experience; and political and social philosophies. Prerequisites: None.
Division: Composition, Creative Writing, and Literature

ENH112 / Chicano Literature
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the works of Mexican-American writers. Samples poetry, fiction, and essays viewed in their relationship to American cultural heritage and to contemporary culture. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH113 / Writers/Directors and Current Issues
3 Credits **/ 3.0 Periods for Lecture**
In-depth analysis of literary texts by contemporary writers/directors throughout the world, including essayists, journalists, playwrights, novelists, directors, short story writers, and/or poets. Examines perspectives representing a variety of cultures. Critical responses to current issues of worldwide interest examined, including topics as environment, technology, medicine, economics, politics, education, human rights, law and order. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH190 / Introduction to US Ethnic Literature
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the US ethnic literatures of African Americans, Arab Americans, Asian Americans, Latinas/os, Native Americans, Mixed Race, and other emerging ethnic groups through various expressions. Examines the interconnections of the various experiences of racialized groups living in the US. Provides ethnic US literature a global context through study of the interconnections with the literatures of Africa, Asia, Latin America, and Oceania. Focus on literary production of at least four specific US ethnic groups and relevant international literatures. Prerequisites or Corequisites: ENG101 or ENG107.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Composition, Creative Writing, and Literature

ENH222 / Survey of English Literature After 1800
3 Credits **/ 3.0 Periods for Lecture**
Emphasizes the social and political backgrounds as well as the form and content of English literature in the nineteenth and twentieth centuries. Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH241 / American Literature Before 1860
3 Credits **/ 3.0 Periods for Lecture**
Includes literature written prior to 1860 in the United States. Prerequisites: A grade of C or better in ENG101.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENH242 / American Literature After 1860
3 Credits **/ 3.0 Periods for Lecture**
Includes literature written after 1860 in the United States. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH251 / Mythology
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH253 / Contemporary Global Literature and Film
3 Credits **/ 3.0 Periods for Lecture**
Characteristics of literary and cinematic mediums. Challenges of adapting literature to film. Global examination of historical, religious, socioeconomic, political, and colonial/post colonial themes depicted in Western and non-Western literature and film (e. g., Africa, Asia, and Latin America) outside the United States. Use of narrative in each medium and how it translates various global/international perspectives and cultural assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENH254 / Literature and Film
3 Credits **/ 3.0 Periods for Lecture**
Presents works of literature and their film versions and analyzes distinguishing techniques of each medium. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENH255 / Contemporary U.S. Literature and Film
3 Credits **/ 3.0 Periods for Lecture**
A discussion of the strengths and weaknesses of literature created by U.S. authors and film created by U.S. or other filmmakers. Includes the challenges of adapting literature to film; addressing the racial, ethnic, sex, sexuality, gender, class, and religious differences among cultures and mediums; the use of narrative in each medium and how it translates various cultural values and assumptions particular to U.S. society and culture; the specific genres present in literature and film; and the cultural metaphors and symbols used in literature and film. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENH260 / Literature of the Southwest
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH284 / 19th Century Women Writers
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: WST284
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH285 / Contemporary Women Writers
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: WST285
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

Game Studies (GST)

GST202 / Games, Culture and Aesthetics
3 Credits **/ 3.0 Periods for Lecture**
Considers games as artifacts and expressions of our basic consciousness, humanity, and potential. Explores through the lens of world cultures such concepts as values, power relations, gender roles, arts, aesthetics, and desire. Compares games across cultural, temporal, geographic, and linguistic divides, for the purpose of examining and appreciating the experiences, contributions, and values of diverse populations, as conveyed through the global phenomenon of games. Prerequisites: A grade of C or better in RDG100, or RDG100LL, or (RDG100AA and RDG100AB and RDG100AC), or RDG111, or RDG112, or RDG113, or eligibility for ENG101 as indicated by appropriate writing assessment test score.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

Humanities (HUM)

HUM108 / Contemporary Humanities
3 Credits **/ 3.0 Periods for Lecture**
An exploration of human expression in contemporary arts and sciences. Prerequisites: None.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM201 / Humanities: Universal Themes
3 Credits **/ 3.0 Periods for Lecture**
Study of worldviews in a variety of historical and contemporary world cultures, including analysis of origin and creation myths, artistic expression, spirituality, and the natural environment. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM205 / Introduction to Cinema
3 Credits **/ 3.0 Periods for Lecture**
Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.
Crosslisted: THF205
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM209 / Women and Films
3 Credits **/ 3.0 Periods for Lecture**
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.
Crosslisted: WST209
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM213 / Hispanic Film
3 Credits **/ 3.0 Periods for Lecture**
Analysis of Hispanic film as art form and as social commentary. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM245 / Introduction to Holocaust Studies
3 Credits **/ 3.0 Periods for Lecture**
Introduction to essential information about the Holocaust. Provides theological, social and political background to establish contexts of anti-Semitism, especially in 19th and 20th centuries, with particular attention to National Socialist ideologies. Ghetto and camp life, including resistance, are explored. Emphasis is on texts of the Holocaust, including historical documents, participant testimonies, fiction, creative non-fiction, and poetry, much of which involves theological and moral debate. Includes analysis of supplementary visual material and some performing arts. Prerequisites: None. CRE101 or equivalent as indicated by appropriate reading placement recommended but not required.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM250 / Ideas and Values in the Humanities: Early Civilizations to the Renaissance
3 Credits **/ 3.0 Periods for Lecture**
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the early civilizations to the Renaissance, including Western and non-Western cultures. Prerequisites: A grade of C or better in ENG101.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

HUM251 / Ideas and Values in the Humanities: Renaissance to the Contemporary World
3 Credits **/ 3.0 Periods for Lecture**
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the Renaissance to modern period, including Western and non-Western cultures. Prerequisites: A grade of C or better in ENG101.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

Journalism (JRN)

JRN201 / News Writing
3 Credits **/ 3.0 Periods for Lecture**
Writing and producing news for the media. Associated Press (AP) editing style, writing skills, and organizational structure for news. Prerequisites: A grade of C or better in ENG101 or ENG107.
SUN SUN# JRN 2201
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

Reading (RDG)

RDG100 / Successful College Reading
3 Credits **/ 3.0 Periods for Lecture**
Emphasis on reading study strategies for any introductory class in any subject area. Introduction to Learning Management System (LMS), how to successfully read course textbooks and assessments, how to navigate information technology and development of academic vocabulary. Prerequisites: A grade of C or better in ALT100, or ESL202, or appropriate reading placement, or permission of Instructor. Corequisites: Any 100-level course in another content area, or permission of Instructor. Course Notes: RDG100 satisfies RDG091 requirement. RDG100 may be repeated for a total of twelve (12) credit hours.
Division: Composition, Creative Writing, and Literature

RDG100LL / Disciplinary Literacy Lab
1 Credit **/ 3.0 Periods for Laboratory**
Supplemental instruction for college-level discipline courses. Focus on developing effective reading processes to address a range of literacy needs including reading, writing, digital, numerical, financial and informational literacies. Prerequisites: None. Corequisites: Any 100-level course in another content area or permission of Instructor.
Division: Composition, Creative Writing, and Literature

Writing Across Curriculum (WAC)

WAC101 / Writing Across the Curriculum
3 Credits **/ 3.0 Periods for Lecture**
Expressive, expository, and academic writing experiences to develop students' rhetoric and composition foundation. Experience planning and drafting multi-paragraph essays through a writing process with emphasis on essay and paragraph structure and the elements of sentence structure. Participation in writing workshop, group work, reading to support writing tasks, and writing from sources. A minimum of three multi-paragraph essays and a final reflection paper. Prerequisites: None.
Division: Composition, Creative Writing, and Literature

Health Sciences, Public Service, & Counseling

Andrea Villarreal, Division Chair
480-726-4246 | andrea.villarreal@cgc.edu

Courses

Prefix	Course
AJS	Administration of Justice Studies
CAP	Counseling and Applied Psychology
CPD	Counseling and Personal Development
EMT	Emergency Medical Technology
EXS	Exercise Science
FON	Food and Nutrition
FYE	First Year Experience
HES	Health Science
MSP	Mortuary Science
PED	Physical Education
REC	Recreation
WED	Wellness Education

Career Programs

Administration of Justice
Administration of Justice Studies
Corrections
Crime Scene Investigation
Emergency Medical Technology
Emergency Medical Technology Comprehensive
Exercise Science: Health, Fitness and Sports Performance
Fingerprint Identification and Photography
Forensic Science
Homeland Security
Law Enforcement
Law Enforcement Training
Law Enforcement Training Academy
Leadership in Public Safety Organizations
Legal Studies
Mortuary Science
Personal Training
Personal Training: Advanced
Victimology

Associate in Applied Science (AAS)

- Administration of Justice Studies, Associate in Applied Science (p. 209)
- Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science (p. 214)
- Forensic Science, Associate in Applied Science (p. 217)
- Law Enforcement Training, Associate in Applied Science (p. 220)
- Mortuary Science, Associate in Applied Science (p. 222)

Certificate of Completion (CCL)

- Administration of Justice, Certificate of Completion (p. 211)
- Corrections, Certificate of Completion (p. 212)
- Crime Scene Investigation, Certificate of Completion (p. 212)
- Emergency Medical Technology Comprehensive, Certificate of Completion (p. 214)
- Emergency Medical Technology, Certificate of Completion (p. 213)
- Fingerprint Identification and Photography, Certificate of Completion (p. 217)
- Homeland Security, Certificate of Completion (p. 219)
- Law Enforcement, Certificate of Completion (p. 219)
- Legal Studies, Certificate of Completion (p. 221)
- Personal Training, Certificate of Completion (p. 223)
- Personal Training: Advanced, Certificate of Completion (p. 224)
- Victimology, Certificate of Completion (p. 225)

Administration of Justice

Jacquin, Gregg

- B.A., M.A., University of Arizona

Ruschak, Lisa

- B.A., Ottawa University
- M.Ed., Northern Arizona University

Counseling

Adams, Ryan

- B.S., University of Illinois at Urbana-Champaign
- M.Ed., Ph.D., Arizona State University

Falleta, Eva

- B.S., New Mexico State University
- M.S., Arizona State University

Hunter, Tamieka

- B.A., M.S., California State University, Long Beach
- Ed.D., California State University, Fullerton

Nieset, Nikki

- B.A., The Ohio State University
- M.Ed., Ph.D., Arizona State University

Parsi, Yasaman

- B.S., M.Ed., & M.C., Arizona State University

Wolfe, Audra

- A.A., Mesa Community College
- B.S., M.C., Arizona State University

Emergency Medical Technology

Bader, Sherrick

- G.S., Mesa Community College
- Certified Emergency Paramedic, Mesa Community College

Exercise Science

McGee, Kimberly

- B.S., M.S., Ph.D., Arizona State University

Food and Nutrition

Villarreal, Andrea
Division Chair

- B.S., M.S., Oregon State University

Health Education

Trone, Gregory

- B.A., University of North Carolina at Wilmington
- M.S., Appalachian State University
- Ph.D., Arizona State University

Mortuary Science

Backhaus, Donna

- A.A.S., Mesa Community College
- B.S., University of Phoenix
- M.A., University of Phoenix

Liddicoat, Christy

- A.A.S., Mesa Community College
- B.A., M.Ed., Arizona State University

Administration of Justice (AJS)

AJS101 / Introduction to Criminal Justice
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# AJS 1101
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS109 / Substantive Criminal Law
3 Credits **/ 3.0 Periods for Lecture**
Covers philosophy of legal sanctions and historical development from the common law to modern American criminal law, classifications of crimes, elements of and parties to crimes, general definition of crimes, common defenses utilized. Includes specific offenses and the essential elements of each offense. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS113 / Criminal Justice Crime Control Policies and Practices
3 Credits **/ 3.0 Periods for Lecture**
Focus on changing the distribution of crime opportunities rather than offender motivation. Topics include application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, and crime prevention through environmental design. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS119 / Computer Applications in Justice Studies
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Division: Health Science, Public Service, & Counseling

AJS123 / Ethics and the Administration of Justice
3 Credits **/ 3.0 Periods for Lecture**
Introduces and explores ethical issues and the justice system. Focuses on ethics and the law, the police, courts and corrections. Reviews ethical theory, concepts and practices as they relate to administration of justice. Explores issues of how media/social media shape ethics. Encourages critical thinking and value decision making in criminal justice system situations. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Health Science, Public Service, & Counseling

AJS139 / Emergency Response to Terrorism
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: FSC139
Division: Health Science, Public Service, & Counseling

AJS195 / International and Domestic Terrorism
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Health Science, Public Service, & Counseling

AJS200 / Current Issues In Criminal Justice
3 Credits **/ 3.0 Periods for Lecture**
Examines current issues, techniques and trends in the Criminal Justice System. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS212 / Juvenile Justice Procedures
3 Credits **/ 3.0 Periods for Lecture**
Examines the nature and extent of juvenile delinquency to the present. Including but not limited to the history, jurisdictions, terminology, procedures, and institutions of the juvenile justice system. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS213 / Evidence Technology: Fingerprints
3 Credits **/ 3.0 Periods for Lecture**
Covers the fundamental principles of fingerprints, including the history of fingerprint classification, the biology of friction ridge skin, pattern analysis, comparison, and identification as well as their application in significant court cases. Also includes techniques for obtaining inked prints and developing and preserving latent prints. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS215 / Criminalistics: Physical Evidence
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Health Science, Public Service, & Counseling

AJS216 / Criminalistics: Biological Evidence
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Health Science, Public Service, & Counseling

AJS225 / Criminology
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS230 / The Police Function
3 Credits **/ 3.0 Periods for Lecture**
An examination of the history, organization, procedures, and methods of operation of public policing in the United States. Career opportunities and current challenges in law enforcement presented. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS240 / The Correction Function
3 Credits **/ 3.0 Periods for Lecture**
Examines the history and development of correctional theories and institutions. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS258 / Victimology and Crisis Management in Public Safety
3 Credits **/ 3.0 Periods for Lecture**
Victimology, the criminal justice system, techniques of crisis intervention and management, and the importance of a multicultural and global perspective. Includes violent crimes, sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, developing effective coping skills of victims and responders, appropriate community resources, and the cultural responsiveness of the justice system.
Crosslisted: FSC258, EMT258
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS260 / Procedural Criminal Law
3 Credits **/ 3.0 Periods for Lecture**
Concerned with the understanding of procedural criminal law. Examines the processes and procedures followed by law enforcement, attorneys, and the courts in the apprehension and prosecution of criminal offenders. Examines the rationale underlying major court holdings impacting the criminal justice process, the procedural requirements that stem from these holdings and their effect on the daily operations of the criminal justice system. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS270 / Community Relations
3 Credits **/ 3.0 Periods for Lecture**
Examination of community problems; community action programs and trends; human behavior, conflict and communication; and the relationship between the criminal justice system and community. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS275 / Criminal Investigation I
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, identification, and basic investigative techniques. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

Counseling and Applied Psychology (CAP)

CAP120 / Introduction to Counseling
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the field of counseling with a focus on skills and competencies needed as a mental health practitioner. Foundations of counseling including counseling theories, ethical considerations, prevention and intervention topics, and multicultural counseling practices. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

CAP220 / The Counselor in a Multicultural Society
3 Credits **/ 3.0 Periods for Lecture**
Current theories and research on culture, race and ethnicity, gender and other aspects of cultural diversity in a multicultural society through the lens of counseling. Focus on personal perspectives, will explore themes, theories, topics and research related to power, privilege and oppression in the United States as applied to counseling discipline. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Health Science, Public Service, & Counseling

CAP240 / Introduction to Counseling Skills
3 Credits **/ 3.0 Periods for Lecture**
Introduction to basic skills and techniques used in the counseling field. Focuses on active listening, self-awareness, and other related skills. Prerequisites: A grade of C or better in CAP120.
Division: Health Science, Public Service, & Counseling

CAP260 / Career and Professional Preparation for the Helping Professions
3 Credits **/ 3.0 Periods for Lecture**
Overview of the process of career and life planning through self-awareness for students interested in helping fields. Focus on current occupational trends and outlook, the learning models of the individual, the world of work, and decision-making. Emphasis on individual application and workplace diversity. Design materials for use in the professional world such as resumes, online presence, career portfolio. Prerequisites: A grade of C or better in ENG101.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Health Science, Public Service, & Counseling

Counseling and Personal Development (CPD)

CPD160 / Introduction to Multiculturalism
3 Credits **/ 3.0 Periods for Lecture**
Examination of the multiple cultures and subcultures within the contemporary United States. Personal exploration of awareness and appreciation of multiculturalism. Activities for experiencing diverse cultural perspectives. Critical thinking skills for recognizing, analyzing, and mediating cultural and psychological factors impacting conflict and accord between diverse cultures through written and oral discourse. Prerequisites: A grade of C or better in ENG101 or ENG107, or permission of Instructor.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Health Science, Public Service, & Counseling

Emergency Medical Technology (EMT)

EMT101 / Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers
0.5 Credits **/ 0.5 Periods for Lecture**
Designed to provide the allied healthcare provider with the knowledge and skills to perform Basic Life Support (BLS) according to current guidelines for emergency cardiovascular care (ECC). Prerequisites: None. Course Notes: EMT101 may be repeated for credit.
Division: Health Science, Public Service, & Counseling

EMT104 / Emergency Medical Technology
10 Credits **/ 10.0 Periods for Lecture**
Designed as the Emergency Medical Technician (EMT) lecture to prepare students for scope of practice and standard of care with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies and non-emergencies. Prerequisites: (A grade of C or better in EMT101, or current validation in Basic Life Support Health Care Provider/Professional Rescuer) and (Accuplacer: 74 or higher, or Next Gen Accuplacer 249 or higher, or Asset 42 or higher, or Compass 83 or higher, or EDReady Critical Reading & Thinking 90 or higher, OR High School GPA 3.0 or higher, or Associate's Degree or higher). Corequisites: EMT104AB. Course Notes: Students must meet National Registry of EMT requirements for certification. Additional information available at nremt.org. EMT104 may be repeated for credit.
Division: Health Science, Public Service, & Counseling

EMT104AB / Applied Practical Studies for Emergency Medical Technology
0.5 Credits **/ 0.5 Periods for Laboratory**
Simulation of actual emergency responses, with practical application of techniques and skills covered in EMT curricula. Scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum. Practical application of anatomy, physiology, patient assessment, and treatment of medically or traumatically compromised patients, special hazards and medical operations. Also includes patient-assisted medication administration, semi-automatic external defibrillator and blood glucose monitoring. Students operate in outside, scenario based environments. Prerequisites: None. Corequisites: EMT104. Course Notes: EMT/FSC104AB may be repeated for credit.
Division: Health Science, Public Service, & Counseling

EMT104LL / Emergency Medical Technology Practicum
2 Credits **/ 4.0 Periods for Laboratory**
Laboratory-based course provides structured, hands-on practice of EMT skills in a controlled learning environment. Students apply standards of care, patient assessment techniques, and evidence-based procedures through simulated medical and trauma emergencies using manikins and training devices. Emphasis is placed on decision-making, patient advocacy, and professional behaviors with immediate instructor feedback. The course follows national and state curricula to ensure skill development prior to clinical or practicum experience. Prerequisites: A grade of C or better in EMT104 or permission of Instructor or Corequisites: EMT104. Course Notes: EMT104LL may be repeated for credit. Students must meet National Registry of EMT requirements for certification. Additional information available at nremt.org
Division: Health Science, Public Service, & Counseling

Exercise Science (EXS)

EXS101 / Introduction to Exercise Science
3 Credits **/ 3.0 Periods for Lecture**
Introductory course that will provide the student with a general overview of the key theories and concepts, professions, and research areas associated with the field of Exercise Science. Educational pathways and career options will also be examined. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

EXS125 / Introduction to Exercise Physiology
3 Credits **/ 3.0 Periods for Lecture**
Principles of exercise science applied to fitness instruction. Major factors related to the function of the human body will be examined/introduced with an emphasis on exercise physiology and functional anatomy. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS146 / Introduction to Exercise Testing
1 Credit **/ 2.0 Periods for Lecture & Lab**
Introductory course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of common evidence-based assessments for apparently healthy populations. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor. Prior completion of or concurrent enrollment in EXS125 is recommended.
Division: Health Science, Public Service, & Counseling

EXS215 / Resistance Training and Recovery Techniques
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental methods for safe and effective instruction of resistance, functional, and athletic conditioning exercises. Application of foundational principles of physiology and kinesiology. Overview of warm-up, cooldown, and recovery techniques. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS217 / Cardiorespiratory and Flexibility Training
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental methods for safe and effective instruction of cardiorespiratory and flexibility training exercises. Application of foundational principles of physiology and kinesiology. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS246 / Advanced Exercise Testing
2 Credits **/ 3.0 Periods for Lecture & Lab**
Advanced course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of evidence-based assessments for apparently healthy and athletic populations. Pharmacology, special populations, and environmental conditions are also examined. Prerequisites: A grade of C or better in EXS146 or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS255 / Program Design: Muscular Fitness and Performance
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced principles of muscular fitness, sports performance, and recovery techniques including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments also examined. Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS257 / Program Design: Cardiorespiratory Fitness
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced principles of cardiorespiratory fitness and weight management including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments are also examined. Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS270 / Exercise Science Internship
3 Credits **/ 0.0 Periods for Laboratory**
A capstone experience in a fitness or health related facility. Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director. Course Notes: CPR and AED certifications must be current through the duration of the internship. EXS270 may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS270AA / Exercise Science Internship
1 Credit **/ 0.0 Periods for Laboratory**
A capstone experience in a fitness or health related facility. Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director. Course Notes: CPR certification must be current through the duration of the internship. EXS270AA may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS270AB / Exercise Science Internship
2 Credits **/ 0.0 Periods for Laboratory**
A capstone experience in a fitness or health related facility. Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director. Course Notes: CPR and AED certifications must be current through the duration of the internship. EXS270AB may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS275 / Sport Science Internship
3 Credits **/ 0.0 Periods for Lecture & Lab**
A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: EXS275 may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS275AA / Sport Science Internship
1 Credit **/ 0.0 Periods for Lecture & Lab**
A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: EXS275AA may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS275AB / Sport Science Internship
2 Credits **/ 0.0 Periods for Lecture & Lab**
A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: EXS275AB may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS280AB / Special Topics in Exercise Science
1 Credit **/ 1.0 Periods for Lecture**
Conceptual and research basis of current topics in exercise science. Prerequisites: None. Course Notes: EXS280AB may be repeated for credit.
Division: Health Science, Public Service, & Counseling

EXS290 / Introduction to Evidence-Based Practice
3 Credits **/ 3.0 Periods for Lecture**
Introduction to Evidence-Based Practice (EBP) as a framework for logical reasoning and informed decision-making in professional settings, particularly in the movement sciences. Students formulate professional questions, acquire and appraise relevant evidence, synthesize findings, and explore practical applications. Specific emphasis on the use of data to inform recommendations and consideration of audience, purpose and context to communicate effectively in both written and oral presentations. Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor. EXS101 OR HES100 OR FON100 OR FON241 recommended.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Health Science, Public Service, & Counseling

First Year Experience (FYE)

FYE101 / Introduction to College, Career and Personal Success
1 Credit **/ 1.0 Periods for Lecture**
Focus on student success through exploration of academic, career and life skills. Includes study of goal-setting/success strategies, academic mindset and financial literacy. Develop an education/career plan utilizing career assessments and other college resources. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

FYE103 / Exploration of College, Career and Personal Success
3 Credits **/ 3.0 Periods for Lecture**
Focus on student success through exploration of academic, career, and life skills. Includes study of goal-setting/success strategies, academic mindset, interpersonal skills, financial literacy, self-care strategies, diverse perspectives, and campus tools and resources. Develop an education/career plan utilizing career assessments and other college resources. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

Food and Nutrition (FON)

FON100 / Introductory Nutrition
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Health Science, Public Service, & Counseling

FON125 / Introduction to Professions in Food, Nutrition, and Dietetics
1 Credit **/ 1.0 Periods for Lecture**
Overview and discussion of career opportunities in the fields of food, nutrition, and dietetics. Includes information about history, ethics, standards of practice, communication and counseling skills. Emphasis on how to become a Registered Dietitian Nutritionist or a Dietetic Technician Registered. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

FON142AB / Science of Food
3 Credits **/ 5.0 Periods for Lecture & Lab**
Exploration and Application of Scientific Principles of Food; experiences with ingredient functionality and application in cooking techniques. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

FON241 / Principles of Human Nutrition
3 Credits **/ 3.0 Periods for Lecture**
Scientific principles of human nutrition. Emphasis on scientific literacy and the study of nutrients for disease prevention. Includes macronutrients and micronutrients, human nutrient metabolism and nutrition's role in the health of the human body throughout the life cycle. Addresses nutrition principles for prevention of nutrition-related health conditions. Course Notes: General Education Designation: Natural Sciences (General) - [SG] in combination with: FON241LL
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Health Science, Public Service, & Counseling

FON241LL / Principles of Human Nutrition Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Self-evaluative laboratory experience to complement FON241, Principles of Human Nutrition using anthropometric, biochemical, clinical, and dietary analysis. Includes the use of qualitative and quantitative methodology to determine nutritional status and evaluate methodological applications. Prerequisites: A grade of C or better in FON241 or Corequisites: FON241. Course Notes: General Education Designation: Natural Sciences (General) - [SG] in combination with: FON241
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Health Science, Public Service, & Counseling

Health Science (HES)

HES100 / Healthful Living
3 Credits **/ 3.0 Periods for Lecture**
Examines health-related behaviors and issues associated with a modern lifestyle. Explores current topics of interest related to mental, physical, social and environmental health such as stress management, nutrition, and fitness. Identifies and evaluates personal and community strategies to promote an optimal lifestyle. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

HES210 / Cultural Aspects of Health and Illness
3 Credits **/ 3.0 Periods for Lecture**
Examines how culture influences health, illness, health maintenance practices, barriers to health care, interactions with healthcare professionals, and health disparities worldwide. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo
Division: Health Science, Public Service, & Counseling

Mortuary Science (MSP)

MSP101 / Mortuary Science: Orientation and History
3 Credits **/ 3.0 Periods for Lecture**
Designed to orient prospective students to the roles, functions, and responsibilities of funeral service professionals. Overview of the requirements, governing agencies, and employment outlook in the field. Includes a historical overview of funeral service with emphasis on individuals, events, and forces that have influenced contemporary funeral principles and practices. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

MSP105 / Cremation for Mortuary Science
1 Credit **/ 1.0 Periods for Lecture**
Overview of cremation topics, including proper procedures, legal considerations, services, merchandise, trends, and the history of cremation. Prerequisites: Permission of Instructor. Course Notes: Course is aligned with American Board of Funeral Service Education (ABFSE) standards. Does not meet the requirements for Arizona Department of Health Services crematory operator training.
Division: Health Science, Public Service, & Counseling

MSP201 / Mortuary Science, Sociology, and Religion
3 Credits **/ 3.0 Periods for Lecture**
Survey of basic principles of sociology as they relate to funeral service. Emphasis on family structures, social structures, and social factors. Exploration of cultural and religious funeral customs. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP202 / Embalming
3 Credits **/ 3.0 Periods for Lecture**
Study of the disinfection, temporary preservation and restoration of the deceased human body by physical and chemical means for the specific purpose to delay organic decomposition and apply practices for reverent care of the deceased. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP202LL / Embalming Lab
1 Credit **/ 2.0 Periods for Laboratory**
Field experience involving observation and practice of embalming processes in a laboratory setting. Includes writing case study reports. Study of anatomical considerations for mortuary science students. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP202 and admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP203 / Microbiology for Mortuary Science
3 Credits **/ 3.0 Periods for Lecture**
Survey of basic principles of microbiology. Emphasis on sanitation, disinfection, public health, and embalming practice. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP204 / Chemistry for Mortuary Science
3 Credits **/ 3.0 Periods for Lecture**
Survey of the basic principles of chemistry as they relate to funeral service. Emphasis on the chemical principles and precautions involved in the preservation and disinfection of the deceased human body. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP205 / Funeral Directing I
3 Credits **/ 3.0 Periods for Lecture**
Funeral directing, documentation procedures, and regulatory compliance from time of death to disposition. Includes establishing professional relationships with family members and funeral profession and allied colleague. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP206 / Funeral Directing II
3 Credits **/ 3.0 Periods for Lecture**
Operation of the established funeral home, including principles and product knowledge in the area of funeral service management and merchandising. Prerequisites: A grade of C or better in MSP205.
Division: Health Science, Public Service, & Counseling

MSP207 / Mortuary Science Restorative Art
3 Credits **/ 3.0 Periods for Lecture**
Care and restoration of the deceased human body to create natural form and appearance. Includes anatomical aspects and color theory. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP207LL / Mortuary Science Restorative Art Lab
1 Credit **/ 2.0 Periods for Laboratory**
Care and restoration of the deceased human body to create natural form and appearance. Includes anatomical aspects and color theory. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP207 and admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP208 / Funeral Service Law: Legal, Ethical, and Regulatory Considerations
3 Credits **/ 3.0 Periods for Lecture**
Exploration of funeral service regulation by state and federal government agencies. Includes cemetery code, dispositions, Federal Trade Commission (FTC), licensing, and crematory law. Examination of torts, wills, estates, contract law, liability, and probate considerations for the funeral service practitioner. Includes ethical considerations, rights, duties, and responsibilities for the funeral service practitioner. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP209 / Pathology for Mortuary Science
3 Credits **/ 3.0 Periods for Lecture**
Study of disease processes and their impact on the human body, with emphasis on those conditions which relate to or affect the handling of human remains. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP210 / Psychology and Counseling for Mortuary Science
2 Credits **/ 2.0 Periods for Lecture**
Survey of the basic principles of psychology and counseling, as they relate to funeral service. Includes psychological concepts in the areas of grief, bereavement, mourning, aftercare and crisis intervention with emphasis in the role of the funeral service practitioner. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP211 / Compendium for Mortuary Science
3 Credits **/ 3.0 Periods for Lecture**
Comprehensive review of exam skills and coursework prior to taking the National Board Exam for Mortuary Science. Analysis of skills and tasks an entry-level funeral practitioner would possess. This course develops skills for recall, application, and analysis of content in the domains of funeral service arts and funeral service sciences. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

Physical Education (PED)

PED101BS / Body Sculpting
1 Credit **/ 2.0 Periods for Lecture & Lab**
Stretch and strengthen. Emphasizes increasing fitness, muscle tone, and body flexibility. Great for reducing stress. Prerequisites: None. Course Notes: PED101BS may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101FL / Fitness For Life
1 Credit **/ 2.0 Periods for Lecture & Lab**
Learn the basics of designing and implementing a personalized fitness program to meet your needs in the areas of Cardiovascular Fitness, Weight Control, Muscular Strength and Flexibility. Prerequisites: None. Course Notes: PED101FL may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101GF / Group Fitness/Aerobics
1 Credit **/ 2.0 Periods for Lecture & Lab**
Group exercise incorporating a variety of equipment to increase respiration, heart rates, strength, and flexibility. Prerequisites: None. Course Notes: PED101GF may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101SR / Stretch and Relaxation
1 Credit **/ 2.0 Periods for Lecture & Lab**
A mat-based stretching class with guided meditation. Stretching increases flexibility and relieves stress, promoting an overall sense of well being. Prerequisites: None. Course Notes: PED101SR may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101ST / Strength Training
1 Credit **/ 2.0 Periods for Lecture & Lab**
Introduction to techniques of basic weight training, concentrating on incorporating an exercise regimen for increased strength. Prerequisites: None. Course Notes: PED101ST may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101YO / Yoga
1 Credit **/ 2.0 Periods for Lecture & Lab**
Promotion of overall health by strengthening muscles and stimulating glands and organs. Basic postures, breathing and relaxation techniques. Prerequisites: None. Course Notes: PED101YO may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED115 / Lifetime Fitness
2 Credits **/ 4.0 Periods for Lecture & Lab**
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 Notes: PED115 may be repeated for a total of eight (8) credit hours.
Division: Health Science, Public Service, & Counseling

Recreation (REC)

REC120 / Leisure and the Quality of Life
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

Wellness Education (WED)

WED106 / Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)
0.5 Credits **/ 0.5 Periods for Lecture**
Basic overview of Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED). Covers choking procedures and the importance, guidelines, and techniques for performing CPR and utilizing an AED. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

Administration of Justice Studies, Associate in Applied Science

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Associate in Applied Science: AAS 3181
61-65 Credits
Program Contact
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Administration of Justice Studies provides in-depth preparation for students desiring to be practitioners or pursue continued education and advancement in several fields including local and federal law enforcement, the courts, corrections, security, and investigations. The program also provides criminal justice practitioners with the opportunity to complete the Certificate of Completion (CCL) in Administration of Justice as well as one of five Certificates of Completion (CCLs) in Corrections, Homeland Security, Law Enforcement, Legal Studies, and Victimology. A transfer pathway in Criminal Justice is also available (Associate Arts (AA), Emphasis in Criminal Justice) as well as an Associate in Applied Science (AAS) in Forensics and related Certificates of Completion.

Program Notes

Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates that any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
AJS101	Introduction to Criminal Justice	3	_____
AJS109	Substantive Criminal Law	3	_____
AJS123	Ethics and the Administration of Justice	3	_____
AJS/EMT/ FSCOR258	Victimology and Crisis Management in Public Safety	3	_____
or AJS200	Current Issues In Criminal Justice		_____
AJS212	Juvenile Justice Procedures	3	_____
AJS225	Criminology	3	_____
AJS230	The Police Function	3	_____
AJS240	The Correction Function	3	_____
AJS260	Procedural Criminal Law	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Restricted Electives			_____
Complete twelve to thirteen (12-13) credits from the course options below. Some of these options fulfill requirements for one or more related certificates of completion (CCLs). Consult with an AJS faculty advisor, program director, and/ or academic advisor to identify coursework that best aligns with academic and professional goals.		12-13	_____
AJS113	Criminal Justice Crime Control Policies and Practices		_____
AJS119	Computer Applications in Justice Studies		_____
AJS270	Community Relations		_____
The following courses fulfill the requirements for the Corrections certificate (5776N):			_____
AJS205	Effective Communication and Report Writing in Criminal Justice		_____
AJS255	Mental Health Conditions and the Criminal Justice System		_____
AJS275	Criminal Investigation I		_____
The following course fulfills the requirements for the Crime Scene Investigation (5964) and Fingerprint Identification and Photography (5010N):			_____
AJS290BN	Courtroom Testimony Seminar		_____
The following courses fulfill the requirements for the Homeland Security (5322N):			_____
AJS/ FSCOR139	Emergency Response to Terrorism		_____
AJS/ FSCOR147	Emergency Preparedness		_____
AJS/ FSCOR148	Fundamentals of Emergency Management		_____
AJS/ FSCOR149	Hazard Mitigation		_____
AJS195	International and Domestic Terrorism		_____
The following courses fulfill the requirements for the Law Enforcement certificate (5987N):			_____
AJS205	Effective Communication and Report Writing in Criminal Justice		_____
AJS275	Criminal Investigation I		_____
The following courses fulfill the requirements for the Legal Studies certificate (5966N):			_____
AJS201	Rules of Evidence		_____
AJS205	Effective Communication and Report Writing in Criminal Justice		_____
AJS210	Constitutional Law		_____
The following courses fulfill the requirements for the Victimology certificate (5392N):			_____
AJS162	Domestic Violence		_____

AJS255	Mental Health Conditions and the Criminal Justice System		_____
AJS+++++	Any AJS Administration of Justice Studies course not listed under the Required Courses area		_____
General Electives			_____
Select additional courses 100-level or higher to complete the minimum total program credits required for this degree.		0-5	_____
Select courses not already listed in Required Courses, Restrictive Electives, or General Education requirements. Consult with an AJS faculty advisor, program director, and/or academic advisor to identify coursework that best aligns with academic and professional goals.			_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking (Recommend for students intending to transfer)		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
Any approved general education course(s) in the Mathematics area			_____
Distribution			_____
Humanities, Arts and Design			_____
Met by Required Courses [1]		0	_____
Social and Behavioral Sciences			_____
Met by Required Courses [2]		0	_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences area [3]		4	_____
Total Credits		61-65	_____

[1] Met by AJS123 Ethics and the Administration of Justice in the Required Courses area

[2] Met by AJS101 Introduction to Criminal Justice AJS200 Current Issues In Criminal Justice AJS225 Criminology or AJS258 Victimology and Crisis Management in Public Safety/EMT258 Victimology and Crisis Management in Public Safety/FSC258 Victimology and Crisis Management in Public Safety in the Required Courses area

[3] Recommended: FOR105 Forensic Science: Physical Evidence or FOR106 Forensic Science: Biological Evidence or a course with the [SQ] or [SG] general education designation

Administration of Justice, Certificate of Completion

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Certificate of Completion: CCL 5007N
15 Credits
Program Contact
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Certificate of Completion (CCL) in the Administration of Justice program is designed to be interdisciplinary by nature and provides students with foundational knowledge of the criminal justice system and operational processes for addressing crime within society. This program also examines diverse populations and communities, and their effects on relationships with the criminal justice system. In addition, this program

allows students to familiarize themselves with and evaluate various career opportunities in the criminal justice field and is one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
AJS101	Introduction to Criminal Justice	3	
AJS109	Substantive Criminal Law	3	
or AJS260	Procedural Criminal Law		
AJS123	Ethics and the Administration of Justice	3	
AJS230	The Police Function	3	
AJS240	The Correction Function	3	
Total Credits		**15**	

Corrections, Certificate of Completion

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Certificate of Completion: CCL 5776N
15 Credits
Program Contact
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Certificate of Completion (CCL) in the Corrections program is designed for students intending to pursue careers in various correctional components of the justice system, including parole, probation, jail, and prisons. Focus is broader learning about the correction function in the context of overall administration of justice system.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
AJS101	Introduction to Criminal Justice	3	
AJS123	Ethics and the Administration of Justice	3	
or AJS255	Mental Health Conditions and the Criminal Justice System		
AJS212	Juvenile Justice Procedures	3	
AJS240	The Correction Function	3	
AJS205	Effective Communication and Report Writing in Criminal Justice	3	
or AJS275	Criminal Investigation I		
Total Credits		**15**	

Crime Scene Investigation, Certificate of Completion

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Certificate of Completion: CCL 5964
16-18 Credits
Program Contact
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Certificate of Completion (CCL) in Crime Scene Investigation is designed to develop knowledge and skills required to investigate and reconstruct crime scenes using scientific evidence and logical analysis. The program provides instruction in criminal investigation procedures, collection and preservation of physical and biological evidence, death investigation techniques, crime scene reconstruction methodology and presentation of testimony in court.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Code	Title	Credits	Semester
Required Courses			_____
AJS213	Evidence Technology: Fingerprints	3	_____
or AJS243	Crime Scene Reconstruction		_____
Select one of the following:		3-4	_____
AJS215	Criminalistics: Physical Evidence		_____
AJS219	Crime Scene Technology: Physical Evidence		_____
FOR105	Forensic Science: Physical Evidence		_____
AJS216	Criminalistics: Biological Evidence	3-4	_____
or FOR106	Forensic Science: Biological Evidence		_____
AJS214	Evidence Technology/ Photography	3	_____
AJS275	Criminal Investigation I	3	_____
AJS290BN	Courtroom Testimony Seminar	1	_____
Total Credits		**16-18**	_____

Emergency Medical Technology, Certificate of Completion

HEALTH SCIENCES

Certificate of Completion: CCL 5643N
13 Credits
Program Contact
Sherrick Bader | 480-988-8101 | sherrick.bader@cgc.edu

Program Description

The Certificate of Completion (CCL) in Emergency Medical Technology curriculum provides the student with the necessary knowledge and skills in accordance with the National EMS Scope of Practice published by National Highway Traffic Safety Administration (NHTSA) and the Arizona Department of Health Services. Successful completion of the curriculum and upon licensure, the candidate can seek employment with ambulance service companies, first responder agencies, fire departments, and hospitals as an Emergency Medical Technician (EMT). Emphasis is on the fundamental principles and skills required to provide emergency medical care for the ill or injured. The primary focus of an EMT is to respond to, assess and triage emergent, urgent, and non-urgent requests for medical care, apply basic knowledge and skills necessary to provide patient care and medical transportation to/from an emergency or health care facility.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

EMT104 Emergency Medical Technology requires students to complete additional hours in a competency-based clinical, vehicular, and/or scenario based experience. Depending on the college, this may be completed through EMT104AB Applied Practical Studies for Emergency Medical Technology or program director-approved rotation.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Students who have current validation in Basic Life Support (BLS) are required to receive credit by evaluation.

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0.5	_____
EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers		_____
Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and Credit By Evaluation			_____
EMT104AB	Applied Practical Studies for Emergency Medical Technology	0.5	_____
EMT104LL	Emergency Medical Technology Practicum	2	_____
EMT104	Emergency Medical Technology	10	_____
Total Credits		**13**	_____

Emergency Medical Technology Comprehensive, Certificate of Completion

HEALTH SCIENCES

Certificate of Completion: CCL 5058
16-17 Credits
Program Contact
Sherrick Bader | 480-988-8101 | sherrick.bader@cgc.edu

Program Description

The Certificate of Completion (CCL) in Emergency Medical Technology Comprehensive curriculum provides the student with the necessary knowledge and skills in accordance with the National EMS Scope of Practice published by National Highway Traffic Safety Administration (NHTSA) and the Arizona Department of Health Services. This certificate provides students with the expanded knowledge and skills for pre-hospital settings. Successful completion of the curriculum and upon licensure, the candidate can seek employment with ambulance service companies, first responder agencies, fire departments, and hospitals as an Emergency Medical Technician (EMT). Emphasis is on the fundamental principles and skills required to provide emergency medical care for the ill or injured. The primary focus of an EMT is to respond to, assess and triage emergent, urgent, and non-urgent requests for medical care, apply basic knowledge and skills necessary to provide patient care and medical transportation to/from an emergency or health care facility.

Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

EMT104 Emergency Medical Technology requires students to complete additional hours in a competency-based clinical, vehicular, and/or scenario based experience. Depending on the college, this may be completed through EMT104AB Applied Practical Studies for Emergency Medical Technology or program director-approved rotation.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Students who have current validation in Basic Life Support (BLS) are required to receive credit by evaluation.

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0.5	_____
EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers		_____
	Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and Credit By Evaluation		_____
EMT104AB	Applied Practical Studies for Emergency Medical Technology	0.5	_____
EMT104	Emergency Medical Technology	10	_____
EMT104LL	Emergency Medical Technology Practicum	2	_____
Restricted Electives			_____
Select one of the following:		3-4	_____
AJS/EMT/ FSCOR258	Victimology and Crisis Management in Public Safety		_____
BIO156	Introductory Biology for Allied Health		_____
HCC145	Medical Terminology for Health Care Professionals		_____
PME190	Introduction to ECG Rhythm Analysis and Interpretation for EMS Professionals		_____
PME191	Introduction to Pharmacology for EMS Professionals		_____
SWU258	Victimology and Crisis, a Social Services Perspective		_____
Total Credits		**16-17**	_____

Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science

HEALTH SCIENCES

Associate in Applied Science: AAS 3059
62-74.5 Credits
Program Contact

Kim McGee, ACSM (EP-C) | 480-726-4246 | kimberly.mcgee@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Exercise Science: Health, Fitness and Sports Performance program prepares students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM) and the American Council on Exercise (ACE) personal trainer certifications. The curriculum is designed to prepare students for employment in entry-level positions such as personal training within health and fitness clubs, wellness centers, and public and private recreation facilities. This curriculum also provides good preparation for transfer to a four-year bachelor program.

Program Notes

Students must earn a grade of "C" or better required for all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-4	_____
BIO181	General Biology (Majors) I		_____
One year of high school biology			_____
BIO160	Introduction to Human Anatomy and Physiology	4	_____
or BIO201	Human Anatomy and Physiology I		_____
Select one of the following:		0-0.5	_____
EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers		_____
WED106	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)		_____
Current CPR/AED certification			_____
EXS101	Introduction to Exercise Science	3	_____
EXS125	Introduction to Exercise Physiology	3	_____
EXS146	Introduction to Exercise Testing	1	_____
EXS215	Resistance Training and Recovery Techniques	3	_____
EXS217	Cardiorespiratory and Flexibility Training	3	_____
EXS246	Advanced Exercise Testing	2	_____
EXS255	Program Design: Muscular Fitness and Performance	3	_____
EXS257	Program Design: Cardiorespiratory Fitness	3	_____
Student must complete three (3) credits from the following EXS internship course options:			_____
Select one of the following:		3	_____
EXS270	Exercise Science Internship		_____
EXS270AA & EXS270AB	Exercise Science Internship and Exercise Science Internship		_____
EXS290	Introduction to Evidence-Based Practice	3	_____
FON100	Introductory Nutrition	3	_____
or FON241	Principles of Human Nutrition		_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
HES100	Healthful Living	3	_____
HES210	Cultural Aspects of Health and Illness	3	_____
PED101RT	Resistance Training for Improved Sports Performance	1	_____
or PED101ST	Strength Training		_____
Select one of the following:		1	_____
PED101BC	Boot Camp		_____
PED101BS	Body Sculpting		_____
PED101CY	Cycling - Indoor		_____
PED101GF	Group Fitness/ Aerobics		_____
PED101KB	Kickboxing		_____
PED101LD	Latin Dancing		_____
PED101PC	Physical Conditioning		_____
PED101PS	Pilates		_____
PED101SR	Stretch and Relaxation		_____
PED101TC	Tai Chi		_____

PED101TX	Suspension Training		_____
PED101YG	Gentle Yoga		_____
PED101YH	Hatha Yoga		_____
PED101YO	Yoga		_____
PED101YP	Power Yoga		_____
PED101YR	Restorative Yoga		_____
PED101ZU	Zumba Fitness		_____
PSY101	Introduction to Psychology	3	_____
Restricted Electives			_____
Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.		1	_____
EXS+++++ Any EXS Exercise Science course			_____
FON+++++ Any FON Food and Nutrition course			_____
HES+++++ Any HES Health Science course			_____
PED+++++ Any PED Physical Education course			_____
IFS110 Critical Research for College Success			_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking (or equivalent by assessment)		_____
OR Equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following options:		3-6	_____
Option 1			_____
Select one of the following:			_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
MAT145	College Mathematics with Review		_____
MAT146	College Mathematics with Review		_____
Option 2			_____
Select one of the following:			_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152	College Algebra/ Functions		_____
MAT155	College Algebra/ Functions with Review		_____
MAT156	College Algebra/ Functions with Review		_____
Higher level course in the Mathematical Applications [MA] area			_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Met by Required Courses [1]		0	_____
Natural Sciences			_____
Met by Required Courses [2]		0	_____
Total Credits		**62-74.5**	_____

[1] Met by HES100 Healthful Living in Required Courses.
[2] Met by BIO201 Human Anatomy and Physiology I in Required Courses.

Fingerprint Identification and Photography, Certificate of Completion

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Certificate of Completion: CCL 5010N
10 Credits
Program Contact
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Certificate of Completion (CCL) in Fingerprint Identification and Photography is designed to prepare students for entry level positions in the field of fingerprint classification and identification. It is one pathway to the Associate in Applied Science (AAS) in Forensic Science.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
AJS101	Introduction to Criminal Justice	3	
AJS213	Evidence Technology: Fingerprints	3	
AJS214	Evidence Technology/ Photography	3	
AJS290BN	Courtroom Testimony Seminar	1	
Total Credits		**10**	

Forensic Science, Associate in Applied Science

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Associate in Applied Science AAS 3183
61-68 Credits

Program Contact
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Forensic Science provides the student with a specialization in forensic investigation as it relates to crime. The curriculum presents a specialized scope of knowledge about photography, collection and preservation of evidence, and investigative strategies. The program provides students with an important knowledge base for investigative specialization in a wide range of disciplines and careers. This degree pathway also provides students with the opportunity to complete two Certificates of Completion (CCL) in Crime Scene Investigation, and Fingerprint Identification and Photography.

Program Notes

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
AJS101	Introduction to Criminal Justice	3	
AJS123	Ethics and the Administration of Justice	3	
AJS275	Criminal Investigation I	3	
AJS290BN	Courtroom Testimony Seminar	1	
AJS215	Criminalistics: Physical Evidence	3-4	
or AJS219	Crime Scene Technology: Physical Evidence		
or FOR105	Forensic Science: Physical Evidence		
AJS216	Criminalistics: Biological Evidence	3-4	
or FOR106	Forensic Science: Biological Evidence		
FYE101	Introduction to College, Career and Personal Success	1-3	
or FYE103	Exploration of College, Career and Personal Success		
Students should select courses from one of the following specializations based on career goals.		15-23	
Specialization 1: Crime Scene			

AJS109	Substantive Criminal Law		_____
AJS210	Constitutional Law		_____
AJS213	Evidence Technology: Fingerprints		_____
AJS214	Evidence Technology/ Photography		_____
AJS260	Procedural Criminal Law		_____
Specialization 2: Lab Science			_____
BIO181	General Biology (Majors) I		_____
BIO182	General Biology (Majors) II		_____
CHM151	General Chemistry I		_____
CHM151LL	General Chemistry I Laboratory		_____
CHM152	General Chemistry II		_____
CHM152LL	General Chemistry II Laboratory		_____
FOR286	Principles of Forensic Science		_____
Any course or combination of courses that include HU, C, and either G or H General Education designations.		3	_____
Restricted Electives			_____
Students must complete three (3) credits of restricted electives.		3	_____
Students interested in specialization 1: Crime Scene select from one of the following			_____
CIS105	Survey of Computer Information Systems		_____
BPC110	Computer Usage and Applications		_____
AJS+++++	Any AJS Administration of Justice Studies course (not listed in the required courses area)		_____
Students interested in Specialization 2: Lab Science select from one of the following:			_____
CIS105	Survey of Computer Information Systems		_____
BPC110	Computer Usage and Applications		_____
General Electives			_____
Students must choose zero 0-13 additional credits of General Elective courses. Total number of General Electives required will largely depend upon specialization selected.		0-13	_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
COM225	Public Speaking	3	_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
or equivalent by assessment			_____
Mathematics			_____
Crime Scene Emphasis:			_____
Select one of the following:		3-5	_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
Higher course with an (MA) general education designation			_____
Lab Science Emphasis:			_____
Select one of the following:		3-8	_____
MAT150	College Algebra/ Functions		_____
MAT151	College Algebra/ Functions		_____
MAT152 & MAT182	College Algebra/ Functions and Plane Trigonometry		_____
MAT187	Precalculus		_____
Higher course with an (MA) general education designation			_____
Distribution			_____
Humanities, Arts and Design			_____
Met by Required Courses [1]		0	_____
Social and Behavioral Sciences			_____
Met by Required Courses [2]		0	_____

Natural Sciences			_____
Recommended for Specialization 1 Crime Scene:		0-4	_____
Select one of the following:			_____
CHM130 & 130LL	Fundamental Chemistry and Fundamental Chemistry Laboratory		_____
CHM151 & 151LL	General Chemistry I and General Chemistry I Laboratory		_____
FOR105	Forensic Science: Physical Evidence		_____
FOR106	Forensic Science: Biological Evidence		_____
For Specialization 2 Lab Science: met by [3]		0	_____
CHM151 & 151LL	General Chemistry I and General Chemistry I Laboratory		_____
Total Credits		61-68	_____

[1] Met by AJS123 Ethics and the Administration of Justice in Required Courses area
[2] Met by AJS101 Introduction to Criminal Justice in Required Courses area
[3] Met by CHM151 General Chemistry I and CHM151LL General Chemistry I Laboratory

Homeland Security, Certificate of Completion

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Certificate of Completion: CCL 5322N
15 Credits
Program Contact
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Certificate of Completion (CCL) in Homeland Security program is designed to provide students with the knowledge and skills needed to conduct a homeland security evaluation and to assess, investigate and respond to terrorism incidents. It also provides criminal justice practitioners with an opportunity for academic growth and the development of specialized skills in homeland security.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
AJS/FSCOR139	Emergency Response to Terrorism	3	_____
AJS/FSCOR147	Emergency Preparedness	3	_____
AJS/FSCOR148	Fundamentals of Emergency Management	3	_____
AJS/FSCOR149	Hazard Mitigation	3	_____
AJS195	International and Domestic Terrorism	3	_____
Total Credits		**15**	_____

Law Enforcement, Certificate of Completion

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Certificate of Completion: CCL 5987N
15 Credits
Program Contact
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Certificate of Completion (CCL) in Law Enforcement is designed for students who are interested in pursuing a course of study specifically focused on law enforcement. The certificate program specializes in training and education related to the duties of law enforcement. The program is designed for the student with no Arizona police academy experience and is one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
AJS101	Introduction to Criminal Justice	3	_____
AJS123	Ethics and the Administration of Justice	3	_____
AJS205	Effective Communication and Report Writing in Criminal Justice	3	_____
AJS230	The Police Function	3	_____
AJS275	Criminal Investigation I	3	_____
Total Credits		**15**	_____

Law Enforcement Training, Associate in Applied Science

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Associate in Applied Science: AAS 3188
63-71 Credits
Program Contact
John Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Law Enforcement Training is designed to provide students with up-to-date industry specific training that will enhance their professional opportunities. Courses are also designed to teach students how to handle the challenges of the law enforcement profession. A Certificate of Completion (CCL) in Law Enforcement Training Academy is also available.

Program Notes

Students must earn a grade of "C" or better for all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Admission Criteria

Must meet AzPOST minimum requirements for a law enforcement officer and meet any physical requirements by the Academy Director.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
AJS101	Introduction to Criminal Justice	3	_____
AJS109	Substantive Criminal Law	3	_____
AJS113	Criminal Justice Crime Control Policies and Practices	3	_____
AJS151	Firearms I	1	_____
AJS153	Firearms II/ Handguns	1	_____
AJS154	Firearms III/Long Weapons	1	_____
AJS162	Domestic Violence	3	_____
AJS201	Rules of Evidence	3	_____
AJS205	Effective Communication and Report Writing in Criminal Justice	3	_____
AJS210	Constitutional Law	3	_____
AJS215	Criminalistics: Physical Evidence	3	_____
AJS230	The Police Function	3	_____
AJS260	Procedural Criminal Law	3	_____
AJS270	Community Relations	3	_____
AJS275	Criminal Investigation I	3	_____
AJS290BN	Courtroom Testimony Seminar	1	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
Select one of the following:		3	_____
ENG102	First-Year Composition		_____
ENG108	First-Year Composition for ESL		_____

See https://www.cgc.edu/CourseDescriptions for current course description information.

ENG111	Technical and Professional Writing		_____
Recommend for transfer to a university or MCCCD bachelor's program:			_____
ENG101	First-Year Composition		_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition		_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication [1]		_____
COM225	Public Speaking		_____
COM230	Small Group Communication [1]		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Any approved general education course(s) in the Mathematics area		3-6	_____
The following courses are recommended for students transfering:			_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
Any higher approved general education course in the Mathematical Applications (MA) area			_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area [2]		3	_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area		3	_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences area		4	_____
Total Credits		**63-71**	_____

[1] Recommended: COM110 Interpersonal Communication or COM230 Small Group Communication

[2] Recommended: AJS123 Ethics and the Administration of Justice

Legal Studies, Certificate of Completion

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Certificate of Completion: CCL 5966N
15 Credits
Program Contacts
Lisa Ruschak 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Certificate of Completion (CCL) in Legal Studies is designed for students who are interested in pursuing a course of study specifically focused on legal studies. It is one pathway to the Associate of Applied Science (AAS) in Administration of Justice.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
AJS109	Substantive Criminal Law	3	_____
AJS201	Rules of Evidence	3	_____
AJS123	Ethics and the Administration of Justice	3	_____
or AJS205	Effective Communication and Report Writing in Criminal Justice		_____
AJS210	Constitutional Law	3	_____
AJS260	Procedural Criminal Law	3	_____
Total Credits		**15**	_____

Mortuary Science, Associate in Applied Science

STEM

Associate in Applied Science: AAS 3765
70-83 Credits
Program Contact
Donna G. Backhaus | 480-988-8503 | donna.backhaus@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Mortuary Science program includes studies in public health; business management; natural sciences; legal, ethical and regulatory concerns; and clinical requirements associated with the mortuary field. The curriculum combines coursework in mortuary science with a general education component. The Mortuary Science associate degree is accredited by the American Board of Funeral Service Education (ABFSE) 992 Mantua Pike, Suite 108, Woodbury Heights, NJ 08097, 816-233-3747, www.abfse.org. Completion of the courses in the program prepares the student to sit for the National Board examination and begin state internship requirements.

Program Notes

Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Students must earn a grade of C or better in each course in the program.

Admission Criteria

Formal application and admission to the program is required. Prior to applying to the program, students must have proof of high school graduation or GED and must complete the following required coursework with a minimum GPA of 2.75 prior to entry into the Mortuary Science (MSP) cohort coursework: [(ACC107 or ACC111), BIO160 or (BIO201 and BIO202), (BPC+++++ or CIS+++++) (BPC110 or CIS105 recommended), (COM100 or COM110 or COM225 or COM230), (CRE101 or equivalent), (ENG101 or ENG107), (ENG102 or ENG108), GBS205 or GBS206 or GBS207 or PHI214, GBS151 or MGT175 or MGT251 or MGT253, (PSY101 or PHY132 or PSY156), Mathematics (any approved), and Humanities (REL100 recommended)] or have permission of Program Director

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
Select one of the following:		3-4	
ACC107	Bookkeeping Theory And Practice		
ACC111	Accounting Principles I		
ACC211	Financial Accounting		
ACC212	Managerial Accounting		
Select one of the following:		4-8	
BIO160	Introduction to Human Anatomy and Physiology		
BIO201 & BIO202	Human Anatomy and Physiology I and Human Anatomy and Physiology II		
Select one of the following:		1-3	
BPC	Any BPC Business-Personal Computers course [1]		
CIS	Any CIS Computer Information Systems course [1]		
Select one of the following:		3	
GBS205	Legal, Ethical, and Regulatory Issues in Business		
GBS206	Business Law (UCC)		
GBS207	Business Law (General Corporate)		
PHI214	Business Ethics		
Select one of the following:		3	
GBS151	Introduction to Business		
MGT175	Business Organization and Management		
MGT251	Human Relations in Business		
MGT253	Owning and Operating a Small Business		
MSP101	Mortuary Science: Orientation and History	3	
MSP105	Cremation for Mortuary Science	1	
MSP201	Mortuary Science, Sociology, and Religion	3	
MSP202	Embalming	3	
MSP202LL	Embalming Lab	1	
MSP203	Microbiology for Mortuary Science	3	

MSP204	Chemistry for Mortuary Science	3	_____
MSP205	Funeral Directing I	3	_____
MSP206	Funeral Directing II	3	_____
MSP207	Mortuary Science Restorative Art	3	_____
MSP207LL	Mortuary Science Restorative Art Lab	1	_____
MSP208	Funeral Service Law: Legal, Ethical, and Regulatory Considerations	3	_____
MSP209	Pathology for Mortuary Science	3	_____
MSP210	Psychology and Counseling for Mortuary Science	2	_____
MSP211	Compendium for Mortuary Science	3	_____
Select one of the following:		3	_____
PSY101	Introduction to Psychology [2]		_____
PSY132	Psychology and Culture		_____
PSY156	Understanding Death and Dying		_____
Note that students who desire to transfer should choose PSY101.			_____
General Education			_____
Core			_____
First-Year Composition			_____
Select two of the following:		6	_____
ENG101	First-Year Composition		_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition		_____
or ENG108	First-Year Composition for ESL		_____
ENG111	Technical and Professional Writing		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
OR Equivalent as indicated by assessment			_____
Mathematics			_____
Any approved general education course from the Mathematics area with a C or better [3]		3-6	_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area [4]		3	_____
Social and Behavioral Sciences			_____
Met by Required Courses [5]		0	_____
Natural Sciences			_____
Met by Required Courses [6]		0	_____
Total Credits		**70-83**	_____

1 BPC110 Computer Usage and Applications or CIS105 Survey of Computer Information Systems recommended
2 Students who desire to transfer should choose PSY101 Introduction to Psychology
3 Students who desire to transfer should choose from the MAT14+ or MAT15+ options
4 REL100 World Religions is recommended
5 Met by PSY101 Introduction to Psychology OR PSY156 Understanding Death and Dying in Required Courses.
6 Met by BIO160 Introduction to Human Anatomy and Physiology in Required Courses.

Personal Training, Certificate of Completion

HEALTH SCIENCES

Certificate of Completion: CCL 5421
18-18.5 Credits
Program Contact
Kim McGee, ACSM (EP-C) | 480-726-4246 | kimberly.mcgee@cgc.edu

Program Description

The Certificate of Completion (CCL) in Personal Training is designed to prepare students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM), and the American Council on Exercise (ACE) personal trainer certifications. These certifications are generally required for employment in personal training positions and/or professional advancement within the fitness industry. The curriculum provides students with the foundational skills needed to design and implement fitness programs appropriate to clients' goals and aligned with current industry best practices. A CCL in Personal Training: Advanced, an

Associate in Applied Science (AAS) in Exercise Science: Health, Fitness, and Sports Performance, and an Associate in Arts (AA), Emphasis in Exercise Science are also available for students interested in continuing their studies in this field.

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Select one of the following:		0-0.5	_____
EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers		_____
WED106	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)		_____
Current CPR/AED certification			_____
Required Courses			_____
EXS101	Introduction to Exercise Science	3	_____
EXS125	Introduction to Exercise Physiology	3	_____
EXS146	Introduction to Exercise Testing	1	_____
EXS215	Resistance Training and Recovery Techniques	3	_____
EXS217	Cardiorespiratory and Flexibility Training	3	_____
FON100	Introductory Nutrition	3	_____
or FON241	Principles of Human Nutrition		_____
PED101ST	Strength Training	1	_____
or PED101RT	Resistance Training for Improved Sports Performance		_____
Restricted Electives			_____
Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.		1	_____
EXS+++++ Any EXS Exercise Science course			_____
FON+++++ Any FON Food and Nutrition course			_____
HES+++++ Any HES Health Science course			_____
PED+++++ Any PED Physical Education course			_____
IFS110 Critical Research for College Success			_____
Total Credits		**18-18.5**	_____

Personal Training: Advanced, Certificate of Completion

HEALTH SCIENCES

Certificate of Completion: CCL 5445
30-30.5 Credits
Program Contact
Kim McGee, ACSM (EP-C) | 480-726-4246 | kimberly.mcgee@cgc.edu

Program Description

The Certificate of Completion (CCL) in Personal Training: Advanced is designed to prepare students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM), and the American Council on Exercise (ACE) personal trainer certifications. These certifications are generally required for employment in personal training positions and/or professional advancement within the fitness industry. The curriculum is designed to prepare students for employment in positions such as personal training within health and fitness clubs, wellness centers, and public and private recreation facilities. The curriculum includes the foundational courses required for the CCL in Personal Training coupled with advanced hands-on courses that foster the development of critical thinking and leadership skills important for developing, implementing and leading exercise programs. An Associate in Applied Science (AAS) in Exercise Science: Health, Fitness, and Sports Performance and an Associate in Arts (AA), Emphasis in Exercise Science are also available for students interested in continuing their studies in this field..

Program Notes

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-0.5	_____

EMT101	Basic Life Support/ Cardiopulmonary Resuscitation (CPR) for Health Care Providers		_____
WED106	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)		_____
Current CPR/AED certification			_____
EXS101	Introduction to Exercise Science	3	_____
EXS125	Introduction to Exercise Physiology	3	_____
EXS146	Introduction to Exercise Testing	1	_____
EXS215	Resistance Training and Recovery Techniques	3	_____
EXS217	Cardiorespiratory and Flexibility Training	3	_____
EXS246	Advanced Exercise Testing	2	_____
EXS255	Program Design: Muscular Fitness and Performance	3	_____
EXS257	Program Design: Cardiorespiratory Fitness	3	_____
Student must complete three (3) credits from the following EXS internship course options:			_____
Select one of the following:		3	_____
EXS270	Exercise Science Internship		_____
EXS270AA & EXS270AB	Exercise Science Internship and Exercise Science Internship		_____
FON100	Introductory Nutrition	3	_____
or FON241	Principles of Human Nutrition		_____
PED101ST	Strength Training	1	_____
or PED101RT	Resistance Training for Improved Sports Performance		_____
Select one of the following:		1	_____
PED101BC	Boot Camp		_____
PED101BS	Body Sculpting		_____
PED101CY	Cycling - Indoor		_____
PED101GF	Group Fitness/ Aerobics		_____
PED101KB	Kickboxing		_____
PED101LD	Latin Dancing		_____
PED101PC	Physical Conditioning		_____
PED101PS	Pilates		_____
PED101SR	Stretch and Relaxation		_____
PED101TC	Tai Chi		_____
PED101TX	Suspension Training		_____
PED101YG	Gentle Yoga		_____
PED101YH	Hatha Yoga		_____
PED101YO	Yoga		_____
PED101YP	Power Yoga		_____
PED101YR	Restorative Yoga		_____
PED101ZU	Zumba Fitness		_____
Restricted Electives			_____
Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.		1	_____
EXS+++++ Any EXS Exercise Science course			_____
FON+++++ Any FON Food and Nutrition course			_____
HES+++++ Any HES Health Science course			_____
PED+++++ Any PED Physical Education course			_____
IFS110 Critical Research for College Success			_____
Total Credits		**30-30.5**	_____

Victimology, Certificate of Completion

BEHAVIORAL SCIENCE AND HUMAN SERVICES

Certificate of Completion: CCL 5392N
15 Credits
Program Contacts
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description

The Certificate of Completion (CCL) in Victimology is designed for students who are interested in pursuing a course of study specifically focused on crisis intervention, community services, and victim rights. It is

one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
AJS101	Introduction to Criminal Justice	3	_____
AJS162	Domestic Violence	3	_____
AJS225	Criminology	3	_____
AJS255	Mental Health Conditions and the Criminal Justice System	3	_____
AJS/EMT/ FSCOR258	Victimology and Crisis Management in Public Safety	3	_____
Total Credits		**15**	_____

Languages, Humanities, & Information Studies

Paul Petrequin, Division Chair
480-857-5256 | paul.petrequin@cgc.edu

Prefix	Course
AFR	African American Studies
AIS	American Indian Studies
ASL	American Sign Language
CCS	Chicana and Chicano Studies
HIS	History
IFS	Information Studies
PHI	Philosophy
REL	Religious Studies
SPA	Spanish
SPH	Spanish Humanities
WST	Women's Studies

Careers Programs

Chicana & Chicano Studies
Language Studies
Spanish Language & Culture
Women & Gender Studies

- Chicana and Chicano Studies, Academic Certificate (p. 232)
- Language Studies, Academic Certificate (p. 233)
- Spanish Language and Culture, Academic Certificate (p. 234)
- Women and Gender Studies, Academic Certificate (p. 235)

American Sign Language

Yalim, Paulus

- B.S., Gallaudet University
- M.A., University of Phoenix

History

Garcia, Jerry

- B.A, M.A., Eastern Washington University
- Ph.D., History, Washington State University

Petrequin, Paul
Division Chair

- B.A., University of Oregon
- M.A., Ph.D., University of California, Santa Cruz

Library Services

Burgoyne, Mary Beth
Librarian

- B.A., Arizona State University
- M.L.S., University of Arizona

Howe, Barbara
Librarian

- B.A., Arizona State University
- J.D., Santa Clara University
- M.L.S., University of Arizona

Johnson, Monica
Librarian

- B.A., California Lutheran University
- M.A., University of Arizona

Kilbridge, Christine
Librarian

- B.A., Alma College
- M.A., Kansas State University
- M.L.I.S., Wayne State University

Martinez, Kelsy
Librarian

- B.A., Arizona State University
- M.L.S., Simmons University

Philosophy

Mowad, Nicholas

- B.A., University of Texas at Austin
- M.A., Ph.D., Loyola University Chicago

Spanish

TBD

Women's Studies

Thompson, Donna

- B.A., Yale University
- M.A., Duke University

African American Studies (AFR)

AFR110 / Introduction to African-American Studies
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the study of the African-American experience. Interdisciplinary approach includes historical underpinnings; population and cultural characteristics; social, economic, and political issues; and implications for the future. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Languages, Humanities & Information Studies

AFR202 / Ethnic Relations in the United States
3 Credits **/ 3.0 Periods for Lecture**
Basic concepts and processes, including historic overview, of inter-ethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to inter-ethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world. Prerequisites: None.
Crosslisted: CCS202, ASB202
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

AFR203 / African-American History to 1865
3 Credits **/ 3.0 Periods for Lecture**
History and cultural heritage of African-Americans from ancestral origins in Ancient Africa through the experience of chattel slavery in the Americas to eventual emancipation and participation in the American Civil War. Prerequisites: None.
Crosslisted: HIS203
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Languages, Humanities & Information Studies

American Indian Studies (AIS)

AIS140 / American Indian History
3 Credits **/ 3.0 Periods for Lecture**
Survey of American Indian history with emphasis on the last 200 years. Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty. Prerequisites: None.
Crosslisted: HIS140
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

American Sign Language (ASL)

ASL101 / American Sign Language I
4 Credits **/ 4.0 Periods for Lecture**
Introduction of principles, methods, and techniques for communicating with deaf people who sign. Development of expressive and receptive sign skills, manual alphabet, numbers, and sign vocabulary. Overview of syntax, grammar, and culture related to American Sign Language (A.S.L.). Prerequisites: None. ASL103 suggested as a corequisite but not required.
Division: Languages, Humanities & Information Studies

ASL102 / American Sign Language II
4 Credits **/ 4.0 Periods for Lecture**
Continued development of knowledge and language skills for communicating with deaf people who sign. Includes numbers, fingerspelling, and culture. Emphasis on enhancement of receptive sign skills and continued development of expressive sign skills. Application of rudimentary, syntactical, and grammatical structure stressed with continued development of sign vocabulary. Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.
Division: Languages, Humanities & Information Studies

ASL103 / Introduction to the Deaf Community
1 Credit **/ 1.0 Periods for Lecture**
History and development of American Sign Language (ASL) and English codes. Overview of education for Deaf and Hard of Hearing children. Legal rights and common adaptive devices used by Deaf and Hard of Hearing individuals. Prerequisites: None.
Division: Languages, Humanities & Information Studies

ASL110 / Fingerspelling
3 Credits **/ 3.0 Periods for Lecture**
Introduction to fingerspelling techniques. Focus on methods, theory, and applications on receptive and expressive skills including manual alphabet production and numbers. In addition, skill development in speed, dexterity, clarity, and lexicalized fingerspelling, numeric incorporation, prefixes, suffixes, and polysyllabic words. Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.
Division: Languages, Humanities & Information Studies

ASL201 / American Sign Language III
4 Credits **/ 4.0 Periods for Lecture**
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.
Division: Languages, Humanities & Information Studies

ASL202 / American Sign Language IV
4 Credits **/ 4.0 Periods for Lecture**
Advanced American Sign Language skills including continued vocabulary. Emphasis on conversational techniques in a cross-cultural framework. Continued work on conceptual accurate signing of English idioms and words with multiple meanings. Prerequisites: A grade of C or better in ASL201 or permission of Department or Division. (ENG101 or ENG107), ASL200, and (CRE101 or equivalent as indicated by assessment) suggested but not required. Completion of prerequisites within the last three years is required.
Division: Languages, Humanities & Information Studies

ASL298AA / Special Projects
1 Credit **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Languages, Humanities & Information Studies

ASL298AB / Special Projects
2 Credits **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Languages, Humanities & Information Studies

ASL298AC / Special Projects
3 Credits **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Languages, Humanities & Information Studies

Chicana and Chicano Studies (CCS)

CCS101 / Chicana and Chicano Studies
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the wealth and diversity of Chicana and Chicano Studies research from a variety of disciplinary perspectives through the use of a series of historical and social scientific studies, novels, testimonies, and films. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

History (HIS)

HIS101 / History of Western Civilization Middle Ages to 1789
3 Credits **/ 3.0 Periods for Lecture**
Survey of the history of the Western world from the emergence of Western civilization in the Middle Ages to the start of the French Revolution. Prerequisites: None.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS102 / History of Western Civilization 1789 to Present
3 Credits **/ 3.0 Periods for Lecture**
Survey of the history of the Western world from the French Revolution to the present. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS103 / United States History to 1865
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# HIS 1131
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS104 / United States History 1865 to Present
3 Credits **/ 3.0 Periods for Lecture**
The political, economic, and social development of United States from 1865 to the present time. Prerequisites: None.
SUN SUN# HIS 1132
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS109 / Mexican American History and Culture
3 Credits **/ 3.0 Periods for Lecture**
Examination of the origins and development of Mexican American peoples. Including culture, history and contributions within the United States. Emphasis on educational, social, and economic conditions of Mexican Americans of the southwest. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS110 / World History to 1500
3 Credits **/ 3.0 Periods for Lecture**
A global survey of the economic, social, cultural, environmental, and political elements of world history to 1500. Prerequisites: None.
SUN SUN#: HIS 1100
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

HIS111 / World History 1500 to the Present
3 Credits **/ 3.0 Periods for Lecture**
A survey of the economic, social, cultural, and political elements of world history from 1500 to the present. Prerequisites: None.
SUN SUN#: HIS 1111
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

HIS140 / American Indian History
3 Credits **/ 3.0 Periods for Lecture**
Survey of American Indian history with emphasis on the last 200 years. Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty. Prerequisites: None.
Crosslisted: AIS140
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS145 / History of Mexico
3 Credits **/ 3.0 Periods for Lecture**
Survey of the major forces that shaped the history of Mexico and its culturally diverse communities from pre-Columbian times to the present. Also examines how these historical forces continue to shape contemporary Mexican society and its place within the world. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS201 / History of Women in America
3 Credits **/ 3.0 Periods for Lecture**
Introduction to women's history from the colonial period to the present. Explores changes and developments which have influenced the lives of women. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS203 / African-American History to 1865
3 Credits **/ 3.0 Periods for Lecture**
History and cultural heritage of African-Americans from ancestral origins in Ancient Africa through the experience of chattel slavery in the Americas to eventual emancipation and participation in the American Civil War. Prerequisites: None.
Crosslisted: AFR203
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Languages, Humanities & Information Studies

HIS204 / African-American History 1865 to Present
3 Credits **/ 3.0 Periods for Lecture**
The multifaceted history and cultural heritage of African-American communities since the Civil War, presented within the broader context of U.S. history. This course explores the social, economic, political, and cultural history of African-American communities, including the historical and cultural impacts of slavery and discrimination, and the collective struggle for freedom, equality, and self-determination throughout U.S. history. Prerequisites: None.
Crosslisted: AFR204
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

Information Studies (IFS)

IFS110 / Critical Research for College Success
1 Credit **/ 1.0 Periods for Lecture**
Access, evaluate, and incorporate sources appropriately into academic projects. Prerequisites: None. Course Notes: IFS110 may be repeated for a total of four (4) credit hours.
Division: Languages, Humanities & Information Studies

IFS201 / Information in a Post-Truth World
3 Credits **/ 3.0 Periods for Lecture**
Develop a critical approach to using information as both a consumer and creator. Explore the impact of culture and worldview on how information is created, shared, understood, and used. Utilize analysis, evaluation, interpretation, and synthesis through substantial writing and/or speaking tasks. Prerequisites: A grade of C or better in ENG101 or ENG107.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

IFS150 / Social Media, Society, and Ourselves
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the role of social media in historical, social, cultural, and political contexts. Examine social media experience through the lens of creator and consumer. Analysis of the impact of social media on information and communication, including its influence on mental health, relationships, and identity formation. Prerequisites: None.
Division: Languages, Humanities & Information Studies

IFS210 / Digital Information and Access in a Global Society
3 Credits **/ 3.0 Periods for Lecture**
An investigation into digital information access in a global environment. Explores the evolving cultures and socioeconomic factors related to the digital flow of information. Examines emerging technologies to produce and distribute information ethically within a global society. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

IFS213 / Hacking and Open Source Culture
3 Credits **/ 3.0 Periods for Lecture**
Focus on the multi-dimensions of hacking and open source culture, including rule-breaking, innovation, and creative use of programming/technology. Social, economic, cultural, and political implications of hacking and technology, in historical and contemporary contexts will be addressed. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Languages, Humanities & Information Studies

Philosophy (PHI)

PHI101 / Introduction to Philosophy
3 Credits **/ 3.0 Periods for Lecture**
General consideration of human nature and the nature of the universe. Knowledge, perception, freedom and determinism, and the existence of God. Prerequisites: None.
SUN SUN# PHI 1101
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

PHI103 / Introduction to Logic
3 Credits **/ 3.0 Periods for Lecture**
Comprehensive introduction to logical reasoning. Exploration of informal logic, including common logical fallacies, delving into symbolic logic to analyze and construct valid arguments using formal methods such as truth tables, truth trees, or proofs. Emphasis on developing critical thinking skills essential for evaluating arguments in a variety of contexts. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
SUN SUN# PHI 1103
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Languages, Humanities & Information Studies

PHI104 / World Philosophy
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

PHI105 / Introduction to Ethics
3 Credits **/ 3.0 Periods for Lecture**
A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories. Prerequisites: None.
SUN SUN# PHI 1105
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

PHI216 / Environmental Ethics
3 Credits **/ 3.0 Periods for Lecture**
Philosophical consideration of diverse theories and perspectives on the environment, and application of these theories to global moral issues such as animal rights, preservation of wilderness and species, population, world hunger and poverty, and air and water pollution. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

PHI218 / Philosophy of Sexuality
3 Credits **/ 3.0 Periods for Lecture**
Philosophical examination of sexuality in human life. Historical and critical survey of philosophical and theological views from Greeks, Christianity, and Kant. Includes examinations of gender identity, sexual orientation, monogamy, polyamory, autoeroticism, (bondage and discipline, dominance and submission, sadism and masochism) (BDSM), and sex and technology. Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor. Course Notes: Course may contain adult content. All students under 18 years old are required to have a signed parental consent form on file, which is on the back of the "Students Under The Age of 18" Enrollment Form.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Languages, Humanities & Information Studies

Religious Studies (REL)

REL100 / World Religions
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# REL 1101
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

REL270 / Introduction to Christianity
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

Spanish (SPA)

SPA101 / Elementary Spanish I
4 Credits **/ 4.0 Periods for Lecture**
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.
SUN SUN# SPA 1101
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Languages, Humanities & Information Studies

SPA102 / Elementary Spanish II
4 Credits **/ 4.0 Periods for Lecture**
Continued study of grammar and vocabulary of the Spanish language and study of the Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills. Prerequisites: A grade of C or better in SPA101 or permission of Department or Division. Completion of prerequisites within the last three years is required.
SUN SUN# SPA 1102
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Languages, Humanities & Information Studies

SPA111 / Fundamentals of Spanish
4 Credits **/ 4.0 Periods for Lecture**
Accelerated study of elementary Spanish for students with previous Spanish coursework. Includes basic Spanish grammar, pronunciation, vocabulary and the study of the Spanish-speaking cultures. Emphasis on speaking, listening, reading, and writing skills. Prerequisites: A grade of C or better in SPA101, or SPA115, or two years of high school Spanish, or permission of Department or Division. Completion of prerequisites within the last three years is required.
Division: Languages, Humanities & Information Studies

SPA115 / Beginning Spanish Conversation I
3 Credits **/ 3.0 Periods for Lecture**
Basic pronunciation, vocabulary, sentence structures, and cultural awareness, necessary to develop speaking and listening skills in Spanish. Prerequisites: None.
Division: Languages, Humanities & Information Studies

SPA117 / Health Care Spanish I
3 Credits **/ 3.0 Periods for Lecture**
Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings. Prerequisites: None.
Division: Languages, Humanities & Information Studies

SPA201 / Intermediate Spanish I
4 Credits **/ 4.0 Periods for Lecture**
Continued study of essential Spanish grammar and Spanish-speaking cultures. Continued practice and development of reading, writing, and speaking skills in Spanish. Emphasis on fluency and accuracy in spoken Spanish. Prerequisites: A grade of C or better in SPA102, or SPA111, or permission of Department or Division. Completion of prerequisites within the last three years is required.
SUN SUN# SPA 2201
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Languages, Humanities & Information Studies

SPA202 / Intermediate Spanish II
4 Credits **/ 4.0 Periods for Lecture**
Review of grammar, continued development of Spanish language skills with continued study of the Spanish-speaking cultures. Prerequisites: A grade of "C" or better in SPA201, or permission of Department or Division. Completion of prerequisites within the last three years is required.
SUN SUN# SPA 2202
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Languages, Humanities & Information Studies

Spanish Humanities (SPH)

SPH245 / Hispanic Heritage in the Southwest
3 Credits **/ 3.0 Periods for Lecture**
A survey of Hispanic heritage in the Southwest. Cultural and social institutions and their contribution to the development of the region and its heritage. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

Women's Studies (WST)

WST100 / Introduction to Women's and Gender Studies
3 Credits **/ 3.0 Periods for Lecture**
Introduction to critical issues in women's studies. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

WST105 / Women of Color in the Americas
3 Credits **/ 3.0 Periods for Lecture**
Interdisciplinary, multi-perspective, and comparative study of the experiences of Women of Color in the Americas and their impact on the arts, literature, social structures and political movements. Examines how the intersection of race, class, gender, and sexuality has shaped their lived experiences and legacy. Prerequisites: None.
Division: Languages, Humanities & Information Studies

WST120 / Gender, Class, and Race
3 Credits **/ 3.0 Periods for Lecture**
A feminist discussion of gender, class and race as basic and central social categories that determine how we see ourselves and others and how they circumscribe our opportunities and privileges in American society. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Languages, Humanities & Information Studies

WST200 / Essential Feminist Writing
3 Credits **/ 3.0 Periods for Lecture**
Literary tracing of feminism from 18th century to present. Explores major issues related to women in the 20th century. Prerequisites: A grade of C or better in ENG101 or permission of Instructor.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Languages, Humanities & Information Studies

WST209 / Women and Films
3 Credits **/ 3.0 Periods for Lecture**
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.
Crosslisted: HUM209
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

WST284 / 19th Century Women Writers
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: ENH284
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

WST285 / Contemporary Women Writers
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: ENH285
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

Chicana and Chicano Studies, Academic Certificate

Academic Certificate: AC 6230N
12-13 Credits
Program Contacts
TBD

Program Description

The Academic Certificate (AC) in Chicana and Chicano Studies explores the unique experiences of the Chicana and Chicano people living in the Southwest. The Certificate provides a study of Mexican-American life in the society of the United States, including Mexican background, social and cultural differences, and experiences of assimilation.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites:

Code	Title	Credits	Semester
ENG101	First-Year Composition	3	
or ENG107	First-Year Composition for ESL		
Select one of the following:		0-3	
CRE101	College Critical Reading and Critical Thinking		
Equivalent as indicated by assessment			
Total Credits		**3-6**	

Code	Title	Credits	Semester
Required Courses			
CCS101	Chicana and Chicano Studies	3	
HIS109	Mexican American History and Culture	3	
SPH245	Hispanic Heritage in the Southwest	3	
Restricted Electives			
Select one of the following:		3-4	
ENH112	Chicano Literature		
HIS145	History of Mexico		
HUM213	Hispanic Film		
SPA101	Elementary Spanish I		
SPA102	Elementary Spanish II		
SPA103	Elementary Spanish for Spanish Speakers I		
SPA104	Elementary Spanish for Spanish Speakers II		
SPA201	Intermediate Spanish I		
SPA202	Intermediate Spanish II		

SPA203	Spanish for Spanish-Speaking Students I		_____
SPA204	Spanish for Spanish-Speaking Students II		_____
Total Credits		**12-13**	_____

Language Studies, Academic Certificate

Academic Certificate: AC 6237N
12-18 Credits
Program Contacts
Fabio Correa | fabio.correa@cgc.edu

Program Description

The Academic Certificate (AC) in Language Studies is designed to provide students with a foundation in the study of culture, language, and linguistic structures. The certificate provides students with the essential language skills and vocabulary to communicate in a language other than English.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Students may qualify to enter higher level language courses via departmental placement. Students wishing to earn credit for courses in which they placed out of should take the CLEP examination or apply credits earned through Advanced Placement (AP) or International Baccalaureate (IB) exams.

Program Requirements

Program Prerequisites:

Code	Title	Credits	Semester
201-level proficiency in a language other than English as indicated by assessment or coursework.		0-5	_____

Code	Title	Credits	Semester
Required Courses			_____
SLC201	Introduction to Linguistics	3	_____
AND			_____
Students must choose 3-5 credits in 202 or higher-level coursework in the language used to satisfy the program prerequisites.		3-5	_____
Restricted Electives			_____
Students must choose two (2) courses from the list below. Prerequisites may not be used to satisfy the Restricted Electives:		6-10	_____
AFR/ASB/ CCSOR202	Ethnic Relations in the United States		_____
or SOC241	Race and Ethnic Relations		_____
COM163	Intercultural Communication in Everyday Life		_____
COM263	Elements of Intercultural Communication		_____
JPH245	Traditional and Modern Japanese Culture		_____
PSY132	Psychology and Culture		_____
AHU+++	Any AHU Arabic Humanities course(s)		_____
ARB+++	Any ARB Arabic course(s)		_____
ASL+++	Any ASL American Sign Language course(s)		_____
CHI+++	Any CHI Chinese course(s)		_____
FLA+++	Any FLA Foreign Language Acquisition course(s)		_____
FRE+++	Any FRE French course(s)		_____
GER+++	Any GER German course(s)		_____
GRK+++	Any GRK Greek course(s)		_____
IPP+++	Any IPP Interpreter Preparation Program course(s)		_____
ITA+++	Any ITA Italian course(s)		_____
ITH+++	Any ITA Italian Humanities course(s)		_____
JPN+++	Any JPN Japanese course(s)		_____

LAT+++	Any LAT Latin course(s)		_____
NAV+++	Any NAV Navajo course(s)		_____
NVH+++	Any NVH Navajo Humanities course(s)		_____
PIM+++	Any PIM Pima course(s)		_____
POR+++	Any POR Portuguese course(s)		_____
RUS+++	Any RUS Russian course(s)		_____
SLC+++	Any SLC Studies in Language and Culture course(s)		_____
SPA+++	Any SPA Spanish course(s)		_____
SPH+++	Any SPH Spanish Humanities course(s)		_____
TRS+++	Any TRS Translation and Interpretation course(s)		_____
Total Credits		**12-18**	_____

Spanish Language and Culture, Academic Certificate

CULTURE AND SOCIETY

Academic Certificate: AC 6243N
25 Credits
Program Contacts
Fabio Correa | fabio.correa@cgc.edu

Program Description

The Academic Certificate (AC) in Spanish Language and Culture is designed to provide students with the essential language skills and vocabulary to communicate with confidence in diverse communicative situations. Instruction in the diverse cultural context will help students to understand the complex interdependence of language and culture.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses in the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Students may qualify to enter higher level Spanish courses by placement or may qualify to exempt out of taking any Spanish courses by assessment. Students wishing to earn credit for any course of which they are exempt by assessment should take the CLEP examination.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
SPA101	Elementary Spanish I	4	_____
SPA102	Elementary Spanish II	4	_____
SPA201	Intermediate Spanish I	4	_____
SPA202	Intermediate Spanish II	4	_____
Restricted Electives			_____
Select six (6) credits taught in Spanish and three (3) credits taught in English.		9	_____
ARH217	Mexican Art History		_____
FLA240	Foreign Language Teaching Methods		_____
HIS145	History of Mexico		_____
MHL156	Music in Latin America and the Caribbean		_____
SLC201	Introduction to Linguistics		_____
SPA115	Beginning Spanish Conversation I		_____
SPA116	Beginning Spanish Conversation II		_____
SPA117	Health Care Spanish I		_____
SPA118	Health Care Spanish II		_____
SPA119	Spanish for Educational Settings I		_____
SPA120	Spanish for Educational Settings II		_____
SPA205	Spanish for Medical Interpretation I		_____
SPA206	Spanish for Medical Interpretation II		_____
SPA225	Intermediate Spanish Conversation I		_____

SPA226	Intermediate Spanish Conversation II		_____
SPA235	Advanced Spanish Conversation I		_____
SPA236	Advanced Spanish Conversation II		_____
SPA241	Spanish and Spanish-American Film I		_____
SPA242	Spanish and Spanish-American Film II		_____
SPA251	Spanish Civilization		_____
SPA265	Advanced Spanish I		_____
SPA266	Advanced Spanish II		_____
SPA282++	Volunteerism for Spanish: A Service Learning Experience (any suffixed course)		_____
SPA298++	Special Projects (any suffixed course)		_____
SPH245	Hispanic Heritage in the Southwest		_____
SPH298++	Special Projects (any suffixed course)		_____
Total Credits		**25**	_____

Women and Gender Studies, Academic Certificate

CULTURE AND SOCIETY

Academic Certificate: AC 6225N
15 Credits
Program Contact
Donna Thompson | 480-857-5534| donna.thompson@cgc.edu

Program Description

The Academic Certificate (AC) in Women and Gender Studies is an intensive interdisciplinary liberal arts certificate program, which provides students with tools and opportunities to discuss and critique historical and contemporary theories and practices of feminism(s) and gender identities. The curriculum enables students to think critically, analyze problems, and communicate effectively. Using women`s experiences and perspectives, students explore cultural and global issues by completing a variety of courses focusing on gender, history, culture, class, race, ethnicity, and sexuality to foster equality and understanding.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
WST100	Introduction to Women's and Gender Studies	3	_____
Restricted Electives			_____
Students must complete 12 credits from the list below:		12	_____
ASB211	Women Across Cultures		_____
ENH/ WSTOR284	19th Century Women Writers		_____
ENH/ WSTOR285	Contemporary Women Writers		_____
HIS201	History of Women in America		_____
WST286	Women and Health: Body/ Mind/Spirit/ Connection		_____
HUM/ WSTOR209	Women and Films		_____
PSY235	Psychology of Gender		_____
REL/ WSTOR290	Women and World Religions		_____
SOC212	Gender and Society		_____
WST120	Gender, Class, and Race		_____
WST160	Women and the Early American Experience		_____
WST161	American Women Since 1920		_____
WST200	Essential Feminist Writing		_____
Total Credits		**15**	_____

Mathematics

Pamela Woodbury, Division Chair

480-857-5531 | pamela.woodbury@cgc.edu

Prefix	Course
MAT	Mathematics

Adamson, Scott

- A.A., Itasca Community College
- B.S., M.Ed., Northern Arizona University
- PH.D., Arizona State University

Bishop, Shannon

- B.A., M.A., Arizona State University
- PH.D., Sam Houston State University

Cox, Frank (Trey)

- B.A., M.S., Concordia University Wisconsin
- PH.D., Arizona State University

Evangelista, Arlene

- B.S., M.N.S., Ph.D., Arizona State University

Flores, Alfinio

- B.S., M.S., Universidad Nacional Autónoma de México
- Ph.D., The Ohio State University

Groseta, Alexandra (Sasha)

- B.A., M.A., Arizona State University

Guglielmo, Jason

- B.S., M.A., Arizona State University

Jeanson, Andrew

- B.S., Elmhurst University
- M.A., University of Arizona

Joyner, Kacie

- B.B.A., Texas Christian University
- M.N.S., Arizona State University

Judson-Garcia, Julia G.

- B.A., M.A., Arizona State University

Llamas-Flores, Silvia

- B.S., M.Ed., University of California, Las Angeles
- Ph.D., Arizona State University

Lock, Kayla

- B.S., California State University, Dominguez Hills
- M.A., PhD Arizona State University

Pardo, Roberta

- B.S., M.Ed., Northern Arizona University
- Ed.D., Sam Houston State University

Podmanik, Milos

- B.A., Arizona State University
- M.S., Northern Arizona University

Ramirez, Jason

- B.A., B.S., M.Ed., Northern Arizona University

Reynolds-Garza, Anne

- B.A., Eastern Illinois University
- M.A., M.Ed., Framingham State University

Steele, Arezoo (Sue)

- B.S., University of Melbourne, Australia
- M.S., Arizona State University

Strom, April

- B.A., M.A., Texas Tech University
- PH.D., Arizona State University

Woodbury, Pamela
Division Chair

- B.S., University of Miami
- M.S., Lehigh University

Mathematics (MAT)

MAT055 / Algebraic Structures
1 Credit **/ 1.0 Periods for Lecture**
Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Prerequisites: None.
Division: Mathematics

MAT056 / Functions I
1 Credit **/ 1.0 Periods for Lecture**
Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Prerequisites: A grade of C or better in MAT055, or an appropriate district placement.
Division: Mathematics

MAT057 / Functions II
1 Credit **/ 1.0 Periods for Lecture**
Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change. Prerequisites: A grade of C or better in MAT055 and MAT056, or an appropriate district placement.
Division: Mathematics

MAT112 / Mathematical Concepts and Applications
3 Credits **/ 3.0 Periods for Lecture**
A problem solving approach to mathematics as it applies to real-life situations. Development, use and communication of mathematical concepts and applications that relate to measurement, percentage, practical geometry, statistics, finance, and unit conversions. Prerequisites: None.
Division: Mathematics

MAT121 / Intermediate Algebra
4 Credits **/ 4.0 Periods for Lecture**
Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions. Prerequisites: A grade of C or better in each of the following courses: (MAT055, MAT056, and MAT057), OR a grade of C or better in MAT09+, OR an appropriate district placement. Course Notes: Students may receive credit for only one of the following: MAT120, OR MAT121, OR MAT122 OR MAT126.
Division: Mathematics

MAT141 / College Mathematics
4 Credits **/ 4.0 Periods for Lecture**
Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics. Prerequisites: An appropriate District placement, or a grade of C or better in (MAT052, MAT053, and MAT055), or (MAT055, MAT056, and MAT057), or MAT09+, or MAT103, or MAT114, or MAT115, or MAT12+. Course Notes: MAT141 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146.
SUN SUN# MAT 1142
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT142 / College Mathematics
3 Credits **/ 3.0 Periods for Lecture**
Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics. Prerequisites: An appropriate District placement, or a grade of C or better in (MAT052, MAT053, and MAT055), or (MAT055, MAT056, and MAT057), or MAT09+, or MAT103, or MAT114, or MAT115, or MAT12+. Course Notes: MAT142 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146.
SUN SUN# MAT 1142
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT151 / College Algebra/Functions
4 Credits **/ 4.0 Periods for Lecture**
Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair. Course Notes: Students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156.
SUN SUN# MAT 1151
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT152 / College Algebra/Functions
3 Credits **/ 3.0 Periods for Lecture**
Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair. Course Notes: Students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156.
SUN SUN# MAT 1151
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT187 / Precalculus
5 Credits **/ 5.0 Periods for Lecture**
Topics in algebra and trigonometry in preparation for calculus. Prerequisites: A grade of C or better in MAT15+, or an appropriate district placement. Course Notes: Students may receive credit for only one of the following: MAT182, or MAT187, or MAT188.
SUN SUN# MAT 1187
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT188 / Precalculus
4 Credits **/ 4.0 Periods for Lecture**
Topics in algebra and trigonometry in preparation for calculus. Prerequisites: A grade of C or better in MAT15+, or an appropriate district placement. Course Notes: Students may receive credit for only one of the following: MAT182 OR MAT187 OR MAT188.
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT206 / Elements of Statistics
3 Credits **/ 3.0 Periods for Lecture**
Basic concepts and applications of statistics, including data description, estimation and hypothesis tests. Prerequisites: A grade of C or better in MAT14+, or MAT15+, or MAT187, or MAT188, or equivalent, or an appropriate District placement, or permission of Department/Division Chair.
SUN SUN# MAT 1160
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Mathematics

MAT213 / Brief Calculus
4 Credits **/ 4.0 Periods for Lecture**
Introduction to the theory, techniques, and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences. Prerequisites: A grade of C or better in MAT15+, or MAT187, or MAT188, or an appropriate District placement. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.
SUN SUN# MAT 2212
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT217 / Mathematical Analysis for Business
3 Credits **/ 3.0 Periods for Lecture**
An introduction to the mathematics required for the study of business. Includes multivariable optimization, Lagrange multipliers, linear programming, linear algebra, probability, random variables, discrete and continuous distributions. Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221. Course Notes: Students may receive credit for only one of the following: MAT217 or MAT218.
Division: Mathematics

MAT220 / Calculus with Analytic Geometry I
5 Credits **/ 5.0 Periods for Lecture**
Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: A grade of C or better in MAT187, or MAT188, or an appropriate District placement. Course Notes: Students may receive credit for only one of the following: MAT220 OR MAT221.
SUN SUN# MAT 2220
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT221 / Calculus with Analytic Geometry I
4 Credits **/ 4.0 Periods for Lecture**
Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: A grade of C or better in MAT187, or MAT188, or an appropriate District placement. Course Notes: Students may receive credit for only one of the following: MAT220, or MAT221.
SUN SUN# MAT 2220
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT225 / Elementary Linear Algebra
3 Credits **/ 3.0 Periods for Lecture**
Introduction to matrices, systems of linear equations, determinants, vector spaces, linear transformations and eigenvalues. Emphasizes the development of computational skills. Prerequisites: A grade of C or better in MAT212 or MAT213 or MAT220 or MAT221, or equivalent.
Division: Mathematics

MAT227 / Discrete Mathematical Structures
3 Credits **/ 3.0 Periods for Lecture**
Course emphasizes discrete mathematics connections to computer science by exposing students to foundational concepts of set theory, logic, counting, induction, proof techniques, graph theory, and algorithms. Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221, or permission of Department/Division Chair.
SUN SUN# MAT 2227
Division: Mathematics

MAT230 / Calculus with Analytic Geometry II
5 Credits **/ 5.0 Periods for Lecture**
Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series. Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent. Course Notes: Students may receive credit for only one of the following: MAT230 or MAT231.
SUN SUN# MAT 2230
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT231 / Calculus with Analytic Geometry II
4 Credits **/ 4.0 Periods for Lecture**
Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series. Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent. Course Notes: Student may receive credit for only one of the following: MAT230 or MAT231.
SUN SUN# MAT 2230
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT240 / Calculus with Analytic Geometry III
5 Credits **/ 5.0 Periods for Lecture**
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 Notes: Student may receive credit for only one of the following: MAT240 or MAT241.
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT241 / Calculus with Analytic Geometry III
4 Credits **/ 4.0 Periods for Lecture**
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 Notes: Student may receive credit for only one of the following: MAT240 or MAT241.
SUN SUN# MAT 2241
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT256 / Investigating Quantity: Number, Operations and Numeration Systems
4 Credits **/ 4.0 Periods for Lecture**
Explore number, numeration systems and operations on numbers. Techniques of problem solving with an emphasis on exploring a variety of strategies. Use a variety of visualization techniques to develop a conceptual understanding of these topics. Prerequisites: A grade of C or better in (MAT15+ or higher), or (MAT12+ and MAT14+), or [MAT14+ and (MAT114 or MAT115)], or (MAT14+ and an appropriate District placement into MAT150, MAT151, or MAT152), or permission of Department/ Division Chair. Course Notes: MAT256 is designed to meet requirements for prospective elementary education teachers.
Division: Mathematics

MAT257 / Investigating Geometry, Probability and Statistics
4 Credits **/ 4.0 Periods for Lecture**
Explores geometry, measurement, probability and statistics. Uses visualization, technologies, problem solving, reasoning and proof to develop a conceptual understanding of these topics. Prerequisites: A grade of C or better in MAT256 or permission of Department/Division Chair. Course Notes: MAT257 is designed to meet the requirements for prospective elementary education teachers.
Division: Mathematics

MAT276 / Modern Differential Equations
4 Credits **/ 4.0 Periods for Lecture**
Introduces differential equations, theoretical and practical solution techniques with applications. Problem-solving using technology. Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department/Division Chair.
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT277 / Modern Differential Equations
3 Credits **/ 3.0 Periods for Lecture**
Introduces differential equations, theoretical and practical solution techniques with applications. Problem-solving using MATLAB. Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department/Division Chair. Course Notes: Students may receive credit for only one of the following: MAT276 or MAT277.
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT280 / Foundational Statistics for Engineers
3 Credits **/ 5.0 Periods for Lecture & Lab**
Fundamentals of probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, regression analysis, analysis of variance, and design of experiments. Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent.
Crosslisted: ECE280
Division: Mathematics

MAT282AA / Service-Learning Experience in Mathematics
1 Credit **/ 0.0 Periods for Laboratory**
Unpaid Service-Learning (SL) experience, completed with approved community partner. Prerequisites: Permission of Instructor. Course Notes: MAT282AA may be repeated for a total of six (6) credit hours. Standard grading is available according to procedures outlined in catalog.
Division: Mathematics

MAT305 / Mathematics for Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced mathematical concepts essential for understanding and applying techniques in machine learning using Python programming language. Focus on vector-based calculus, probability distributions, continuous optimization, and information theory. Prerequisites: A grade of C or better in (AIM250 and MAT227) or permission of Program Director.
Crosslisted: BAM305
Division: Mathematics

Nursing

Jill Anderson, Division Chair
480-988-8865 | jill.anderson@cgc.edu

Courses

Prefix	Course
HCC	Health Core Curriculum
HCR	Health Care Related
NUR	Nursing Science: Basic

Career Programs

Nursing

Associate in Applied Science (AAS)

- Registered Nurse Pathway, Associate in Applied Science (p. 242)

Anderson, Jill
Division Chair

- A.S., A.A., Portland Community College
- B.S.N., Oregon Health Sciences University
- M.S.N., M.B.A., University of Phoenix
- Ph.D., University of Arizona

Baugham, Catherine

- M.S.N., Grand Canyon University

Cruz, Patricia

- A.D.N., Triton College
- B.S.N., Benedictine University
- M.S.N., Grand Canyon University

Geraghty, Diana

- B.S., University of Virginia
- M.A., Grand Canyon University

Gerle, Kerry Lee

- M.A. Grand Canyon University

Millstone, Katie

- B.S.N, M.S.N., University of Phoenix; RNC

Staggar, William

- B.S.N., American University of Beirut
- M.S.N., University of Texas
- Ph.D., New Mexico State University

Vogel, Rachel

- A.D.N., Mesa Community College
- B.S.N., Arizona State University

Voss, Jennifer M.

- M.S., Grand Canyon University

Health Care Curriculum (HCC)

HCC130 / Fundamentals in Health Care Delivery
3 Credits **/ 3.0 Periods for Lecture**
Overview of current and recent development of health care professions, including career and labor market information, health care delivery systems, third party payers, and facility ownership. Health organization structure, patient rights and quality care. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Basic communication skills which facilitate inter-professional teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies. Prerequisites: None.
Division: Nursing and Health Sciences

HCC145AA / Medical Terminology for Health Care Professionals I
1 Credit **/ 1.0 Periods for Lecture**
Introduction to medical terms used in health care. Body systems approach to selected terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using basic word parts. Selected medical abbreviations and symbols and term spelling. Prerequisites: None.
Division: Nursing and Health Sciences

HCC145AB / Medical Terminology for Health Care Professionals II
1 Credit **/ 1.0 Periods for Lecture**
Selected medical terms used in health care. Body systems approach to more detailed terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using standard word parts. Selected abbreviations and symbols and term spelling. Prerequisites: A grade of C or better in HCC145AA.
Division: Nursing and Health Sciences

Health Care Related (HCR)

HCR210 / Clinical Health Care Ethics
3 Credits **/ 3.0 Periods for Lecture**
An introduction to health care ethics with emphasis on analysis and ethical decision making at both the clinical and health policy levels for health care professionals. Theoretical foundation of bioethics reviewed within historical and contemporary contexts. Prerequisites: A grade of C or better in ENG102 or ENG108 or permission of Instructor.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Nursing and Health Sciences

HCR220 / Introduction to Nursing and Health Care Systems
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the social, political, and economic contexts of the nursing profession and health care systems in the United States. Prerequisites: A grade of C or better in ENG102 or ENG108 or permission of Instructor.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Nursing and Health Sciences

HCR230 / Culture And Health
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo
Division: Nursing and Health Sciences

HCR240 / Human Pathophysiology
4 Credits **/ 4.0 Periods for Lecture**
Chemical, biological, biochemical, and psychological processes as a foundation for the understanding of alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered. Prerequisites: A grade of C or better in BIO202 or BIO205, or permission of Instructor.
Division: Nursing and Health Sciences

Nursing Science: Basic (NUR)

NUR104AB / Structured Nursing Review
1 Credit **/ 1.0 Periods for Lecture**
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. Corequisites: Concurrent enrollment in the Nursing program or permission of Department Chair. Course Notes: Course offered as Credit (P) No credit (Z) basis. NUR104AB may be repeated for a total of eight (8) credits.
Division: Nursing and Health Sciences

NUR152 / Nursing Theory and Science I
9 Credits **/ 16.88 Periods for Laboratory, 4.0 Periods for Lecture**
Introduction of Nurse of the Future competencies as a foundational framework for development of the professional nurse. Basic care concepts, the nursing process, and clinical reasoning are utilized to meet the needs of adult and older adult patients. Prerequisites: Admission into the Nursing Program.
Division: Nursing and Health Sciences

NUR172 / Nursing Theory and Science II
9 Credits **/ 11.81 Periods for Laboratory, 5.5 Periods for Lecture**
Utilization of Nurse of the Future competencies and clinical judgment measures to develop knowledge, skills, and attitudes to provide safe, quality patient care across the wellness-illness continuum in selected medical-surgical and mental health patients. Prerequisites: A grade of C or better in (BIO202 and NUR152) or permission of Nursing Department Chair.
Division: Nursing and Health Sciences

NUR252 / Nursing Theory and Science III
9 Credits **/ 11.81 Periods for Laboratory, 5.5 Periods for Lecture**
Application of critical thinking strategies and clinical judgment measures related to holistic care of the newborn and childbearing patients. Integration of concepts related to holistic care of adults and older adult patients with selected acute and chronic alterations in health. Integration of professional nursing standards in role development. Utilization of previous knowledge of physical, biologic, psycho-social sciences, and the cultural, spiritual aspects of nursing care. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care. Prerequisites: A grade of C or better in [(CRE101 or appropriate district placement) and NUR172 and PSY101] or permission of Nursing Department Chair.
Division: Nursing and Health Sciences

NUR283 / Nursing Theory and Science IV
9 Credits **/ 11.81 Periods for Laboratory, 5.5 Periods for Lecture**
Applies Nurse of the Future competencies and clinical judgment measures to practice and manage care for the child/family unit and adults requiring complex care throughout the wellness/illness continuum, and prepare for transition from student to professional nurse. Prerequisites: A grade of C or better in (BIO205 and NUR252) or permission of Nursing Department Chair.
Division: Nursing and Health Sciences

Maricopa Community Colleges (MCCCD) Allied Health or Nursing Program (S-13)

Most of the allied health or nursing program pathways include a program of study in a clinical training environment that may contain exposures to risks inherent in patient-oriented educational experiences (such as but not limited to bodily injury or communicable and infectious diseases). Students enrolling in clinical educational courses will be asked to sign a statement assuming all risks inherent in their coursework.

Use of Confidential Information

Students enrolled in allied health or nursing program pathways will have learning experiences in a health care setting where they will have access to confidential information. Prior to beginning any clinical studies, the students will be asked to sign an agreement to adhere to the requirements of those clinical sites and applicable law, including the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

MCCCD Required Background Checks

Students enrolled in an MCCCD allied health or nursing program are required to complete and pass clinical learning experiences, working with children, elderly persons, and other vulnerable populations. MCCCD's major clinical agency partners now mandate that any college students assigned to them for clinical experiences submit to a comprehensive background clearance prior to entering such learning experiences. Because the clinical experience portion of the programs is critical to completing a program of study, MCCCD has instituted two specific background check requirements in order for a student to enroll in a program. First, the student must obtain, at his or her own cost, a Level I Fingerprint Clearance Card from the Arizona Department of Public Safety. Precluding offenses for a Level I card can be found in Arizona Revised Statute § 41-1758.07 (https://www.azleg.gov/viewdocument/?docName=https://www.azleg.gov/ars/41/01758-07.htm). Additionally, students must also obtain a "pass" status on a MCCCD supplemental background check from MCCCD's authorized background check contractor. The student must also pay for this background check. The supplemental check will be based on the most stringent standards of MCCCD's clinical experience partners.

The sole program for which the background check requirements are different is the Emergency Medical Technician program. For that program, students must have obtained a Level 1 Fingerprint Clearance Card from the Arizona Department of Public Safety. They are also required, at the time of their clinical assignments, to submit to, pay for and pass any additional background check requirements of the clinical agencies to which their EMT program places students.

Certain licensing boards may require a separate background check or clearance card upon application for licensure or certification.

The MCCCD supplemental background check review may include searches of the following databases and information but MCCCD reserves the right to change the search criteria and the program background check requirements at any time without notice:

1. National Federal Health Care and Abuse Databases
2. Social Security Verification
3. Residency History
4. Arizona Statewide Criminal Records
5. Nationwide Criminal Databases
6. Nationwide Sexual Offender Registry
7. Homeland Security Search

Examples of background information that will result in a "fail" status on the supplemental background check include:

1. Social Security number does not belong to the applicant
2. Any inclusion on any registered sex offender database
3. Any inclusion on any of the Federal exclusion lists or Homeland Security watch lists
4. Any conviction of a felony no matter what age of the convictions
5. Any warrant any state
6. Any misdemeanor conviction for the following no matter how long ago:
   a. Violent crimes
   b. Sex crime of any kind including non consensual sexual crimes and sexual assault
   c. Murder, attempted murder
   d. Abduction
   e. Assault
   f. Robbery
   g. Arson
   h. Extortion
   i. Burglary
   j. Pandering
   k. Any crime against minors, children, vulnerable adults including abuse, neglect, exploitation
   l. Any abuse or neglect
   m. Any fraud
   n. Illegal drugs
   o. Aggravated DUI
7. Any misdemeanor controlled substance conviction in last 7 years
8. Any other misdemeanor conviction within last 3 years

[**Exceptions**: Any misdemeanor traffic (DUI is NOT considered traffic).

The information that MCCCD uses for the "pass/fail" background check is subject to change at any time without notice.

MCCCD recommends that students carry proof of the background clearance at all times during any clinical agency learning experience.

Duty to Report Changes; Removal

Students have an obligation to immediately report to the director of their program any change in the information that they supplied on forms submitted to initiate background checks relating to the allied health or nursing program. That includes information provided to the Arizona Department of Public Safety and MCCCD's supplemental background check vendor, as well as that related to the background check required by a clinical agency. Failure to do so will result in removal from the program. Additionally, any change in background check status that would affect the student's clearance under either MCCCD's or a clinical agency's standards will result in removal from a program.

Additional Clinical Agency Background Check

Some clinical agencies require that students assigned to their sites submit to a criminal background check covering other offenses, as well as to a drug screening. Students are required to pay for the additional agency clinical background check. A clinical agency that requires this additional background check may refuse to place a student due to information the clinical agency obtains in its background check even though that student possess a valid Level I Fingerprint Clearance Card and has obtained a "pass" status on the MCCCD supplemental background check.

Some conditions that have resulted in students being denied placement at clinical agencies include pending criminal charges, outstanding warrants, unfinished terms of a sentence (such as unpaid fines), pattern of repeated types of arrests/convictions, and failure to disclose all past arrests/convictions when asked to do so on any background check application.

Inability to Place

MCCCD has no obligation to make repeated attempts to place a student when the reason for MCCCD's inability to place the student is due to background check issues. Since clinical agency assignments are mandatory requirements for completion of a program, a student's inability to complete required clinical experience due to his or her background check issues will result in removal from the program.

Changes to Admission or Background Check Requirements

MCCCD may change its program admission requirements or background check requirements without notice at any time.

No Guarantee of Receipt of Licensure/Certificate

Many of the nursing and allied health programs prepare graduates for application for State or National certificates or licenses. In some professions, such licensure and certification is required prior to employment or practice in the profession. Graduation from a nursing and allied health program does not guarantee the receipt of a license or certificate to practice in the field of study.

Amended by Direct Chancellor Approval, June 1, 2017

Registered Nurse Pathway, Associate in Applied Science

HEALTH SCIENCES

Nursing

Associate in Applied Science: AAS 3812
62-75 Credits
Program Contacts

Director of Nursing
Jill Anderson| 480-988-8865 | jill.anderson@cgc.edu

Nursing Advisor
Maria Dela Torre | 480-988-8880 | chuy.delatorre@cgc.edu

Nursing Office
Teresa Hull | 480-988-8881 | teresa.hull@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Nursing Program is available at eight of the Maricopa Community Colleges. Clinical experiences are provided in a variety of healthcare settings. Nursing Program graduates are eligible to apply for the national exam for the registered nurse license. Licensing requirements are the exclusive responsibility of the State Board of Nursing.

The Associate in Applied Science (AAS) Nursing Program is approved by the Arizona State Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326; (404-975-5000); email: info@acennursing.org

Program Offerings

This program is offered at the following sites:

- Chandler-Gilbert Community College
- Estrella Mountain Community College
- Gateway Community College
- Glendale Community College
- Mesa Community College
- Paradise Valley Community College
- Phoenix College
- Scottsdale Community College

Waiver of Licensure/Certification Guarantee

Admission or graduation from the Nursing Program does not guarantee obtaining a license to practice nursing. Licensure requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college or school requirements for graduation.

Pursuant to A.R.S. 32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute

discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

Level One Fingerprint Clearance is required for admission into the program. Applicants must present a Level One Fingerprint Clearance Card to be copied by the advisor or designee. For a Department of Public Safety Fingerprint Clearance Card application, contact MCCCD Healthcare/Nursing Advisor. If there is any question about eligibility for licensure or certification, contact the nursing education consultant at the Arizona State Board of Nursing (602.771.7800).

Health Declaration

It is essential that nursing students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours at a time and perform bending activities. Students who have a chronic illness or condition must be maintained on current treatment and be able to implement direct patient care. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients` lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give careful consideration to the mental and physical demands of the program prior to making application. All must provide documentation of compliance with all health and safety requirements required to protect patient safety. Only students in compliance are permitted to enroll in nursing courses. Students will meet these requirements by providing the required documentation for the Health/Safety Requirements Documentation Checklist and the signed Health Declaration Form.

Health & Safety Requirements for the Maricopa Nursing Program

1. Students must submit a Health and Safety Documentation Checklist verifying completion of all requirements and maintain current status throughout the program.
2. Students must submit the Health Declaration Form signed by a licensed health care provider.
3. Students must test negative on a timed urine drug screen.
4. Admission to an Allied Health program requires that students be in compliance with the Maricopa County Community College District Supplemental Background Check policy. Program applications will not be accepted without a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Upon conditional program admission, the student must comply with all requirements of the current MCCCD background check policy.

University Transfer Students

Students who are planning to earn the Bachelor of Science in Nursing may obtain their prerequisite courses at the Maricopa Community Colleges. For information on courses that meet requirements for admission into a baccalaureate program, please contact a program advisor.

Registered Nurse Pathway

Associate in Applied Science Degree in Nursing Program

The Associate in Applied Science (AAS) degree in Nursing graduate is eligible to apply for licensure as a Registered Nurse (RN). The RN is educated as a generalist who delivers health care to clients and family groups and has competencies related to the art and science of nursing. The RN may be employed in a variety of acute, long term, and community-based healthcare settings. The AAS degree in Nursing provides the graduate with an educational foundation for articulation into the university setting.

Program Notes

Students must earn a grade of “C” or better in all courses required within the program. Overall program minimum GPA = 2.00.

++ indicates any suffixed course may be selected.

Course Fee Information

Please see class schedule for information regarding course fees.

Maricopa Nursing is aligned with Nurse of the Future Competencies: Person-Centered Care, Professionalism, Leadership, Systems-Based Practice, Informatics and Technology, Communication, Teamwork and Collaboration, Safety, Quality Improvement, and Evidence-Based Practice. These competencies focus on key stakeholders of healthcare clients, colleagues and communities. Demonstration of the competencies will signify preparation for successful transition into nursing practice and further professional development.

Admission Criteria

High school diploma or GED is required for the Associate in Applied Science degree in Nursing. Applicants must signify that they meet this requirement by providing high school diploma/transcripts or GED completion OR by signing the nursing application page containing the ‘Declaration of High School Graduation or GED Completion.’ In some instances, high school diploma/transcripts or proof of GED completion may be required.

Formal application and admission to the program is required. There are limited spaces available in the Nursing program. Only students who have completed all of the general education and introductory courses noted above may have their name added to the queue of those waiting for an available space in a cohort. A passing score on a nursing program admission test is required to complete an application.

Applicants for Advanced Placement must receive a passing score on a practical nursing content exam for placement into Block 3. The final placement decision rests with the Nursing Program Chair at the college to which the student is accepted. Advanced placement applications are maintained for two years from the date of application. After two years, the applicant is required to review, update, and resubmit the application.

The Nursing Program Chair reserves the right to deny acceptance of an admission application if the applicant was previously dismissed for issues relating to academic integrity, unsafe patient care, and/or two (2) or more failures from any nursing program.

All applicants holding or receiving a certificate or license as a Nursing Assistant and/or license as a Practical Nurse must remain in good standing with the Regulatory Board. Once enrolled, students receiving any disciplinary actions against their certificate or license must notify the Nursing Program Chair within five (5) school days. The Nursing Program Chair reserves the right to restrict the student`s participation in clinical experiences and involvement in patient care until the certificate and/or license is valid and unrestricted.

Program Requirements

Code	Title	Credits	Semester
Required Courses			_____
Select one of the following:		0-4	_____
BIO156	Introductory Biology for Allied Health		_____
BIO181	General Biology (Majors) I		_____
One year of high school biology			_____
BIO201	Human Anatomy and Physiology I	4	_____
Select one of the following:		0-4	_____
CHM130 & 130LL	Fundamental Chemistry and Fundamental Chemistry Laboratory		_____
CHM130AA	Fundamental Chemistry with Lab		_____
One year of high school chemistry			_____
NUR152	Nursing Theory and Science I	9	_____
NUR172	Nursing Theory and Science II	9	_____
NUR252	Nursing Theory and Science III	9	_____
NUR283	Nursing Theory and Science IV	9	_____
General Education			_____
Core			_____
First-Year Composition [1]			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Waived		0	_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
OR Equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-5	_____
MAT140	College Mathematics		_____
MAT141	College Mathematics		_____
MAT142	College Mathematics		_____
Satisfactory completion of higher level math course			_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		2	_____
Social and Behavioral Sciences			_____
PSY101	Introduction to Psychology	3	_____
Natural Sciences			_____
BIO202 & BIO205	Human Anatomy and Physiology II and Microbiology	8	_____
Total Credits		**62-75**	_____

[1] Three credits of First Year Composition are met by ENG101 First-Year Composition or ENG107 First-Year Composition for ESL in Program Prerequisites area

Physical Sciences & Engineering

Michael McFavilen, Division Chair
480-732-7336| michael.mcfavilen@cgc.edu

Courses

Prefix	Course
AIM	Artificial Intelligence and Machine Learning
AST	Astronomy
BAM	Baccalaureate Artificial Intelligence Machine Learning
CHM	Chemistry
ECE	Engineering Science
EEE	Electrical Engineering
ELE	Electronics
GLG	Geology
GPH	Physical Geography
PHY	Physics

Career Programs

Artificial Intelligence
Artificial Intelligence and Machine Learning

Associate in Applied Science (AAS)

- Artificial Intelligence and Machine Learning, Associate in Applied Science (p. 252)
- Engineering Technology, Associate of Applied Science (p. 260)

Certificate Of Completion (CCL)

- Artificial Intelligence and Machine Learning, Certificate of Completion (p. 259)

Bachelor of Science (BS)

- Artificial Intelligence and Machine Learning, Bachelor of Science (p. 254)

Artificial Intelligence and Machine Learning

Matar, Habib

- M.S. Arizona State University

Astronomy

Viola, Donna

- B.S., University of Maryland
- Ph.D., University of Arizona

Chemistry

Krishnaswamy, Sujatha

- B.S., University of Madras
- M.S., Indian Institute of Technology
- M.S., Ph.D., Vanderbilt University

McFavilen, Michael
Division Chair

- B.S., M.S., University of California at San Diego
- M.S., Arizona State University

Sheet, Justin

- B.S., M.Ed., Northern Arizona University

Woodrum, Brian

- B.S., Elmhurst College
- Ph.D., Arizona State University

Engineering

Matar, Bassam

- B.S., Oklahoma State University
- M.S., Northern Arizona University

Neal, Nichole

- M.S., Kettering University

Silvestri, Fanny

- B.A., Ecole Supérieure des Techniques Aéronautiques et de Construction Automobile
- M.A., University of Montreal

Wong, Henry

- M.S., B.S.E., Arizona State University

Geology

Ruberto, Thomas

- B.S., M.S., Ph.D., Arizona State University

Geography

Moll, Heather

- B.A.E ., M.A.S., Ph.D., Arizona State University

Physics

Flaherty, Sean

- B.S., California Lutheran University
- M.N.S., Arizona State University

Richardson, Arlisa

- B.S., Grambling State University
- M.S., University of Texas at Dallas
- M.S., Ph.D., Arizona State University

Roman, Kathryn

- M.S.N., Arizona State University

Artificial Intelligence and Machine Learning (AIM)

AIM100 / Introduction to Artificial Intelligence
3 Credits **/ 3.0 Periods for Lecture**
Basic concepts and applications of artificial intelligence (AI), including AI project cycles. Focus on issues surrounding AI including ethics, bias, culture, regulations, and professional expectations. Prerequisites: None.
Division: Physical Sciences and Engineering

AIM111 / Introduction to Data Science
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the basics of data science, including data handling, problem framing in a data-centric context, the foundational techniques of exploratory data analysis (EDA), data visualization, and data ethics. Students will gain practical experience in using various data science libraries and tools through hands-on exercises and projects. Prerequisites: A grade of C or better in (CSC101 and AIM100) or permission of Program Director.
Division: Physical Sciences and Engineering

AIM110 / Introduction to Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to machine learning concepts and Python applications, including data acquisition, supervised and unsupervised learning, and data modeling. Prerequisites: A grade of C or better in AIM100, CIS156, and MAT206.
Division: Physical Sciences and Engineering

AIM210 / Natural Language Processing
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental concepts in Natural Language Processing (NLP) and text processing. Focus on knowledge and skills necessary to create a language recognition application. Prerequisites: A grade of C or better in AIM110.
Division: Physical Sciences and Engineering

AIM220 / Artificial Intelligence for Computer Vision
3 Credits **/ 4.0 Periods for Lecture & Lab**
Understand and apply the basic techniques to process images using OpenCV and Python libraries. Prerequisites: A grade of C or better in AIM110.
Division: Physical Sciences and Engineering

AIM230 / Artificial Intelligence for Business Solutions
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamentals of artificial intelligence (AI) and machine learning to support business solutions. Prerequisites: A grade of C or better in AIM210 and AIM220.
Division: Physical Sciences and Engineering

AIM240 / Artificial Intelligence Capstone Project
3 Credits **/ 4.0 Periods for Lecture & Lab**
Focus on how a social issue is explored, brought through the Artificial Intelligence (AI) Project cycle, and delivered as a solution using the different domains of AI, including computer vision and natural language processing. Prerequisites: A grade of C or better in AIM210 and AIM220.
Division: Physical Sciences and Engineering

AIM250 / Machine Learning I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of statistical machine learning algorithms and Python applications with an introduction to deep learning. Emphasis on data input, algorithm selection, hyperparameter tuning, and model evaluation and selection. Prerequisites: A grade of C or better in [AIM111, (MAT230 or MAT231), MAT225, and MAT206] or permission of Program Director.
Division: Physical Sciences and Engineering

Astronomy (AST)

AST101 / Survey of Astronomy
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Survey of astronomy for the nontechnical student. The history, content, and evolution of the solar system and the universe in general. Astronomical principles and instrumentation. The planets, moons, sun, comets, stars and star formation, galaxies, and cosmology. Prerequisites: None.
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Physical Sciences and Engineering

AST106 / Life in the Universe
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduction to the search for life in the universe for the non-science major. Earth's location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets. Prerequisites: A grade of C or better in MAT090 or MAT091 or MAT092 or completion of higher level mathematics course, or satisfactory placement.
Crosslisted: GLG106
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

AST111 / Introduction to Solar System Astronomy
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduction to astronomy for the non-science major. The scientific method, properties of light, astronomical instruments, our Solar System and solar systems around other stars. Includes hands-on astronomical observations and laboratory exercises. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory district placement.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

AST112 / Introduction to Stars, Galaxies, and Cosmology
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduction to astronomy for the non-science major. Structure and evolution of stars; supernovae, black holes, and quasars; nebulae; star clusters; galaxies; cosmology, including the birth and death of the universe. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory district placement. Course Notes: Note that AST111 is not a prerequisite for this course.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

AST294AB / Special Topics in Astronomy
1 Credit **/ 1.0 Periods for Lecture**
Conceptual, experimental, and computational aspects of a special topic in astronomy. Prerequisites: Permission of Department or Division. Course Notes: AST294AB may be repeated for credit.
Division: Physical Sciences and Engineering

Baccalaureate Artificial Intelligence Machine Learning (BAM)

BAM305 / Mathematics for Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced mathematical concepts essential for understanding and applying techniques in machine learning using Python programming language. Focus on vector-based calculus, probability distributions, continuous optimization, and information theory. Prerequisites: A grade of C or better in (AIM250 and MAT227) or permission of Program Director.
Crosslisted: MAT305
Division: Physical Sciences and Engineering

BAM310 / Machine Learning II: Deep Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of deep learning algorithms and Python applications. Emphasis on data input, algorithm selection, hyperparameter tuning, and deep learning model evaluation and selection. Prerequisites: A grade of C or better in AIM250 or permission of Program Director.
Division: Physical Sciences and Engineering

BAM320 / Computer Vision
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of vision with computers utilizing Python tools and libraries. Emphasis on image processing and feature detection as it applies to various computer vision tasks, utilizing visualizations for transparency. Includes statistical and deep computer vision techniques. Prerequisites: A grade of C or better in (BAM310 and BAM/MAT305) or permission of Program Director.
Division: Physical Sciences and Engineering

BAM330 / Natural Language Processing for Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of natural language processing utilizing Python tools and libraries. Emphasis on computer linguistic understanding as it applies to various natural language tasks. Statistical and deep natural language techniques will be covered including large language models. Prerequisites: A grade of C or better in (BAM310 and BAM/MAT305) or permission of Program Director.
Division: Physical Sciences and Engineering

BAM440 / Hardware Optimization for Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Explores advanced techniques in parallel computing for optimizing performance in machine learning applications. Focus on design, implementation, and evaluation of parallel algorithms across various hardware architectures, including CPUs, GPUs, and custom artificial intelligence accelerators. Includes hands-on projects and real-world case studies to develop the skills necessary to leverage parallel computing effectively to accelerate machine learning tasks. Prerequisites: A grade of C or better in CSC/EEE230, CSC240++, BAM/MAT305, and BAM310.
Division: Physical Sciences and Engineering

BAM450 / Planning and Optimization for Automation
3 Credits **/ 4.0 Periods for Lecture & Lab**
Explores optimization path for automation. Covers a diverse array of techniques including evolutionary algorithms, reinforcement learning, and swarm intelligence to navigate complex environments. Emphasis on hands-on projects and theoretical exploration, including design and implementation of optimized paths. Prerequisites: A grade of C or better in CSC310, BAM/MAT305, and BAM310.
Division: Physical Sciences and Engineering

BAM490 / Artificial Intelligence Capstone I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Capstone project with opportunities for research and application of artificial intelligence and machine learning knowledge and skills obtained throughout the student's program of study. Focus on project research, selection, design, and implementation with emphasis on communication, critical thinking, and technical skills. Prerequisites: A grade of C or better in BAM320, BAM330, and CSC310.
Division: Physical Sciences and Engineering

BAM499 / Artificial Intelligence Capstone II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Completion of capstone project using research and application of artificial intelligence and machine learning knowledge and skills obtained throughout the student's program of study. Focus on project testing, enhancement, and evaluation. Emphasis on self-assessment, development of a written report, project defense, and career development. Prerequisites: A grade of C or better in BAM490.
Division: Physical Sciences and Engineering

Chemistry (CHM)

CHM107 / Chemistry and Society
3 Credits **/ 3.0 Periods for Lecture**
A survey of chemistry and its impact on society and the environment. Prerequisites: None. Course Notes: Completion of CHM107LL required to meet the Natural Science requirement.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM107LL / Chemistry and Society Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM107. Prerequisites or Corequisites: CHM107. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM107
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM130 / Fundamental Chemistry
3 Credits **/ 3.0 Periods for Lecture**
A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Prerequisites: A grade of C or better in [(CHM100, or high school algebra, or MAT140 or higher, or an EdReady-Quantitative Reasoning, Algebra and Statistics score of 70 or higher, or an EdReady-College Algebra score of 80 or higher) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM130LL. Arizona Shared Unique Number SUN# CHM 1130 in combination with: CHM130LL. Students may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA.
SUN SUN# CHM 1130
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM130AA / Fundamental Chemistry with Lab
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Prerequisites: A grade of C or better in [(CHM100, or high school algebra, or MAT140 or higher, or an EdReady-Quantitative Reasoning, Algebra and Statistics score of 70 or higher, or an EdReady-College Algebra score of 80 or higher) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair. Course Notes: Student may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA.
SUN SUN# CHM 1130
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM130LL / Fundamental Chemistry Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM130. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM130. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM130. Arizona Shared Unique Number SUN# CHM 1130 in combination with: CHM130. Students may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA.
SUN SUN# CHM 1130
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM138 / Chemistry for Allied Health
3 Credits **/ 3.0 Periods for Lecture**
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: A grade of C or better in (CHM100 or MAT090 or MAT091 or MAT092 or higher or satisfactory math placement), or one year of high school chemistry taken within the last five years with a grade of C or better, or permission of the Instructor, or Department or Division Chair.
Division: Physical Sciences and Engineering

CHM138LL / Chemistry for Allied Health Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM138, Chemistry for Allied Health. Prerequisites: None. Corequisites: CHM138.
Division: Physical Sciences and Engineering

CHM151 / General Chemistry I
3 Credits **/ 3.0 Periods for Lecture**
Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM151LL. Arizona Shared Unique Number SUN# CHM 1151 in combination with: CHM151LL. Completion of all prerequisites within the last two years is recommended. Students may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.
SUN SUN# CHM 1151
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM151AA / General Chemistry I with Lab
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.
SUN SUN# CHM 1151
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM151LL / General Chemistry I Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM150 or CHM151. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM150 or CHM151. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM150 or CHM151. Arizona Shared Unique Number SUN# CHM 1151 in combination with: CHM150 or CHM151. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.
SUN SUN# CHM 1151
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM152 / General Chemistry II
3 Credits **/ 3.0 Periods for Lecture**
A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of CHM152LL required to meet the Natural Science requirement. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with CHM152LL.
SUN SUN# CHM 1152
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM152AA / General Chemistry II with Lab
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.
SUN SUN# CHM 1152
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM152LL / General Chemistry II Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM152. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM152. Course Notes: Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM152.
SUN SUN# CHM 1152
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM230 / Fundamental Organic Chemistry
3 Credits **/ 3.0 Periods for Lecture**
Chemistry of representative groups of organic compounds, emphasizing biological applications. Prerequisites: A grade of C or better in (CHM130 and CHM130LL) or [(CHM150 or CHM151) and CHM151LL], or permission of Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230LL. Arizona Shared Unique Number SUN#: CHM 2230. Completion of prerequisites within the last two years recommended. CHM230 course content is designed to meet the needs of students in such areas as agriculture, home economics, nursing, pre-physician assistant, and physical education among others. Students may receive credit for only one of the following: CHM230 and CHM230LL, or CHM230AA.

SUN SUN# CHM 2230
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM230LL / Fundamental Organic Chemistry Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM230. Prerequisites: A grade of C or better in CHM130LL or CHM151LL, or equivalent. Prerequisites or Corequisites: CHM230. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230. CHM230LL students may receive credit for only one of the following: (CHM230 and CHM230LL), or CHM230AA. Completion of prerequisites within the last two years recommended. Designed for students in agriculture, dental hygiene, home economics, nursing, and physical therapy.

SUN SUN# CHM 2230
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM235 / General Organic Chemistry I
3 Credits **/ 3.0 Periods for Lecture**
Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized. Prerequisites: A grade of C or better in (CHM152 and CHM152LL), or CHM152AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Student may receive credit for only one of the following: CHM235 and CHM235LL, or CHM235AA. Completion of prerequisites within the last two years recommended.

SUN SUN# CHM 2235
Division: Physical Sciences and Engineering

CHM235LL / General Organic Chemistry I Laboratory
1 Credit **/ 4.0 Periods for Laboratory**
Laboratory experience in support of CHM235. Prerequisites: A grade of C or better in CHM235 or Corequisites: CHM235. Completion of prerequisites within the last two years recommended.

SUN SUN# CHM 2235
Division: Physical Sciences and Engineering

CHM236 / General Organic Chemistry II
3 Credits **/ 3.0 Periods for Lecture**
Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Prerequisites: A grade of C or better in (CHM235 and CHM235LL) or CHM235AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Student may receive credit for only one of the following: CHM236 and CHM236LL, or CHM236AA. Completion of prerequisites within the last two years recommended.

SUN SUN# CHM 2236
Division: Physical Sciences and Engineering

CHM236LL / General Organic Chemistry II Laboratory
1 Credit **/ 4.0 Periods for Laboratory**
Laboratory experience in support of CHM236. Prerequisites: A grade of C or better in CHM236 or Corequisites: CHM236. Completion of prerequisites within the last two years recommended.

SUN SUN# CHM 2236
Division: Physical Sciences and Engineering

CHM260 / Fundamental Biochemistry
3 Credits **/ 3.0 Periods for Lecture**
Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates and lipids; the utilization and synthesis of these materials by living systems and the relationship of the processes to energy production and utilization. Prerequisites: A grade of C or better in [(CHM230 and CHM230LL) or CHM230AA], or [(CHM235 and CHM235LL) or CHM235AA], or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended. Designed for students in agriculture, dental hygiene, home economics, nursing, and physical therapy.
Division: Physical Sciences and Engineering

Engineering Science (ECE)

ECE102 / Engineering Analysis Tools and Techniques
2 Credits **/ 4.0 Periods for Lecture & Lab**
Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design. Prerequisites: A grade of C or better in MAT15+ or higher-level mathematics course, or an appropriate District placement above MAT15+, or permission of Instructor or Division or Department Chair. Course Notes: Arizona Shared Unique Number SUN# EGR 1102 - In combination with: ECE103

SUN SUN# EGR 1102
Division: Physical Sciences and Engineering

ECE103 / Engineering Problem Solving and Design
2 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamentals of the design process: engineering modeling, communication and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession. Prerequisites: A grade of C or better in ECE102 or permission of Instructor or Division or Department Chair. Course Notes: Student may receive credit for only one of the following: ECE103 or ECE103EP.

SUN SUN# EGR 1102
Division: Physical Sciences and Engineering

ECE105 / MATLAB Programming
1 Credit **/ 2.0 Periods for Lecture & Lab**
Use MATLAB to solve engineering problems. An overview of programming, including matrices, structures, strings, functions, control flow, file management, data analysis, graphing capabilities, and mathematical calculations. Prerequisites: A grade of C or better in [(MAT150 or MAT151 or MAT152 or MAT155 or MAT156) and MAT182] or (MAT187 or MAT188) or higher level mathematics course or permission of Instructor or Division or Department Chair.
Division: Physical Sciences and Engineering

ECE150 / Exploring Engineering and its Impact on Society
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the profession of engineering and its impact on culture and society. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Physical Sciences and Engineering

ECE211 / Engineering Mechanics-Statics
3 Credits **/ 2.0 Periods for Laboratory, 3.0 Periods for Lecture**
Modeling of static equilibrium in particles and rigid bodies through analysis of forces and mechanical properties. Prerequisites: A grade of C or better in PHY121 or permission of Instructor or Division or Department Chair. Corequisites: MAT230 or MAT231 or permission of Instructor or Division or Department Chair.
Division: Physical Sciences and Engineering

ECE212 / Engineering Mechanics-Dynamics
3 Credits **/ 2.0 Periods for Laboratory, 3.0 Periods for Lecture**
Modeling of dynamic motion in particles and rigid bodies through kinetics and kinematics. Work and energy principles; impulse and momentum principles; planar kinematics; equations of motion; conservation of energy and momentum. A grade of C or better required in all Prerequisites. Prerequisites: (ECE211 and PHY121) or permission of Instructor or Division or Department Chair. Prerequisites or Corequisites: MAT240, or MAT241, or permission of Instructor or Division or Department Chair.
Division: Physical Sciences and Engineering

ECE215 / Mechanics of Materials
3 Credits **/ 5.0 Periods for Lecture & Lab**
Designed to provide students with a strong fundamental foundation in the mechanics of solids. Includes the concepts of stress and strain applied to the analysis and design of members subjected to axial and torsional loads and members subjected to shear and bending, applications and transformation of plane stress and plane strain, deformation of beams, and elastic buckling of columns. Prerequisites: A grade of C or better in ECE211 or ECE214 or permission of Instructor or Division or Department Chair.
Division: Physical Sciences and Engineering

ECE216 / Computer-Aided Engineering
2 Credits **/ 2.0 Periods for Lecture**
Introduction to engineering graphics, including tolerancing and fasteners, as well as creation and use of engineering drawings. Prerequisites: A grade of C or better in ECE103 or permission of Instructor or Division or Department Chair. Corequisites: ECE216LL.
Division: Physical Sciences and Engineering

ECE216LL / Computer-Aided Engineering Laboratory
1 Credit **/ 2.0 Periods for Laboratory**
Laboratory experience in support of ECE216. Prerequisites: A grade of C or better in ECE103 or permission of Instructor. Corequisites: ECE216.
Division: Physical Sciences and Engineering

ECE280 / Foundational Statistics for Engineers
3 Credits **/ 5.0 Periods for Lecture & Lab**
Fundamentals of probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, regression analysis, analysis of variance, and design of experiments. Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent.
Crosslisted: MAT280
Division: Physical Sciences and Engineering

ECE297WA / Engineering Internship
1 Credit **/ 0.0 Periods for Laboratory**
Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes. Prerequisites: Permission of Instructor or Division Chair or Department Chair.
Division: Physical Sciences and Engineering

ECE297WB / Engineering Internship
2 Credits **/ 0.0 Periods for Laboratory**
Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes. Prerequisites: Permission of Instructor or Division Chair or Department Chair.
Division: Physical Sciences and Engineering

ECE297WC / Engineering Internship
3 Credits **/ 0.0 Periods for Laboratory**
Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes. Prerequisites: Permission of Instructor or Division Chair or Department Chair.
Division: Physical Sciences and Engineering

ECE297WD / Engineering Internship
4 Credits **/ 0.0 Periods for Laboratory**
Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes. Prerequisites: Permission of Instructor or Division Chair or Department Chair.
Division: Physical Sciences and Engineering

Electrical Engineering (EEE)

EEE120 / Digital Design Fundamentals
4 Credits **/ 6.0 Periods for Lecture & Lab**
Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, Read Only Memory (ROMs), Programmable Logic Device (PLDs), synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: None. Corequisites: CSC100 or (CSC110 or CSC110AB) or permission of Instructor or Division or Department Chair.
Crosslisted: CSC120
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Physical Sciences and Engineering

EEE202 / Circuits and Devices
5 Credits **/ 3.0 Periods for Laboratory, 4.0 Periods for Lecture**
Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks. Prerequisites: None. Corequisites: (PHY131, or permission of Instructor or Division or Department Chair) and (MAT276 or permission of Instructor or Division or Department Chair).
Division: Physical Sciences and Engineering

EEE230 / Computer Organization and Assembly Language
4 Credits **/ 5.0 Periods for Lecture & Lab**
Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: A grade of C or better in [(CSC100 or CSC110 or CSC110AB) and CSC/EEE120], or permission of Instructor or Division or Department Chair.
Crosslisted: CSC230
Division: Physical Sciences and Engineering

Geology (GLG)

GLG101IN / Physical Geology: Dynamic Earth
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduction to Earth's materials, surface and internal geologic processes, plate tectonics and geologic time. Includes practical experience in rock and mineral identification, topographic maps, and applied problems in geology. Prerequisites: None. Course Notes: Enrollment in both a GLG101IN lecture section and a GLG101IN laboratory section is required. Students may receive credit for only one of the following: GLG101 and GLG103 or GLG101IN.
SUN SUN# GLG 1101
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

GLG102IN / Historical Geology: Primordial to Present
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
The origin and history of the Earth, its dynamic geographic and climatic changes. Evolution and sequence of life recorded in the fossil record; tectonic evolution of major continents through time. Prerequisites: None. Course Notes: Enrollment in both a GLG102IN lecture section and a GLG102IN laboratory section is required. Students may receive credit for only one of the following: GLG102 and GLG104 or GLG102IN.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Physical Sciences and Engineering

GLG110IN / Geological Disasters and the Environment
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Acquaints students with the use and importance of geological studies as they apply to the interactions between people and the Earth. Includes geological processes and hazards such as earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources. Prerequisites: None. Course Notes: Enrollment in both a GLG110IN lecture section and a GLG110IN laboratory section is required. Students may receive credit for only one of the following: GLG110 and GLG111 or GLG110IN.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

GLG230AA / Field Geology of the Southwest
1 Credit **/ 5.0 Periods for Laboratory**
Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena. Prerequisites: None. GLG103 suggested but not required. Course Notes: GLG230AA may be repeated for a total of four (4) credit hours.
Division: Physical Sciences and Engineering

Geography (GPH)

GPH113 / Physical Geography: Atmosphere, Lithosphere, Water, and Hazards
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Earth's physical processes and impacts on human environments via the atmosphere, biosphere, lithosphere and hydrosphere. Topics and practical experiences include severe weather, climate change, biomes / ecosystems, landform processes; mountain building and erosion by rivers, glaciers, waves, wind, and using various topographic mapping data. Prerequisites: None.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

GPH210 / Society and Environment
3 Credits **/ 3.0 Periods for Lecture**
Principles of physical geography relating to environmental problems pertinent to contemporary society. Pollution, maladjusted land use, resource exploitation. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Physical Sciences and Engineering

GPH212 / Introduction to Meteorology I
3 Credits **/ 3.0 Periods for Lecture**
Atmospheric processes and elements. General and local circulation, heat exchange and atmospheric moisture. Prerequisites: None. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GPH214.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

GPH214 / Introduction to Meteorology Laboratory I
1 Credit **/ 3.0 Periods for Laboratory**
Explores meteorological operations, including temperatures, precipitation, weather systems, and weather forecasting. Prerequisites: None. Corequisites: GPH212. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GPH212.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

Physics (PHY)

PHY101 / Introduction to Physics
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
A survey of physics emphasizing applications of physics to modern life. Prerequisites: A grade of C or better in MAT090, or higher level mathematics course, or eligibility for MAT120 or higher as indicated by appropriate placement. Course Notes: Students may receive credit for only one of the following: PHY101 or PHY101AA.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY111 / General Physics I
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Includes motion, energy, and properties of matter. Prerequisites: A grade of C or better in MAT182 or MAT187 or MAT188 or MAT220 or MAT221 or eligibility for MAT220 as indicated by appropriate placement or one year high school Trigonometry with a grade of C or better or permission of Department or 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.
SUN SUN# PHY 1111
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY112 / General Physics II
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Includes electricity, electromagnetism, and modern physics. Prerequisites: A grade of C or better in PHY111.
SUN SUN# PHY 1112
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY121 / University Physics I: Mechanics
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Kinematics, Newton's laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound. Prerequisites: A grade of C or better in MAT220, or MAT221, or permission of Department or Division. One year of high school physics suggested but not required.
SUN SUN# PHY 1121
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY131 / University Physics II: Electricity and Magnetism
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department or Division and PHY121. Corequisites: MAT241 or permission of Department or Division.
SUN SUN# PHY 1131
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY241 / University Physics III: Thermodynamics, Optics, and Wave Phenomena
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Heat, entropy, and laws of thermodynamics; wave propagation; geometrical and physical optics; introduction to special relativity. Prerequisites: A grade of C or better in PHY131 or permission of Instructor.
Division: Physical Sciences and Engineering

Artificial Intelligence and Machine Learning, Associate in Applied Science

STEM

Associate in Applied Science : AAS 3891
61-76 Credits
Program Contact
Habib Matar | habib.matar@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Artificial Intelligence and Machine Learning focuses on building machine learning models that can be used for predicting, making decisions and enhancing human capabilities. The program prepares students for entry level positions in a variety of fields using artificial intelligence, including the information technology, automotive, healthcare, aerospace, industrial, and manufacturing industries. Program content includes an introduction to artificial intelligence and machine learning, natural language processing, computer vision, and artificial intelligence for business solutions and other applications. The curriculum also includes coursework in computer programming, math, engineering, and statistics.

Program Notes

Students must earn a grade of C or better for all courses required within the program. Overall program minimum GPA = 3.00.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
AIM100	Introduction to Artificial Intelligence	3	_____
AIM110	Introduction to Machine Learning	3	_____
AIM210	Natural Language Processing	3	_____
AIM220	Artificial Intelligence for Computer Vision	3	_____
AIM230	Artificial Intelligence for Business Solutions	3	_____
AIM240	Artificial Intelligence Capstone Project	3	_____
Select one of the following:		0-3	_____
CIS105	Survey of Computer Information Systems		_____
May be waived by permission of the Program Director			_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS156	Python Programming: Level I	3	_____
ECE102	Engineering Analysis Tools and Techniques	2	_____
ECE103	Engineering Problem Solving and Design	2	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
MAT206	Elements of Statistics	3	_____
MAT225	Elementary Linear Algebra	3	_____
Restricted Electives			_____
Select a programming language from below that best aligns with academic and professional goals (to complete the minimum total program credits required for this degree) in one of the following areas:		0-3	_____
CIS150	Programming Fundamentals		_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CSC100++	Introduction to Computer Science (C++)		_____
CSC110++	Introduction to Computer Science (Java)		_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
Any approved General Education course from the Oral Communication area			_____
Critical Reading			_____
Complete one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____

Or equivalent as indicated by assessment			_____
Mathematics			_____
Any approved general education course in the Mathematical Applications (MA) area (that serves as a prerequisite for) MAT22+ 0-9		4-14	_____
MAT220	Calculus with Analytic Geometry I		_____
or MAT221	Calculus with Analytic Geometry I		_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area [1]		3	_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences area		4	_____
Total Credits		61-76	_____

[1] Recommend PSY101 Introduction to Psychology or SOC101 Introduction to Sociology

Artificial Intelligence and Machine Learning, Bachelor of Science

STEM

Bachelor of Science: BS 9310
120 Credits
Program Contact
Habib Matar | habib.matar@cgc.edu

Program Description

The Bachelor of Science (BS) in Artificial Intelligence and Machine Learning provides students with the skills needed for designing and developing machine learning models for predictive analysis, automated decision-making, and the augmentation of human capabilities. The program prepares students for careers as developers and engineers in various fields using artificial intelligence, including information technology, automotive, healthcare, aerospace, finance, industrial, semiconductor, and manufacturing industries. Program content includes in-depth coverage of artificial intelligence, statistical machine learning, deep learning, natural language processing, computer vision, hardware-based optimization, and industrial automation. The curriculum emphasizes computer science, mathematics, and engineering content.

Program Notes

Students must earn a grade of C or better in each course in the program.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
AIM100	Introduction to Artificial Intelligence	3	_____
AIM111	Introduction to Data Science	3	_____
AIM250	Machine Learning I	3	_____
BAM/MATOR305	Mathematics for Machine Learning	3	_____
BAM310	Machine Learning II: Deep Learning	3	_____
BAM320	Computer Vision	3	_____
BAM330	Natural Language Processing for Machine Learning	3	_____
BAM440	Hardware Optimization for Machine Learning	3	_____
BAM450	Planning and Optimization for Automation	3	_____
BAM490	Artificial Intelligence Capstone I	3	_____
BAM499	Artificial Intelligence Capstone II	3	_____
CSC100	Introduction to Computer Science (C++)	3-4	_____
or CSC100AA	Introduction to Computer Science (C++)		_____
or CSC100AB	Introduction to Computer Science (C++)		_____
or CSC110	Introduction to Computer Science (Java)		_____
or CSC110AA	Introduction to Computer Science (Java)		_____
or CSC110AB	Introduction to Computer Science (Java)		_____
CSC101	Introduction to Computing with Python	3	_____
CSC/EEEOR120	Digital Design Fundamentals	4	_____

CSC205	Object Oriented Programming and Data Structures	3-4	_____
or CSC205AA	Object Oriented Programming and Data Structures		_____
or CSC205AB	Object Oriented Programming and Data Structures		_____
CSC/EEEOR230	Computer Organization and Assembly Language	4	_____
CSC240	Introduction to Different Programming Languages	3-4	_____
or CSC240AA	Introduction to Different Programming Languages		_____
CSC310	Data Structures and Algorithms	3	_____
CSC350	Logic Programming for Artificial Intelligence	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
MAT206	Elements of Statistics	3	_____
MAT220	Calculus with Analytic Geometry I	4-5	_____
or MAT221	Calculus with Analytic Geometry I		_____
MAT225	Elementary Linear Algebra	3	_____
MAT227	Discrete Mathematical Structures	3	_____
MAT230	Calculus with Analytic Geometry II	4-5	_____
or MAT231	Calculus with Analytic Geometry II		_____
Restricted Electives			_____
Students should consult with their college's Program Director or their faculty or academic advisor to select courses that best align with academic and professional goals.			_____
Students should select 0-12 credits from the following list of courses to complete a minimum of 120 total semester credits:		0-12	_____
AIM110	Introduction to Machine Learning		_____
AIM210	Natural Language Processing		_____
AIM220	Artificial Intelligence for Computer Vision		_____
AIM230	Artificial Intelligence for Business Solutions		_____
AIM240	Artificial Intelligence Capstone Project		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
ECE105	MATLAB Programming		_____
MAT240	Calculus with Analytic Geometry III		_____
or MAT241	Calculus with Analytic Geometry III		_____
MAT276	Modern Differential Equations		_____
or MAT277	Modern Differential Equations		_____

Arizona General Education Curriculum-Science (AGEC-S) Requirements

Credits 36 (min)

The AGEC-S requires a minimum of 36 credits (33 if FYC is met by single transfer course)*; courses applied to meet AGEC-S requirements vary by emphasis.

Refer to the program (Degree) Search at curriculum.maricopa.edu (https://curriculum.maricopa.edu/) (click on Current Programs) for specific course requirements. The Required Courses and/or Restricted Electives for some areas of Emphasis may also have AGEC designations including one or more of the Awareness Areas ([C], [G] and/or [H]). A single course may meet more than one requirement but its credits are only counted once toward the total for the degree.

Some courses have been approved for more than one AGEC designation (see AGEC matrix). For the AGEC-S only, a single course with an [L] designation may be used to satisfy a second AGEC requirement (as well as any approved Awareness Areas). Only courses with [L] designations may be shared in this way.

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Code	Title	Credits	Semester
First-Year Composition (FYC)			_____
ENG101	First-Year Composition [1]	3	_____
or ENG107	First-Year Composition for ESL		_____

ENG102	First-Year Composition [1]	3	_____
or ENG108	First-Year Composition for ESL		_____
Literacy and Critical Inquiry (L) [2]			_____
Students pursuing AGEC-S and/or AS degree are strongly encouraged to choose an L course that also has HU or SB designation or to use CRE101 or COM225 from the Maricopa Additional Requirements Area to satisfy the L requirement. The L course selected may also have been approved to satisfy one or more Awareness Areas (C, G, H). Thus, a single L course could potentially meet another AGEC requirement as well as one or more Awareness areas. [3]		0-3	_____
Mathematical Applications (MA)			_____
Requires the first semester of calculus courses designed for scientists and engineers (MAT220 or MAT221) or any other MA designated course for which Calculus I is a prerequisite.		4-5	_____
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.			_____
Humanities, Arts and Design (HU)			_____
A single course approved for both L and HU designations may be used to satisfy both requirements. This policy is unique to AGEC-S and to L courses. A course approved for both HU and SB can be counted for one or the other designation, not both. AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.Physical Geology: Dynamic Earth Lab [5]		6	_____
Social-Behavioral Sciences (SB)			_____
A single course approved for both (L) and (SB) designations may be used to satisfy both requirements. This policy is unique to AGEC-S and to (L) courses. A course approved for both (SB) and (HU) can be counted for one or the other designation, not both. AGEC designations are subject to change. [5]		6	_____
Natural Sciences (SQ/SG)			_____
Students must complete eight (8) credits of General Chemistry, University Physics, General Biology for Majors, or Physical and Historical Geology. Consult specific requirements of university transfer major or associate degree with corresponding emphasis for guidance.			_____
Select one of the following sequences:		8-10	_____
General Chemistry			_____
CHM150 & CHM151LL & CHM152 & CHM152LL	General Chemistry I and General Chemistry I Laboratory and General Chemistry II and General Chemistry II Laboratory		_____
CHM150 & CHM151LL & CHM152AA	General Chemistry I and General Chemistry I Laboratory and General Chemistry II with Lab		_____
CHM151 & 151LL & CHM152 & CHM152LL	General Chemistry I and General Chemistry I Laboratory and General Chemistry II and General Chemistry II Laboratory		_____
CHM151 & 151LL & CHM152AA	General Chemistry I and General Chemistry I Laboratory and General Chemistry II with Lab		_____
CHM150AA & CHM152 & CHM152LL	General Chemistry I with Lab and General Chemistry II and General Chemistry II Laboratory		_____

CHM151AA & CHM152 & CHM152LL	General Chemistry I with Lab and General Chemistry II and General Chemistry II Laboratory	_____
CHM150AA & CHM152AA	General Chemistry I with Lab and General Chemistry II with Lab	_____
CHM151AA & CHM152AA	General Chemistry I with Lab and General Chemistry II with Lab	_____
University Physics		_____
PHY121 & PHY131	University Physics I: Mechanics and University Physics II: Electricity and Magnetism	_____
General Biology for Majors		_____
BIO181 & BIO182	General Biology (Majors) I and General Biology (Majors) II	_____
BIO181 & BIO182XT	General Biology (Majors) I and General Biology (Majors) II	_____
BIO181XT & BIO182	General Biology (Majors) I and General Biology (Majors) II	_____
BIO181XT & BIO182XT	General Biology (Majors) I and General Biology (Majors) II	_____
Physical and Historical Geology		_____
GLG101 & GLG103	Physical Geology: Dynamic Earth Lecture and Physical Geology: Dynamic Earth Lab	_____
or GLG101IN	Physical Geology: Dynamic Earth	_____
and		_____
GLG102 & GLG104	Historical Geology: Primordial to Present Lecture and Historical Geology: Primordial to Present Lab	_____
or GLG102IN	Historical Geology: Primordial to Present	_____
Subject Options - Math/Science		_____
Students should refer to transfer resources, including academic advisement, transfer guides and/or requirements for associate degree with corresponding area of emphasis, to select six (6)-ten (10) additional math and/or science credits that meet requirements for selected major.	6-10	_____
This Math/Science requirement can be met by selecting Mathematics course(s) (MAT) that require Calculus I as a prerequisite and/or Computer Science course(s) (CSC) and/or additional Science courses from the following disciplines: Astronomy, Biology, Botany, Chemistry, Engineering, Environmental Science, Geology, Physical Geography, Physics, Zoology (MCCCD prefixes AST, BIO CHM, ECE, EEE, ENV, GLG, GPH, and/or PHY)		_____
Awareness Areas		_____
Courses may be used to satisfy other AGEC requirements and one or more Awareness Area(s). [6]	0-6	_____
Cultural Diversity in the United States (C)		_____
Global Awareness (G) **OR** Historical Awareness (H)		_____

[1] FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

[2] 0 only if shared with HU or SB

[3] Or to use CRE101 College Critical Reading and Critical Thinking or COM225 Public Speaking from the Maricopa Additional Requirements Area to satisfy the (L) requirement.
It may also have been approved to satisfy one or more Awareness Areas ([C], [G], [H]). (AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) for each course's value(s) in the semester it is taken.)

[4] MAT220 Calculus with Analytic Geometry I or MAT221 Calculus with Analytic Geometry I

[5] AGEC designations are subject to change. See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/

WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for each course's value(s) in the semester it is taken.

6 See AGEC matrix (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec) for current course values.

AGEC-Area Requirements Descriptions/Definitions

First-Year Composition (FYC)

First-Year Composition courses emphasize skills necessary for college-level expository writing, including correct grammar and punctuation, logical organization of ideas, and identification of supporting documentation.

Literacy and Critical Inquiry [L]

In the [L] course students, typically at the sophomore level, gather, interpret, and evaluate evidence and express their findings in writing or speech. This course includes a series of graded written or spoken formal assignments.

Literacy is defined broadly as communicative competence in written and oral discourse; critical inquiry is defined as the gathering, interpreting, and evaluating of evidence. Building on the proficiency attained in traditional First-Year Composition courses, the Literacy and Critical Inquiry [L] requirement sustains and extends students' ability to thoughtfully use and critically analyze written and/or spoken language.

Mathematical Applications [MA]

The Mathematical Studies requirement is intended to ensure that students have requisite skill in mathematics appropriate for their discipline and can apply mathematical analysis in their chosen fields.

Computer/Statistics/Quantitative Applications [CS]

AGEC-A and AGEC-B require a course that emphasizes the use of statistics, other mathematical methods, computer programming languages and/or software in the interpretation of data and in describing and analyzing quantitative relationships.

Humanities, Arts and Design [HU]

The study of the humanities and the disciplines of art and design deepen awareness of the complexities of the human condition and its diverse histories and cultures. Courses in the humanities are devoted to the production of human thought and imagination, particularly in philosophical, historical, religious and artistic traditions. Courses with an emphasis in fine arts and design are devoted to the study of aesthetic experiences and the processes of artistic creation. They may also feature a design emphasis in which material culture is studied as a product of human thought and imagination.

Social-Behavioral Sciences [SB]

Social-Behavioral Sciences provide scientific methods of inquiry and empirical knowledge about human behavior, both within society and within individuals. This area of emphasis in general education curriculum may include study of such disciplines as anthropology, economics, history, political science, psychology, or sociology. The courses in this area address the challenge of understanding the diverse natures of individuals and cultural groups who live together in a complex and evolving world.

Natural Sciences [SQ/SG]

In addition to an understanding of basic scientific principles and concepts, courses in the Natural Sciences are designed to help students appreciate, from firsthand laboratory and/or field research experience, the nature of science as a process that embraces curiosity, inquiry, testing, and communication to better understand natural phenomena At least one of the two natural science courses must include an introduction to the fundamental behavior of matter and energy in physical or biological systems.

Awareness Areas

Students must satisfy two Awareness areas: Cultural Diversity in the U.S. and either Global Awareness or Historical Awareness. Courses can satisfy other AGEC requirements and one or two Awareness areas simultaneously. Therefore, no additional semester credits are required to satisfy the two Awareness areas provided courses selected are approved for those designations (see AGEC matrix (http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/1/wa/agecMatrixReport?inst=001075) at aztransmac2.asu.edu/cgi-bin/WebObjects/agec (https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec)).

Cultural Diversity in the United States [C]

The contemporary "culture" of the United States involves the complex interplay of many different cultures that exist side by side in various states of harmony and conflict. U.S. history involves the experiences not only of different groups of European immigrants and their descendants, but also of diverse groups of American Indians, Hispanic Americans, African Americans and Asian Americans--all of whom played significant roles in the development of contemporary culture and together shape the future of the United States. At the same time, the recognition that gender, class, and religious differences cut across all distinctions of race and ethnicity offers an even richer variety of perspectives from which to view one. Awareness of cultural diversity and its multiple sources can illuminate the collective past, present, and future and can help to foster greater mutual understanding and respect.

The objective of the Cultural Diversity area requirement is to promote awareness of and appreciation for cultural diversity within the contemporary United States. This is accomplished through the study of the cultural, social, or scientific contributions of women and minority groups, examination of their experiences in the United States, or exploration of successful or unsuccessful interactions between and among cultural groups.

Global Awareness [G]

Human organizations and relationships have evolved from being family and village centered to the modern global interdependence that is apparent in many disciplines--for example, contemporary art, business, engineering, music, and the natural and social sciences. Many serious local and national problems are world issues that require solutions which exhibit mutuality and reciprocity. These problems occur in a wide variety of activities, such as food supply, ecology, health care delivery, language planning, information exchange, economic and social developments, law, technology transfer, and even philosophy and the arts. The Global Awareness Area recognizes the need for an understanding of the values, elements, and social processes of cultures other than the culture of the United States. The Global Awareness Area includes courses that recognize the nature of other contemporary cultures and the relationship of the American cultural system to generic human goals and welfare.

Courses that satisfy the global awareness option in the requirements are of one or more of the following types:

1. Area studies that are concerned with an examination of culture-specific elements of a region of the world;

2. The study of a non-English language;
3. Studies of international relationships, particularly those in which cultural change is facilitated by such factors as social and economic development, education, and the transfer of technology; and
4. Studies of cultural interrelationships of global scope such as the global interdependence produced by problems of world ecology.

Historical Awareness [H]

The Historical Awareness Area option in the requirements aims to develop a knowledge of the past that can be useful in shaping the present and future. Because historical forces and traditions have created modern life and lie just beneath its surface, historical awareness is an aid in the analysis of present-day problems. Also, because the historical past is a source of social and national identity, historical study can produce intercultural understanding by tracing cultural differences to their origins. Even the remote past may have instructive analogies for the present.

The Historical Awareness Area consists of courses that are historical in method and content. In this area, the term "history" designates a sequence of past events or a narrative whose intent or effect is to represent such a sequence.

The requirement presumes that these are human events and that history includes all that has been felt, thought, imagined, said, and done by human beings. History is present in the languages, art, music, literature, philosophy, religion, and the natural sciences, as well as in the social science traditionally called history.

Artificial Intelligence and Machine Learning, Certificate of Completion

STEM

Certificate of Completion: 5897N
21-36 Credits
Program Contact
Habib Matar | habib.matar@cgc.edu

Program Description

The Certificate of Completion (CCL) in Artificial Intelligence and Machine Learning focuses on building machine learning models that can be used for predicting, making decisions and enhancing human capabilities. The program provides the industry professional with the knowledge and skills used in a variety of fields using artificial intelligence, including the information technology, automotive, healthcare, aerospace, industrial, and manufacturing industries. Program content includes an introduction to artificial intelligence and machine learning, natural language processing, computer vision, and artificial intelligence for business solutions and other applications. The curriculum also includes coursework in computer programming, math, and statistics.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

This Certificate of Completion (CCL) is a closed program that is available to industry professionals with the requisite industry experience or those with an associate or bachelor`s degree in a related field. Speak to a Program Director for additional information.

Students must earn a grade of C or better for all courses required within the program.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
AIM100	Introduction to Artificial Intelligence	3	
AIM110	Introduction to Machine Learning	3	
AIM210	Natural Language Processing	3	
AIM220	Artificial Intelligence for Computer Vision	3	
AIM230	Artificial Intelligence for Business Solutions	3	
AIM240	Artificial Intelligence Capstone Project	3	
Select one of the following:		0-3	
CIS105	Survey of Computer Information Systems		
May be waived by permission of the Program Director			
Select one of the following:		0-3	
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database (May be waived by permission of the Program Director)		
Select one of the following:		0-3	
CIS156	Python Programming: Level I		
May be waived by permission of the Program Director			
Select one of the following:		0-6	
MAT14+	Any College Mathematics course		

MAT15+	Any College Algebra/ Functions course		_____
MAT187	Precalculus		_____
MAT188	Precalculus		_____
Appropriate District placement			_____
Permission of Department/ Division Chair			_____
Recommend students intending to transfer take MAT187 or MAT188 Precalculus.			_____
MAT206	Elements of Statistics	3	_____
Total Credits		**21-36**	_____

Engineering Technology, Associate of Applied Science

Associate in Applied Science : AAS 3187
61-70 Credits
Program Contact
Bassam Matar | 480-732-7139 | b.matar@cgc.edu

Program Description

The Associate in Applied Science (AAS) in Engineering Technology program prepares students as entry-level engineering technicians. They will apply basic engineering principles and technical skills to support engineers engaged in a wide variety of projects. Includes instruction in various engineering support functions, including preparation in the areas of research, production, and operations. This degree will prepare highly skilled and needed workers for area manufacturers and the tech industry.

Program Notes

Students must earn a grade of C or better in all courses within the program.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
CHM130	Fundamental Chemistry	3	_____
CHM130LL	Fundamental Chemistry Laboratory	1	_____
OR			_____
CHM150	General Chemistry I	4	_____
or CHM151	General Chemistry I		_____
CHM151LL	General Chemistry I Laboratory	1	_____
OR			_____
CHM130AA	Fundamental Chemistry with Lab	4	_____
or CHM140AA	General Chemistry for Engineers with Lab		_____
or CHM150AA	General Chemistry I with Lab		_____
or CHM151AA	General Chemistry I with Lab		_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:			_____
CIS150	Programming Fundamentals		_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS159	Visual Basic Programming I		_____
CIS162AB	C++: Level I		_____
CIS162AD	C#: Level I		_____
CIS163AA	Java Programming: Level I		_____
CSC100	Introduction to Computer Science (C++)		_____
CSC100AA	Introduction to Computer Science (C++)		_____
CSC100AB	Introduction to Computer Science (C++)		_____
CSC110	Introduction to Computer Science (Java)		_____
CSC110AA	Introduction to Computer Science (Java)		_____
CSC110AB	Introduction to Computer Science (Java)		_____
ECE102	Engineering Analysis Tools and Techniques	2	_____
ECE103	Engineering Problem Solving and Design	2	_____
ECE216	Computer-Aided Engineering	2	_____
ECE216LL	Computer-Aided Engineering Laboratory	1	_____
or ECE216AA	Computer-Aided Engineering		_____

ECE104	EPICS Gold I	0.5-4	_____
or ECE294AA	Special Topics in Engineering		_____
or ECE294AB	Special Topics in Engineering		_____
or ECE294AC	Special Topics in Engineering		_____
or ECE296WA	Cooperative Education		_____
or ECE296WB	Cooperative Education		_____
or ECE296WC	Cooperative Education		_____
or ECE296WD	Cooperative Education		_____
or ECE298AA	Special Projects		_____
or ECE298AB	Special Projects		_____
or ECE298AC	Special Projects		_____
FYE101	Introduction to College, Career and Personal Success	1	_____
or FYE103	Exploration of College, Career and Personal Success		_____
PHY111	General Physics I	4	_____
or PHY121	University Physics I: Mechanics		_____
PHY112	General Physics II	4	_____
or PHY131	University Physics II: Electricity and Magnetism		_____
Restricted Electives			_____
In consultation with an Academic, Faculty, or Program Advisor, complete 10-14 credits of coursework from any of the areas below that best align with academic and professional goals. Students may select courses from multiple areas.			_____
General Application			_____
Select one of the following programming courses not already taken in required courses:			_____
CIS150	Programming Fundamentals		_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS159	Visual Basic Programming I		_____
CIS162AB	C++: Level I		_____
CIS162AD	C#: Level I		_____
CIS163AA	Java Programming: Level I		_____
CSC100	Introduction to Computer Science (C++)		_____
CSC100AA	Introduction to Computer Science (C++)		_____
CSC100AB	Introduction to Computer Science (C++)		_____
CSC110	Introduction to Computer Science (Java)		_____
CSC110AA	Introduction to Computer Science (Java)		_____
CSC110AB	Introduction to Computer Science (Java)		_____
Select one of the following courses not already taken in required courses:			_____
ECE104	EPICS Gold I		_____
or ECE294	Special Topics in Engineering		_____
or ECE294AA	Special Topics in Engineering		_____
or ECE294AB	Special Topics in Engineering		_____
or ECE294AC	Special Topics in Engineering		_____
or ECE296WA	Cooperative Education		_____
or ECE296WB	Cooperative Education		_____
or ECE296WC	Cooperative Education		_____
or ECE296WD	Cooperative Education		_____
or ECE298AA	Special Projects		_____
or ECE298AB	Special Projects		_____
or ECE298AC	Special Projects		_____
ECE105	MATLAB Programming	1	_____
ECE106	Survey of Nanotechnology	1	_____
GTC/MIT/ OSHOR106	Industrial Safety	1-3	_____
or AIT100	Industrial Safety		_____
or CON271	Construction Safety		_____
MAT206	Elements of Statistics	3	_____
Biomedical Engineering Technician			_____
BIO160	Introduction to Human Anatomy and Physiology	4	_____
or BIO201	Human Anatomy and Physiology I		_____
ABS175	Design and Analysis of Multivariable Biological Experiments	1	_____
BIO211AA	Biotechnology Seminar: Biomedical Applications	1	_____
ECE111	Bioengineering Systems	3	_____

Civil Engineering Technician			_____
CET211	Strength of Materials	3	_____
or CON223	Strength of Materials		_____
CON241	Surveying	3	_____
ECE216	Computer-Aided Engineering	2	_____
ECE216LL	Computer-Aided Engineering Laboratory	1	_____
OR			_____
ECE216AA	Computer-Aided Engineering	3	_____
GLG101	Physical Geology: Dynamic Earth Lecture	3	_____
GLG103	Physical Geology: Dynamic Earth Lab	1	_____
OR			_____
GLG101IN	Physical Geology: Dynamic Earth	4	_____
Drafting for Engineering Technician			_____
CAD100	Fundamentals of 2D Autocad	3	_____
CAD101	Elements of CAD Graphics (AutoCAD)	3	_____
CAD145	Design Principles for Industry	3	_____
DFT110	Introduction to Drafting	3	_____
DFT126	Building Trades Blueprint Reading	3	_____
ECE216	Computer-Aided Engineering	2	_____
ECE216LL	Computer-Aided Engineering Laboratory	1	_____
OR			_____
ECE216AA	Computer-Aided Engineering	3	_____
			_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
COM100	Introduction to Human Communication (Recommend COM225 or COM230)	3	_____
or COM110	Interpersonal Communication		_____
or COM225	Public Speaking		_____
or COM230	Small Group Communication		_____
Critical Reading			_____
CRE101	College Critical Reading and Critical Thinking	3	_____
or equivalent as indicated by assessment			_____
Mathematics			_____
MAT187	Precalculus	5	_____
or MAT220	Calculus with Analytic Geometry I		_____
or MAT221	Calculus with Analytic Geometry I		_____
General Education			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area			_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area			_____
Recommend ECN211 or ECN212			_____
Natural Sciences			_____
Met by CHM or PHY in Required Courses			_____
Total Credits		61-70	_____

Social & Behavioral Sciences

Linda Zehr, Division Chair
480-857-5530 | linda.zehr@cgc.edu

Courses

Prefix	Course
ASB	Anthropology
ASM	Anthropology
CFS	Child/Family Studies
ECH	Early Childhood Education
ECN	Economics
EDU	Education
EED	Early Education
HON	Honors
POS	Political Science
PSY	Psychology
SOC	Sociology

Career Programs

Early Childhood Education

Foundations of Early Childhood Education

Associate in Applied Science (AAS)

- Early Childhood Education, Associate in Applied Science (p. 269)

Certificate Of Completion (CCL)

- Early Childhood Education, Certificate of Completion (p. 271)
- Foundations of Early Childhood Education, Certificate of Completion (p. 273)

Anthropology

Edmonds, Hallie

- B.A, University of Arizona
- M.A, Arizona State University
- P.H.D., Arizona State University

Economics

Villalobos, Karen

- B.A., Universidad Autónoma De Ciudad Juárez, Mexico
- M.S., University of Texas

Zehr, Linda
Division Chair

- B.A., M.A., St. Mary's University

Education

Burris, Joni

- B.S., M.Ed., Ph.D., University of North Dakota

Peterson, Jennifer

- B.S., Minnesota State University Moorhead
- M.Ed., Northern Arizona University

Reider, Christopher

- B.A., Arizona State University
- M.A.Ed., Ottawa University

Psychology

Beyer, Alisa

- B.A., University of Arizona
- M.A., Ph.D., University of Kansas

Dinehart, Jared

- B.S., M.S., Ph.D., Brigham Young University

Lazzara, Julie

- B.A., Arizona State University
- M.C., Arizona State University
- Ph.D., Grand Canyon University

Hawkins, Skyler

- B.A., Providence College
- Ed.M., Harvard University
- M.A., Ph.D., Arizona State University

Romero, Fernando

- B.S., Hunter College of the City University of New York
- M.S. Ed., Queens College of the City University of New York
- Ph.D., Arizona State University

Silberman, Scott W.

- B.A., University of Arizona
- M.A., University of Georgia
- Ph.D., Arizona State University

Tovar-Blank, Zoila

- B.A., Stanford University
- M.Ed., Ph.D., Arizona State University

Sociology

Huntsinger, Marie

- A.A., Chandler-Gilbert Community College
- B.A., Arizona State University
- M.A., Arizona State University

Anthropology (ASB)

ASB102 / Introduction to Cultural Anthropology
3 Credits **/ 3.0 Periods for Lecture**
Introduces concepts and methods of cultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of cultural and social practices such as subsistence, economics, politics, marriage, kinship, gender and religion. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

ASB211 / Women Across Cultures
3 Credits **/ 3.0 Periods for Lecture**
Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

ASB214 / Magic, Witchcraft and Healing: An Introduction to Comparative Religion
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Global Awareness [G]; Global Awareness [G]-in combo
Division: Social & Behavioral Sciences

ASB222 / Buried Cities and Lost Tribes: Old World
3 Credits **/ 3.0 Periods for Lecture**
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 life ways, 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.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Global Awareness [G]; Global Awareness [G]-in combo
Division: Social & Behavioral Sciences

ASB223 / Buried Cities and Lost Tribes: New World
3 Credits **/ 3.0 Periods for Lecture**
Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which fragment societies. Examples drawn from North America, Central America, and South America. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

ASB253 / Death and Dying Across Cultures
3 Credits **/ 3.0 Periods for Lecture**
Responses to death and dying in cultures around the world. Explanations for particular cultural responses to death and dying. Examples drawn from ancient and contemporary cultures. Prerequisites: None. ASB102 suggested but not required.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Social & Behavioral Sciences

Anthropology (ASM)

ASM104 / Bones, Stones, and Human Evolution
4 Credits **/ 5.0 Periods for Lecture & Lab**
Study of human evolution and variation; including fossil hominids and their tools, primate anatomy and behavior, human genetics, and the environment and human biology. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Social & Behavioral Sciences

ASM275 / Forensic Anthropology
4 Credits **/ 5.0 Periods for Lecture & Lab**
Survey of the role of forensic anthropologists, from the crime scene to the courtroom. Course focuses on how skeletal analysis can aid in medicolegal investigations, especially by identifying aspects of the life history of unknown individuals and by reconstructing events that took place at crime scenes. Covers both the legal aspects of forensic practice and the underlying biological basis for evidence obtained from skeletal remains. Examines applications of forensic anthropology in mass disasters, human rights investigations, and the deciphering of historic cases. Lab activities designed to illustrate techniques and principles central to the discipline. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Social & Behavioral Sciences

ASM298AA / Special Projects
1 Credit **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Social & Behavioral Sciences

Child/Family Studies (CFS)

CFS123 / Health and Nutrition in Early Childhood Settings
1 Credit **/ 1.0 Periods for Lecture**
Creating and maintaining healthy environments and practices in programs serving young children. Emphasis on assessing the child's health status, nutrition and food service, communicable disease recognition, transmission, and prevention, infection control, regulations and regulatory agencies, current topics, resources, and innovative practices. Prerequisites: None.
Division: Social & Behavioral Sciences

CFS125 / Safety In Early Childhood Settings
1 Credit **/ 1.0 Periods for Lecture**
Fundamental concepts of promoting a safe, but challenging learning environment. Establishing and maintaining safety procedures in the early childhood setting. Emphasis on indoor and outdoor equipment and activities, risk analysis, accident, evacuation and emergency plans, regulations, regulatory agencies and resources, current topics, and innovative practices. Prerequisites: None.
Division: Social & Behavioral Sciences

CFS176 / Child Development
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: ECH176
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

CFS282 / Inclusion of Young Children with Special Needs
1 Credit **/ 1.0 Periods for Lecture**
An exploration of the educational, social, and behavioral concerns involved in the successful inclusion of children with special needs into typical preschool classrooms. Includes discussion of strategies for adaptations and modifications of the environment and accessing existing resources in the community. Prerequisites: None.
Division: Social & Behavioral Sciences

CFS205 / Human Development
3 Credits **/ 3.0 Periods for Lecture**
Explores the growth and development process over the human life span. Research and theoretical approaches; physical, cognitive, social, and personality development from birth through adulthood and death. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Early Childhood Education (ECH)

ECH128 / Early Learning: Play and the Arts
3 Credits **/ 3.0 Periods for Lecture**
Examines theory, research and practices relating to play and the creative arts in early childhood. Considers practical constraints and alternative perspectives. Prerequisites: None.
Division: Social & Behavioral Sciences

ECH176 / Child Development
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: CFS176
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

ECH271 / Arranging the Environment
1 Credit **/ 1.0 Periods for Lecture**
Exploration of the influence of the environment on the behavior and development of young children. Considers indoor and outdoor spaces from the perspective of safety, age-related needs, spatial requirements, and usage. Prerequisites: None.
Crosslisted: CFS271
Division: Social & Behavioral Sciences

ECH280 / Food Experiences with Young Children
1 Credit **/ 1.0 Periods for Lecture**
A discussion of the nutritional needs of young children and the cultural and social meanings of foods, feeding and eating. Includes planning and managing food experiences in home and group settings. Prerequisites: None.
Division: Social & Behavioral Sciences

Economics (ECN)

ECN211 / Macroeconomic Principles
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# ECN 2201
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

ECN212 / Microeconomic Principles
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# ECN 2202
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Education (EDU)

EDU115 / Digital Literacy for Teaching and Learning in Education
3 Credits **/ 3.0 Periods for Lecture**
Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education. Prerequisites: None.
Crosslisted: EED115
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Social & Behavioral Sciences

EDU220 / Introduction to Serving English Language Learners (ELL)
3 Credits **/ 3.0 Periods for Lecture**
Historical overview of current educational and legal issues for serving English Learners (EL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), Sheltered English Instruction, and bilingual/Dual Language Immersion (DLI). Includes SEI, Sheltered English Instruction, and bilingual/DLI strategies. Prerequisites: None.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Social & Behavioral Sciences

EDU221 / Introduction to Education
3 Credits **/ 3.0 Periods for Lecture**
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 Notes: EDU221 requires a minimum of 30 hours of field experience in elementary or secondary classroom environment.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

EDU222 / Introduction to the Exceptional Learner
3 Credits **/ 3.0 Periods for Lecture**
Overview of the exceptional learner with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mild disabilities, severe disabilities, emotional and behavioral disorders, intellectual disabilities, and students who are gifted. Prerequisites: None. Course Notes: EDU222 requires an approved field experience.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

EDU230 / Cultural Diversity In Education
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Social & Behavioral Sciences

EDU236 / Classroom Relationships
3 Credits **/ 3.0 Periods for Lecture**
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 Notes: Requires a 20-hour field experience in a K-12 classroom.
Division: Social & Behavioral Sciences

EDU291 / Children's Literature
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: ENH291
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Social & Behavioral Sciences

EDU292 / The Art of Storytelling
3 Credits **/ 3.0 Periods for Lecture**
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None.
Crosslisted: HUM292, STO292
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Social & Behavioral Sciences

Early Education (EED)

EED115 / Digital Literacy for Teaching and Learning in Education
3 Credits **/ 3.0 Periods for Lecture**
Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education. Prerequisites: None.
Crosslisted: EDU115
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Social & Behavioral Sciences

EED200 / Foundations of Early Childhood Education
3 Credits **/ 3.0 Periods for Lecture**
Overview of early childhood education (birth to age eight) in American society, including current issues and responsibilities. Emphasis on issues of professionalism, ethics and program types. Opportunities for students to explore potential career paths. Prerequisites: None. Course Notes: EED200 includes practicum designed to explore the field of early childhood education.
Division: Social & Behavioral Sciences

EED215 / Early Learning: Health, Safety, Nutrition and Physical Fitness
3 Credits **/ 3.0 Periods for Lecture**
Consideration of public health issues and safety procedures within early childhood settings that serve young children birth to age eight. Overview of nutritional needs and issues of physical fitness and well-being in young children. Includes practicum designed to explore the field of early childhood education. Prerequisites: None.
Division: Social & Behavioral Sciences

EED222 / Introduction to the Exceptional Young Child: Birth to Age Eight
3 Credits **/ 3.0 Periods for Lecture**
Overview of the exceptional learner (birth - age eight), one who differs from the average or the norm, with emphasis on observation, techniques, characteristics, identification, types of programs, and work with families. Issues related to learning exceptionalities, sensory and communication disorders, social and emotional problems, physical and health related disorders, and giftedness. Includes practicum designed to explore the field of early childhood education. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Honors (HON)

HON201 / Leadership Development: Historical and Contemporary Perspectives
3 Credits **/ 3.0 Periods for Lecture**
Interdisciplinary study of leadership focusing on development of leadership skills. Prerequisites: Admission to the college honors program or permission of Instructor.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Political Science (POS)

POS110 / American National Government
3 Credits **/ 3.0 Periods for Lecture**
Study of the historical backgrounds, governing principles, and institutions of the national government of the United States. Prerequisites: None.
SUN SUN# POS 1110
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

POS120 / International Relations
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# POS 1120
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

POS140 / Comparative Government
3 Credits **/ 3.0 Periods for Lecture**
Overview and evaluation of the sub-field of comparative politics. Covers various national governments from around the world: their structure, system, method of governance. Examines methods of assessing these governments. Prerequisites: None.
SUN SUN# POS 2204
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

POS210 / Political Ideologies
3 Credits **/ 3.0 Periods for Lecture**
Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

POS221 / Arizona Constitution
1 Credit **/ 1.0 Periods for Lecture**
Examination of the Constitution of the State of Arizona. Prerequisites: None. Course Notes: Course content is equivalent to partial competencies from POS220. Students may receive credit for only one of the following: POS220 OR (POS221 and POS222).
Division: Social & Behavioral Sciences

POS223 / Civil Rights and Liberties
3 Credits **/ 3.0 Periods for Lecture**
The historic background and current status of major civil rights and civil liberties issues in the United States. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Psychology (PSY)

PSY101 / Introduction to Psychology
3 Credits **/ 3.0 Periods for Lecture**
Overview of the methods, concepts, and applications of psychological science. Includes an introduction to key domains of psychology: Biological, Cognitive, Developmental, Social and Personality, and Mental and Physical Health. Prerequisites: None.
SUN SUN# PSY 1101
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY123 / Psychology of Parenting
3 Credits **/ 3.0 Periods for Lecture**
The study of major psychological theories that pertain to parenting. Includes current research findings to foster effective relationships within modern families. Explores evidence-based practices for parenting individuals from birth through emerging adulthood. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY132 / Psychology and Culture
3 Credits **/ 3.0 Periods for Lecture**
Presents current knowledge about human diversity in behavior and culture using examples from a variety of contexts within western and global societies. Highlights topics in cross-cultural psychology, such as intergroup relations, diverse cognitive styles, ethnocentrism, gender, personality, emotion, language, communication, work and health. The role of enculturation throughout the lifespan will be explored to increase awareness of how behavioral and cognitive principles affect interactions in a multicultural world. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY156 / Understanding Death and Dying
3 Credits **/ 3.0 Periods for Lecture**
Designed to give the student an understanding of the research and theories of death, dying, bereavement process, and aspects of end-of-life care and decision-making. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY230 / Introduction to Statistics
3 Credits **/ 3.0 Periods for Lecture**
An introduction to basic concepts in descriptive and inferential statistics, with emphasis upon application to psychology. Consideration given to the methods of data collection, sampling techniques, graphing of data, and the statistical evaluation of data collected through experimentation. Required of psychology majors. Prerequisites: A grade of C or better in (PSY101 and eligibility for MAT14+ or higher as indicated by appropriate district mathematics placement) or permission of Instructor. Course Notes: Students may receive credit for only one (1) of the following courses: PSY230 or PSY230WL.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Social & Behavioral Sciences

PSY235 / Psychology of Gender
3 Credits **/ 3.0 Periods for Lecture**
To assess historical and psychological perspectives on women and men and to evaluate contemporary viewpoints regarding the psychology of women and men. Prerequisites: A grade of C or better in PSY101, or permission of Instructor.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY240 / Developmental Psychology
3 Credits **/ 3.0 Periods for Lecture**
Human development from conception through death. Includes biological, physical, cognitive, emotional, and sociocultural development across various ages. Prerequisites: A grade of C or better in PSY101, or permission of Instructor. Course Notes: Recommended for students majoring in nursing, education, behavioral, pre-med, and psychology.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY250 / Social Psychology
3 Credits **/ 3.0 Periods for Lecture**
The scientific study of how people's thoughts, feelings, and behaviors are influenced by other people and situations. Includes how we think about ourselves and others, persuasion and influence, sexual and romantic attraction, friendship and helping others, aggression and prejudice. Prerequisites: A grade of C or better in PSY101, or permission of Instructor.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY262 / Positive Psychology: The Science of Well-Being
3 Credits **/ 3.0 Periods for Lecture**
Overview and application of psychological principles based on strengths and resilience of human beings as opposed to dysfunction and symptoms of mental disorders. Topics include happiness, relationships, resilience, optimism, well-being, and brain research explaining positive emotions. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY266 / Psychological Disorders
3 Credits **/ 3.0 Periods for Lecture**
Distinguishes between healthy psychological functioning and psychological disorders. Includes topics in psychopathology such as problems with anxiety and depression, eating disorders, substance-use, schizophrenia, sexuality, and personality. Also covers causes and treatments of psychological disorders. Prerequisites: A grade of C or better in PSY101, or permission of Instructor.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY290AB / Research Methods
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Critical review of literature and methods in representative areas of psychological research. A grade of C or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 or PSY230WL or permission of Instructor.
SUN SUN# PSY 2290
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Social & Behavioral Sciences

Sociology (SOC)

SOC101 / Introduction to Sociology
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# SOC 1101
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC130 / Human Sexuality
3 Credits **/ 3.0 Periods for Lecture**
Sociological study of human sexuality. Course examines the social forces that shape a culture's sexual practices, attitudes, and inequalities. Topics include the social construction of sexuality, social change, sexual identities, sexual inequalities, institutional influence and regulation of sexuality, as well as current trends and issues surrounding human sexuality. Prerequisites: None. Course Notes: SOC130 contains mature adult content and some of the topics discussed may be considered "controversial" or "taboo" in some societies and cultures. Students are expected to be able to engage with the content in a respectful and open-minded way.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC157 / Sociology of Families and Relationships
3 Credits **/ 3.0 Periods for Lecture**
Systemic analysis of socio-cultural and historical origins of modern families in the U.S. and their importance, major challenges and changing trends. Explores being single, dating and attraction, love, cohabitation and marriage, family planning and parenthood, conflict and crisis within the family, and divorce. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC180 / Social Implications of Technology
3 Credits **/ 3.0 Periods for Lecture**
Exploration of the transformative power of technology on society, focusing on historical roots, cultural impact, and future implications. Engagement with critical concerns and opportunities that technology presents in shaping human connections, societal structures, and global communities. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC212 / Gender and Society
3 Credits **/ 3.0 Periods for Lecture**
A sociological exploration of the way culture shapes and defines gender in contemporary U.S. society. Major emphasis on gender roles, gender stereotypes, power and the relationship between gender and other intersecting social identities such as race, ethnicity, class, and sexual identity. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC220 / Sport and Society
3 Credits **/ 3.0 Periods for Lecture**
Applies the sociological perspective to the study of sport. Emphasizes how hierarchies of race, class, and gender in the United States impact the sport experience of fans, athletes, and athletic administrators, as well as how professional, collegiate, and amateur sports have at times played a transformative role in society. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC241 / Race and Ethnic Relations
3 Credits **/ 3.0 Periods for Lecture**
Examines how the social construction of race shapes social interaction and social institutions. Explores the consequences of power, privilege and oppression among major ethnic and racial groups in the United States. Prerequisites: None.
SUN SUN# SOC 2215
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC251 / Social Problems
3 Credits **/ 3.0 Periods for Lecture**
An overview of the sociological study of social problems and inequalities confronting the United States. Emphasis is placed on what is known about social problems, recent trends, causes and consequences, individual and societal responses, and how social policies might solve social problems. Issues to be examined may include: health care, education, family, economy, environment, drug and alcohol abuse, crime and violence, among others. Prerequisites: None.
SUN SUN# SOC 2250
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC266 / Sociology Through Film
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Early Childhood Education, Associate in Applied Science

Associate in Applied Science: AAS 3186
60-74 Credits
Program Contact
Joni Burris | 480-857-5526 | j (jennifer.peterson@cgc.edu)oni.burris@cgc.edu (joni.burris@cgc.edu)

Program Description

The Associate in Applied Science (AAS) in Early Childhood Education (ECE) program is designed to prepare individuals for employment as early childhood professionals in a variety of educational settings. The AAS program includes courses based on current ECE theory and practice as well as general education classes to broaden a student`s base of knowledge. Certificates of Completion are also available.

Program Notes

Students must earn a grade of “C” or better in all courses in the program. Overall program minimum GPA = 2.00.

For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
CFS101AH & ECH281	Visual Art Experiences for Young Children and Movement/ Music for the Young Child	2-3	_____
or ECH128	Early Learning: Play and the Arts		_____
or EED210	Creative and Cognitive Play		_____
CFS123 & CFS125 & ECH280	Health and Nutrition in Early Childhood Settings and Safety In Early Childhood Settings and Food Experiences with Young Children	3	_____
or EED215	Early Learning: Health, Safety, Nutrition and Physical Fitness		_____
CFS/ECH176	Child Development	3	_____
or CFS235	Developing Child: Theory into Practice, Prenatal to Age Eight		_____
or EED205	The Developing Child: Prenatal to Age Eight		_____
Select one of the following options:		2-3	_____
Option 1			_____
CFS/ECH269	Early Childhood Education Seminar		_____
CFS/ECH287	Professional Development in Early Childhood Education		_____
Option 2			_____
EED255	Independent Study Portfolio Development and Writing for the Early Childhood Profession		_____
CFS271 & CFS282 & ECH282	Arranging the Environment and Inclusion of Young Children with Special Needs and Discipline/ Guidance of Child Groups	3	_____
or EED212	Guidance, Effective Interactions and the Environment		_____
Select one of the following options:			_____
Option 1		2-3	_____
CFS/ ECH284AB	Early Childhood Teaching Internship		_____
Option 2			_____
EED260 & EED261	Early Childhood Infant/Toddler Internship and Early Childhood Preschool Internship		_____
Option 3			_____
CFS/ ECH284AA	Early Childhood Teaching Internship		_____
ECH140 & ECH270	Learning Made Visible Through Documentation and Observing Young Children	2-3	_____
or EED280	Standards, Observation and Assessment of Typical/Atypical Behaviors of Young Children Birth to Age 8		_____
ECH273 & ECH275 & ECH272 & ECH279	Math and the Young Child and Literacy Development and the Young Child and Science and the Young Child and Early Childhood Curriculum Development	3-4	_____
or EED278	Early Learning Curriculum and Instruction - Birth to Age Eight		_____
EED200	Foundations of Early Childhood Education	3	_____
EED222	Introduction to the Exceptional Young Child: Birth to Age Eight	3	_____
EED225	Language and Literacy in the Context of Culture and Relationships	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Restricted Electives			_____

Students must select nine (9) to twelve (12) credits from the following to complete the minimum total program credits required for this degree. Students are encouraged to consult with a faculty advisor or student services analyst to identify the requirements for their desired academic and professional goals:		9-12	_____
CFS+++	Any CFS Child/ Family Studies course(s)		_____
ECH+++	Any ECH Early Childhood Education course(s)		_____
EDU+++	Any EDU Education course(s)		_____
EED+++	Any EED Early Education course(s)		_____
FCS+++	Any FCS Family and Consumer Science course(s)		_____
ITD+++	Any ITD Infant/Toddler Development course(s)		_____

General Education Requirements

Code	Title	Credits	Semester
General Education Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Any approved General Education course from the Oral Communication area		3	_____
Note: COM225 Public Speaking is recommended for students who wish to transfer to the BAE at ASU.			_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
OR Equivalent as indicated by assessment			_____
Mathematics			_____
Select one of the following:		3-6	_____
MAT112	Mathematical Concepts and Applications		_____
OR Satisfactory completion of a higher-level mathematics course			_____
Note: MAT14+ College Mathematics or any approved general education course in the Mathematical Application [MA] area may be required for students intending to transfer to a bachelor's degree program.			_____
General Education Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Recommend: EDU/ENH291 Children`s Literature OR EDU/HUM/ STO292 The Art of Storytelling			_____
Social and Behavioral Sciences			_____
Fulfilled by EED222 in Required Courses area.		0	_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences area		4	_____
Total Credits		**19-25**	_____

1 Note: COM225 Public Speaking is recommended for students who wish to transfer to the BAE at ASU.

2 Note: MAT14+ College Mathematics or any approved general education course in the Mathematical Application [MA] area may be required for students intending to transfer to a bachelor's degree program.

3 Recommend: EDU291 Children's Literature/ENH291 Children's Literature or EDU292 The Art of Storytelling/HUM292 The Art of Storytelling/STO292 The Art of Storytelling.

4 Fulfilled by EDU222 Introduction to the Exceptional Learner or EED222 Introduction to the Exceptional Young Child: Birth to Age Eight in Required Courses area.

Early Childhood Education, Certificate of Completion

EDUCATION

Certificate of Completion: CCL 5056
36 Credits
Program Contact
Joni Burris | 480-857-5526 | joni.burris@cgc.edu (joni.burris@cgc.edu)

Program Description

The Certificate of Completion (CCL) in Early Childhood Education program is designed to prepare students for employment as early childhood

teachers in a variety of educational programs. Students learn effective teaching skills as they apply developmentally appropriate early childhood educational theory in the classroom setting. Courses have been selected with a focus on developing an educational career ladder. An Associate in Applied Science (AAS) in Early Childhood Education is also available and includes additional early childhood electives and general education classes to broaden the student`s base of knowledge.

Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			
CFS101AH & ECH281	Visual Art Experiences for Young Children and Movement/ Music for the Young Child	2-3	
or ECH128	Early Learning: Play and the Arts		
or EED210	Creative and Cognitive Play		
CFS123 & CFS125 & ECH280	Health and Nutrition in Early Childhood Settings and Safety In Early Childhood Settings and Food Experiences with Young Children	3	
or EED215	Early Learning: Health, Safety, Nutrition and Physical Fitness		
CFS/ECH176	Child Development	3	
or CFS235	Developing Child: Theory into Practice, Prenatal to Age Eight		
or EED205	The Developing Child: Prenatal to Age Eight		
Select one of the following options:		2-3	
Option 1			
CFS/ECH269	Early Childhood Education Seminar		
CFS/ECH287	Professional Development in Early Childhood Education		
Option 2			
EED255	Independent Study Portfolio Development and Writing for the Early Childhood Profession		
CFS271 & CFS282 & ECH282	Arranging the Environment and Inclusion of Young Children with Special Needs and Discipline/ Guidance of Child Groups	3	
or EED212	Guidance, Effective Interactions and the Environment		
Select one of the following options:			
Option 1		2-3	
CFS/ ECH284AB	Early Childhood Teaching Internship		
Option 2			
EED260 & EED261	Early Childhood Infant/Toddler Internship and Early Childhood Preschool Internship		
Option 3			
CFS/ ECH284AA	Early Childhood Teaching Internship		
ECH140 & ECH270	Learning Made Visible Through Documentation and Observing Young Children	2-3	
or EED280	Standards, Observation and Assessment of Typical/Atypical Behaviors of Young Children Birth to Age 8		
ECH273 & ECH275 & ECH272 & ECH279	Math and the Young Child and Literacy Development and the Young Child and Science and the Young Child and Early Childhood Curriculum Development	3-4	
or EED278	Early Learning Curriculum and Instruction - Birth to Age Eight		
EED200	Foundations of Early Childhood Education	3	

See https://www.cgc.edu/CourseDescriptions for current course description information.

EED222	Introduction to the Exceptional Young Child: Birth to Age Eight	3	_____
EED225	Language and Literacy in the Context of Culture and Relationships	3	_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
Restricted Electives			_____
Students must select nine (9) to twelve (12) credits from the following to complete the minimum total program credits required for this degree. Students are encouraged to consult with a faculty advisor or student services analyst to identify the requirements for their desired academic and professional goals:		9-12	_____
CFS+++	Any CFS Child/ Family Studies course(s)		_____
ECH+++	Any ECH Early Childhood Education course(s)		_____
EDU+++	Any EDU Education course(s)		_____
EED+++	Any EED Early Education course(s)		_____
FCS+++	Any FCS Family and Consumer Science course(s)		_____
ITD+++	Any ITD Infant/Toddler Development course(s)		_____

Foundations of Early Childhood Education, Certificate of Completion

EDUCATION

Certificate of Completion: CCL 5054
18-19 Credits

Program Contact
Joni Burris | 480-857-5526 | joni.burris@cgc.edu (jobi.burris@cgc.edu)

Program Description

The Certificate of Completion (CCL) in Foundations of Early Childhood Education is designed to prepare students with foundational knowledge regarding the growth and development of the young child. Topics include cognitive and physical development of the young child, language acquisition, curriculum development, health and safety guidelines, business procedures, and family/community relationship building. This CCL is embedded (can be used to fulfill part of the requirements) in a second available CCL, Early Childhood Education. Both CCLs are embedded (can be used to fulfill requirements) in the Associate in Applied Science (AAS) in Early Childhood Education.

Program Notes

Students must earn a grade of "C" or better in all courses in the program. Overall program minimum GPA = 2.00.

For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.

++ indicates any suffixed course may be selected.

Program Requirements

Code	Title	Credits	Semester
Required Courses			_____
CFS101AH & ECH281	Visual Art Experiences for Young Children and Movement/ Music for the Young Child	2-3	_____
or ECH128	Early Learning: Play and the Arts		_____
or EED210	Creative and Cognitive Play		_____
CFS123 & CFS125 & ECH280	Health and Nutrition in Early Childhood Settings and Safety In Early Childhood Settings and Food Experiences with Young Children	3	_____
or EED215	Early Learning: Health, Safety, Nutrition and Physical Fitness		_____
CFS/ECHOR176	Child Development	3	_____
or CFS235	Developing Child: Theory into Practice, Prenatal to Age Eight		_____
or EED205	The Developing Child: Prenatal to Age Eight		_____

CFS271 & CFS282 & ECH282	Arranging the Environment and Inclusion of Young Children with Special Needs and Discipline/ Guidance of Child Groups	3	_____
or EED212	Guidance, Effective Interactions and the Environment		_____
CFS/ ECHOR284AA	Early Childhood Teaching Internship	1	_____
or EED260	Early Childhood Infant/Toddler Internship		_____
or EED261	Early Childhood Preschool Internship		_____
EED200	Foundations of Early Childhood Education	3	_____
EED222	Introduction to the Exceptional Young Child: Birth to Age Eight	3	_____
Total Credits		**18-19**	_____

Special Programs

- Workforce Development
- Continuing Education
- Fitness, Wellness, and Recreation
- Honors Program
- Performing Arts

Enhancement Programs

Honors Program

The CGCC Honors Program provides the opportunity for academically advanced students to participate in challenging and rewarding educational experiences. The purpose of the Honors Program is to foster greater depth of thought in reading, writing, and discussion with faculty and guest lecturers, which will better prepare Honors students to complete baccalaureate degrees or to begin their careers. A variety of academic scholarships are available to eligible Honors Program students.

Honors students enjoy:

- Scholarships
- Special recognition on transcripts and diplomas
- Cultural and social activities, such as the Honors
- Forum Lecture Series and other experiential learning activities
- Enhanced intellectual growth through Honors courses and projects

Students with a cumulative grade point average of 3.25 or higher and have earned at least 12 credit hours of Maricopa Community College coursework are invited to apply as an Honors Achievement Scholar. Recent high school graduates with an unweighted GPA of at least 3.25 from attending an accredited Maricopa County high school are invited to apply to the Honors Program as a Presidents' Scholar. Other requirements may apply at the time of application.

For full details and specific requirements about the Honors Program or Honors scholarships, visit www.cgc.edu/honors (http://www.cgc.edu/honors) or contact the Honors Office at 480#732#7252 or honors@cgc.edu.

Performing Arts

The Performing Arts Program at CGCC offers an integrated approach to dance, theatre, and music. The classes, while separate, are coordinated within the area to provide students a broader base and more versatility in their performing arts education.

Students can explore all aspects of the performing arts at CGCC. The department offers a transfer program to four-year institutions in music performance, music education, music theory, dance education, dance performance, theater education, theater performance, technical theater and musical theater. Two-year degrees are offered in dance and theatre and music business as well as a certificate of completion in music business. Preparing for life after CGCC is the focus of the program and student success is the goal of the dedicated faculty. There are many opportunities for students to develop skills leading to work in the performing arts, and related areas.

The Arnette Scott Ward Performing Arts Center (the PAC) is home to the CGCC's music, theatre, and dance faculty and staff. It houses a costume shop, scene shop, and its heart, a 299-seat performance venue. In addition, the program has ample teaching facilities including two dance studios, a revitalized black box theater, an instrumental music room, choir room, music library, rehearsal rooms and studio recording space.

For more information on performing arts at CGCC, visit www.cgc.edu/arts (http://www.cgc.edu/arts) or call:

Contact	Phone Number
Dance and Musical Theatre	480-732-7136
Instrumental Music	480-732-7290
Music Business	480-857-5182
Theatre	480-732-7040
Vocal Music and Musical Theatre	480-732-7144

Enrichment Programs

Continuing Education and Workforce Development

Chandler-Gilbert Community College offers life-long learning opportunities through non-credit courses. The Continuing Education Department offers courses designed to enhance personal and professional development through classroom instruction as well as online learning.

Workforce development at CGCC brings together employers, employees and education. Instruction is either at the company, at the college, or online. Students can enroll in CTE programs or take courses to learn skills needed by current or future employers.

To continue learning with flexible courses year-round, call 480#857-5500.

Fitness, Wellness and Recreation

CGCC offers a variety of fitness, wellness, and recreation opportunities on the Pecos and Williams Campus.

Fitness Center

The Pecos Fitness Center features state-of-the-art cardiovascular training equipment, Life Fitness and Cybex weight training machines, and a complete free-weight area with Olympic style platforms and bumper plates. The Fitness Center is equipped with TRX trainers, plyometric boxes, medicine balls, stability balls, bands and hurdles for complete performance training. Whether you are an elite athlete or a week-end warrior we have all of the equipment that you need.

All members of the Pecos Fitness Center are offered personalized instruction, a complete fitness assessment, and body composition analysis from our degreed and certified instructors. Fitness Center members also have access to amenities such as locker rooms and shower facilities.

To use the Fitness Center, all students must be enrolled in a credit (PED115 Lifetime Fitness) or non-credit (Fitness 600-100) Lifetime Fitness course. PED115 students also have access to Group Fitness Courses. Additional information is available by calling the Pecos Campus Fitness Center at 480#732#7200.

Group Fitness Classes

Chandler-Gilbert also has a wide variety of group fitness classes open to students. All Group Fitness classes are 1-credit classes and have the PED101 prefix. Students may choose from Boot Camp Fitness, Zumba, Pilates, Yoga, Restorative Yoga, Stretch and Relaxation, Tai Chi, Karate and other classes.

To see a complete list of group fitness classes being offered this semester, please see the current schedule of classes.

Students, faculty, staff, and community members interested in using the Fitness Center or taking a group fitness class can contact the Pecos Campus Fitness Center at 480#732#7200 for more information.

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 First-Year Composition 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. Each 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 / (5) 3 credits / * 3 periods
(7) ENG 1101

(3)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 ESL097 Preparatory Academic Writing III for ESL.

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 https://www.manula.com/manuals/aztransfer/handbook-policy-manual/1/en/topic/shared-unique-number-sun-system

A

- Accounting (ACC) (p. 278)
- Administration of Justice Studies (AJS) (p. 278)
- Aeronautics (AET) (p. 280)
- African American Studies (AFR) (p. 282)
- Aircraft/Maintenance Technology (AMT) (p. 282)
- American Indian Studies (AIS) (p. 284)
- American Sign Language (ASL) (p. 284)
- Anthropology (Science/Math) (ASM) (p. 285)
- Anthropology (Soc/Behv. Science) (ASB) (p. 285)

- Art (ART) (p. 286)
- Art and Visual Communication (AVC) (p. 288)
- Art Humanities (ARH) (p. 287)
- Artificial Intelligence and Machine Learning (AIM) (p. 289)
- Astronomy (AST) (p. 290)
- Automated Industrial Technology (AIT) (p. 290)

B

- Baccalaureate Artificial Intelligence Machine Learning (BAM) (p. 291)
- Biology (BIO) (p. 291)
- Business-Personal Computers (BPC) (p. 292)

C

- Chemistry (CHM) (p. 293)
- Chicana and Chicano Studies (CCS) (p. 295)
- Child/Family Studies (CFS) (p. 295)
- Cisco Network Technology (CNT) (p. 295)
- Cloud Computing (CLD) (p. 296)
- Communication (COM) (p. 296)
- Computer Information Systems (CIS) (p. 296)
- Computer Science (CSC) (p. 302)
- Counseling and Applied Psychology (CAP) (p. 304)
- Counseling and Personal Development (CPD) (p. 304)
- Creative Writing (CRW) (p. 304)
- Critical Reading (CRE) (p. 305)

D

- Dance (DAN) (p. 305)
- Dance Humanities (DAH) (p. 308)

E

- Early Education (EED) (p. 308)
- Economics (ECN) (p. 309)
- Education (EDU) (p. 309)
- Electrical Engineering (EEE) (p. 310)
- Emergency Medical Technology (EMT) (p. 310)
- Engineering Science (ECE) (p. 311)
- English (ENG) (p. 312)
- English Humanities (ENH) (p. 313)
- Environmental Sciences (ENV) (p. 314)
- Exercise Science (EXS) (p. 314)

F

- First Year Experience (FYE) (p. 316)
- Food and Nutrition (FON) (p. 316)

G

- Game Studies (GST) (p. 316)
- General Business (GBS) (p. 316)
- Geology (GLG) (p. 317)

H

- Health Care Related (HCR) (p. 318)
- Health Core Curriculum (HCC) (p. 318)
- Health Science (HES) (p. 318)
- History (HIS) (p. 319)
- Honors (HON) (p. 320)
- Humanities (HUM) (p. 320)

I

- Information Studies (IFS) (p. 321)
- Information Technology Security (ITS) (p. 321)
- International Business (IBS) (p. 322)

J

- Journalism (JRN) (p. 322)

L

- Law Enforcement Training (LET) (p. 322)

M

- Management (MGT) (p. 322)
- Marketing (MKT) (p. 323)
- Mass Communications (MCO) (p. 323)
- Mathematics (MAT) (p. 324)
- Microsoft Technology (MST) (p. 326)
- Mortuary Science Program (MSP) (p. 327)
- Music: Commercial/Business (MUC) (p. 328)
- Music: History/Literature (MHL) (p. 328)
- Music: Performance (MUP) (p. 329)
- Music: Theory/Composition (MTC) (p. 345)

N

- Nursing Science: Basic (NUR) (p. 345)

P

- Philosophy (PHI) (p. 346)
- Physical Education (PED) (p. 346)
- Physical Geography (GPH) (p. 347)
- Physics (PHY) (p. 347)
- Political Science (POS) (p. 348)
- Psychology (PSY) (p. 349)

R

- Reading (RDG) (p. 350)
- Recreation (REC) (p. 350)
- Religious Studies (REL) (p. 350)

S

- Small Business Management (SBS) (p. 350)
- Society and Business (SBU) (p. 351)
- Sociology (SOC) (p. 351)
- Spanish (SPA) (p. 351)

- Spanish Humanities (SPH) (p. 352)
- Storytelling (STO) (p. 352)
- Sustainability/Natural Sciences (SUS) (p. 352)
- Sustainability/Social Sciences and Humanities (SSH) (p. 353)

T

- Theatre (THE) (p. 353)
- Theatre and Film (THF) (p. 353)
- Theatre Occupational (THO) (p. 353)
- Theatre Performance/Production (THP) (p. 353)

U

- Unmanned Aircraft Systems (UAS) (p. 354)

W

- Wellness Education (WED) (p. 354)
- Women's Studies (WST) (p. 355)
- Writing Across Curriculum (WAC) (p. 355)

Accounting (ACC)

ACC105 / Payroll, Sales and Property Taxes
3 Credits **/ 3.0 Periods for Lecture**
Tax reporting for payroll, sales, and personal property. Prerequisites: None.
Division: Business and Computing Studies

ACC111 / Accounting Principles I
3 Credits **/ 3.0 Periods for Lecture**
Fundamental theory of accounting principles and procedures. Prerequisites: None.
Division: Business and Computing Studies

ACC112 / Accounting Principles II
3 Credits **/ 3.0 Periods for Lecture**
Continuation of the fundamental theory of accounting principles and procedures, including interpretation of general purpose financial statements. Prerequisites: ACC111 with a grade of "C" or better, or permission of Department or Division.
Division: Business and Computing Studies

ACC115 / Computerized Accounting
3 Credits **/ 3.0 Periods for Lecture & Lab**
Understanding of fundamental accounting principles and mastery of an accounting information systems including the general ledger, accounts receivable, accounts payable and payroll. Prerequisites: None.
Division: Business and Computing Studies

ACC121 / Individual Tax Preparation
3 Credits **/ 3.0 Periods for Lecture & Lab**
Theory and practice of accounting for individual taxation. Prerequisites: None.
Division: Business and Computing Studies

ACC211 / Financial Accounting
3 Credits **/ 3.0 Periods for Lecture**
Introduction to theory and practice in the preparation and interpretation of general purpose financial statements. Prerequisites: None.
SUN SUN# ACC 2201
Division: Business and Computing Studies

ACC212 / Managerial Accounting
3 Credits **/ 3.0 Periods for Lecture**
Development and analysis of accounting information for managerial planning and control. Prerequisites: A grade of "C" or better in (ACC111 and ACC112), or ACC211, and (CIS105 or permission of Department or Division).
SUN SUN# ACC 2202
Division: Business and Computing Studies

ACC219 / Intermediate Accounting I
3 Credits **/ 3.0 Periods for Lecture**
Continuation of the theory and practice of financial accounting, applicable to assets, liabilities, equity related problems of income determination and financial reporting. Prerequisites: A grade of C or better in ACC212 or ACC240 or permission of Department or Division.
Division: Business and Computing Studies

ACC221 / Tax Accounting
3 Credits **/ 3.0 Periods for Lecture**
Theory and practice of accounting for personal, corporate, and non-corporate taxation. Prerequisites: A grade of C or better in ACC111 or ACC211 or permission of Department or Division.
Division: Business and Computing Studies

ACC224 / Tax Practice Administration and Business Entity Analysis
3 Credits **/ 3.0 Periods for Lecture**
Federal income tax representation, practices, and procedures, including trust and estate income tax, exempt organizations, and retirement plans. Prerequisites: A grade of C or better in ACC121 or ACC221.
Division: Business and Computing Studies

Administration of Justice Studies (AJS)

AJS101 / Introduction to Criminal Justice
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# AJS 1101
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS109 / Substantive Criminal Law
3 Credits **/ 3.0 Periods for Lecture**
Covers philosophy of legal sanctions and historical development from the common law to modern American criminal law, classifications of crimes, elements of and parties to crimes, general definition of crimes, common defenses utilized. Includes specific offenses and the essential elements of each offense. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS113 / Criminal Justice Crime Control Policies and Practices
3 Credits **/ 3.0 Periods for Lecture**
Focus on changing the distribution of crime opportunities rather than offender motivation. Topics include application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, and crime prevention through environmental design. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS123 / Ethics and the Administration of Justice
3 Credits **/ 3.0 Periods for Lecture**
Introduces and explores ethical issues and the justice system. Focuses on ethics and the law, the police, courts and corrections. Reviews ethical theory, concepts and practices as they relate to administration of justice. Explores issues of how media/social media shape ethics. Encourages critical thinking and value decision making in criminal justice system situations. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Health Science, Public Service, & Counseling

AJS151 / Firearms I
1 Credit **/ 1.0 Periods for Lecture & Lab**
Moral aspects, legal provisions, safety precautions and restrictions covering the use of firearms, and the firing of sidearms. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS153 / Firearms II/Handguns
1 Credit **/ 1.0 Periods for Lecture & Lab**
Advanced familiarization with handguns. Variations of basic shooting stance. Legal and moral repercussions of self-defense. Includes range practice. Prerequisites: A grade of C or better in AJS151 or equivalent certified firearms training as reviewed by the Department.
Division: Health Science, Public Service, & Counseling

AJS154 / Firearms III/Long Weapons
1 Credit **/ 1.0 Periods for Lecture & Lab**
Familiarization with different types of long weapons and associated ammunition. Emphasis on safety techniques for use and storage of weapons. Limited use of range for practice. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS162 / Domestic Violence
3 Credits **/ 3.0 Periods for Lecture**
Explores domestic violence as a social problem within the United States from historical, cultural, political, legal, and law enforcement perspectives. Provides an overview of theories, definitions and causes of, and interventions for domestic violence involving spousal, elder and child abuse along with teen dating violence. Examines the dynamics and effects of domestic violence. Addresses research issues and contemporary domestic violence policy. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS200 / Current Issues In Criminal Justice
3 Credits **/ 3.0 Periods for Lecture**
Examines current issues, techniques and trends in the Criminal Justice System. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS201 / Rules of Evidence
3 Credits **/ 3.0 Periods for Lecture**
A practical insight into the rules of evidence. Examines the general rules governing admissibility of evidence. Explores types of evidence, the hearsay rule, witness testimony, the exclusionary rule, privileged communications, best evidence rule. Examination of chain of custody and the use of scientific evidence. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS205 / Effective Communication and Report Writing in Criminal Justice
3 Credits **/ 3.0 Periods for Lecture**
Overview of effective communication for criminal justice agencies. Covers the communication process and flow. Written communication emphasized with report writing, including characteristics of reports and field notes, and the importance and uses of each. Form, style, and procedures for writing various reports, including elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS210 / Constitutional Law
3 Credits **/ 3.0 Periods for Lecture**
An examination of the U.S. Constitution as it relates to the law enforcement function. Includes statutory law and judicial decisions governing the areas of arrest, search and seizure, interrogations and confessions, self-incrimination and other constitutional guarantees. Required in AJS curriculum. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS212 / Juvenile Justice Procedures
3 Credits **/ 3.0 Periods for Lecture**
Examines the nature and extent of juvenile delinquency to the present. Including but not limited to the history, jurisdictions, terminology, procedures, and institutions of the juvenile justice system. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS213 / Evidence Technology: Fingerprints
3 Credits **/ 3.0 Periods for Lecture**
Covers the fundamental principles of fingerprints, including the history of fingerprint classification, the biology of friction ridge skin, pattern analysis, comparison, and identification as well as their application in significant court cases. Also includes techniques for obtaining inked prints and developing and preserving latent prints. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS214 / Evidence Technology/Photography
3 Credits **/ 3.0 Periods for Lecture**
The use of photography and other aids in identification and preservation of evidence such as fingerprints, footprints, and impressions. Techniques in crime scene and traffic accident photography. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS215 / Criminalistics: Physical Evidence
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Health Science, Public Service, & Counseling

AJS216 / Criminalistics: Biological Evidence
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Health Science, Public Service, & Counseling

AJS225 / Criminology
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS230 / The Police Function
3 Credits **/ 3.0 Periods for Lecture**
An examination of the history, organization, procedures, and methods of operation of public policing in the United States. Career opportunities and current challenges in law enforcement presented. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS240 / The Correction Function
3 Credits **/ 3.0 Periods for Lecture**
Examines the history and development of correctional theories and institutions. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS258 / Victimology and Crisis Management in Public Safety
3 Credits **/ 3.0 Periods for Lecture**
Victimology, the criminal justice system, techniques of crisis intervention and management, and the importance of a multicultural and global perspective. Includes violent crimes, sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, developing effective coping skills of victims and responders, appropriate community resources, and the cultural responsiveness of the justice system.
Crosslisted: FSC258, EMT258
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS260 / Procedural Criminal Law
3 Credits **/ 3.0 Periods for Lecture**
Concerned with the understanding of procedural criminal law. Examines the processes and procedures followed by law enforcement, attorneys, and the courts in the apprehension and prosecution of criminal offenders. Examines the rationale underlying major court holdings impacting the criminal justice process, the procedural requirements that stem from these holdings and their effect on the daily operations of the criminal justice system. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS270 / Community Relations
3 Credits **/ 3.0 Periods for Lecture**
Examination of community problems; community action programs and trends; human behavior, conflict and communication; and the relationship between the criminal justice system and community. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

AJS275 / Criminal Investigation I
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, identification, and basic investigative techniques. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

AJS290BN / Courtroom Testimony Seminar
1 Credit **/ 1.0 Periods for Lecture**
Courtroom demeanor and protocol. Role and primary functions of witness and legal counsels. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

Aeronautics (AET)

AET107 / Private Pilot Ground School
5 Credits **/ 5.0 Periods for Lecture**
Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, airplane systems, airports, airspace, communications, Federal Air Regulations, navigation, airplane performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam. Prerequisites: None. Corequisites: AET110 or AET112.
Division: Aviation and Applied Technology

AET110 / Private Pilot Flight
1 Credit **/ 5.0 Periods for Laboratory**
Flight course in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate practical examination. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, night flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Approximately 50 hours airplane flight experience at student's expense required. Requires passing check ride similar to the FAA Private Pilot check ride. Prerequisites: None. Corequisites: AET107.
Division: Aviation and Applied Technology

AET115 / Aviation Meteorology
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Aviation and Applied Technology

AET203 / Basic Airplane Systems
3 Credits **/ 3.0 Periods for Lecture**
Beginning commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examination. Discussions will include, but not be limited to reciprocating engines, engine systems, airplane systems, altitude systems, and commercial regulations. Prerequisites: A grade of C or better in (AET207, AET217, and AET210) or permission of Instructor. Corequisites: AET222.
Division: Aviation and Applied Technology

AET207 / Attitude Instruments and Navigation
3 Credits **/ 3.0 Periods for Lecture**
Beginning instrument pilot ground course in preparation for the Federal Aviation Administration (FAA) Instrument Pilot Rating and Instrument Rating written examinations. Includes preflight preparation, flight instruments, basic attitude instrument flying, radio navigation systems, and technically advanced aircraft systems. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET210, AET217, and AET220.
Division: Aviation and Applied Technology

AET208 / Aviation Safety
3 Credits **/ 3.0 Periods for Lecture**
Introduction to aviation safety, including aviation safety programs, risk management, pilot psychology, physiology, human factors, and accident review and investigation. Prerequisites: A grade of C or better in AET107, or permission of Instructor.
Division: Aviation and Applied Technology

AET210 / Commercial Flight Lab I
1 Credit **/ 5.0 Periods for Laboratory**
Initial flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on instrument and technically advanced aircraft operations. Student must fly approximately 10 hours at own expense. Requires passing operational stage checks similar to the FAA check rides. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET217, and AET220.
Division: Aviation and Applied Technology

AET213 / Aerodynamics and Performance
3 Credits **/ 3.0 Periods for Lecture**
Advanced commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examinations. Includes discussion of aerodynamic factors including lift, weight, drag, and thrust. Discussions will include, but are not limited to aerodynamics, performance, safe and efficient airplane operations, airplane stability and control, stalls, and spins. Prerequisites: A grade of C or better in AET207, AET217, and AET210. Corequisites: AET221.
Division: Aviation and Applied Technology

AET217 / Instrument Procedures
3 Credits **/ 3.0 Periods for Lecture**
Advanced instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Includes Federal Aviation Regulations, instrument approach procedures, and instrument en route considerations. Requires passing written exam similar to the Instrument pilot rating and Instrument rating written exams. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210, and AET220.
Division: Aviation and Applied Technology

AET220 / Instrument Flight Lab
1 Credit **/ 5.0 Periods for Laboratory**
Flight course in preparation for the Federal Aviation Administration (FAA) Instrument rating practical examination. Emphasis on instrument operations. Student must fly approximately 40 hours at own expense. Requires passing of stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210, and AET217.
Division: Aviation and Applied Technology

AET221 / Commercial Flight Lab II
1 Credit **/ 5.0 Periods for Laboratory**
Intermediate flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial and solo cross-country flight operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures during dual instruction are designed to be performed with flight instructor guidance. Requires passing commercial pilot stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET207 and AET210 or permission of Instructor. Corequisites: AET213.
Division: Aviation and Applied Technology

AET222 / Commercial Flight Lab III
1 Credit **/ 5.0 Periods for Laboratory**
Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures are designed to be performed with little flight instructor guidance. Requires commercial pilot stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET221 and AET213. Corequisites: AET203.
Division: Aviation and Applied Technology

AET225 / Advanced Aircraft Systems
4 Credits **/ 4.0 Periods for Lecture**
Survey of advanced aircraft systems to include electrical, automatic flight control, pressurization, cabin atmosphere, ice control, rain control, fire detection and extinguishing. Includes theory and analysis of turbine aircraft engines. Introduction to turbine engine systems to include lubrication, ignition, fuel control, cooling, exhaust, and propellers. Includes overview of maintenance publications, forms and records. Prerequisites: Private Pilot Certificate or permission of Instructor.
Division: Aviation and Applied Technology

AET227 / Certified Flight Instructor: Airplane, Single Engine Land Ground School
5 Credits **/ 5.0 Periods for Lecture**
Ground school in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor and Fundamentals of Instruction written examinations. Includes fundamentals of instruction, aerodynamics, airplane performance, systems, operations, weight and balance, weather, federal regulations, navigation, maneuvers, pilot physiology, ethics, and aeronautical decision making. Requires passing written exams similar to the FAA Certified Flight Instructor: Airplane, and Fundamentals of Instruction written exams. Prerequisites: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET230.
Division: Aviation and Applied Technology

AET229 / Crew Resource Management
3 Credits **/ 3.0 Periods for Lecture**
Crew communications, teamwork, leadership, "followership," decision-making, and situational awareness; also the benefits of diversity, and the role diversity plays in the modern aerospace industry. Emphasis on utilization of all available resources in order to conduct a safe and efficient flight. Prerequisites: A grade of C or better in AET217, or permission of instructor.
Division: Aviation and Applied Technology

AET230 / Certified Flight Instructor: Airplane, Single Engine Land Flight Lab
1 Credit **/ 3.0 Periods for Laboratory**
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: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET227.
Division: Aviation and Applied Technology

AET237 / Multiengine Airplane Pilot Ground School
2 Credits **/ 2.0 Periods for Lecture**
Aeronautical knowledge necessary to meet requirements for a multi-engine airplane rating including orientation, aerodynamics, airplane systems, airplane performance, flight planning, and emergency procedures. Prerequisites: A grade of C or better in AET220 or FAA Commercial Pilot Certificate with instrument rating Corequisites: AET240.
Division: Aviation and Applied Technology

AET239 / Commercial Flight Lab IV
1 Credit **/ 5.0 Periods for Laboratory**
Final flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 20 hours at their own expense. Maneuvers and procedures are designed to be performed without flight instructor guidance. Requires passing commercial pilot stage check similar to the FAA check ride. Prerequisites: A grade of C or better in (AET203 and AET222), or permission of Instructor.
Division: Aviation and Applied Technology

AET240 / Multiengine Airplane Pilot Flight Lab
1 Credit **/ 1.5 Periods for Laboratory**
Flight course in preparation for the Federal Aviation Administration (FAA) Multi-engine Airplane practical examination. Approximately 18 hours of flight experience at the student`s expense and passing check ride similar to the FAA Multi-engine check ride are required. Prerequisites: A grade of C or better in AET239 or FAA Commercial Pilot Certificate with Single Engine Land and Instrument rating. Corequisites: AET237.
Division: Aviation and Applied Technology

African American Studies (AFR)

AFR110 / Introduction to African-American Studies
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the study of the African-American experience. Interdisciplinary approach includes historical underpinnings; population and cultural characteristics; social, economic, and political issues; and implications for the future. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Languages, Humanities & Information Studies

AFR202 / Ethnic Relations in the United States
3 Credits **/ 3.0 Periods for Lecture**
Basic concepts and processes, including historic overview, of inter-ethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to inter-ethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world. Prerequisites: None.
Crosslisted: CCS202, ASB202
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

AFR203 / African-American History to 1865
3 Credits **/ 3.0 Periods for Lecture**
History and cultural heritage of African-Americans from ancestral origins in Ancient Africa through the experience of chattel slavery in the Americas to eventual emancipation and participation in the American Civil War. Prerequisites: None.
Crosslisted: HIS203
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Languages, Humanities & Information Studies

AFR204 / African-American History 1865 to Present
3 Credits **/ 3.0 Periods for Lecture**
The multifaceted history and cultural heritage of African-American communities since the Civil War, presented within the broader context of U.S. history. This course explores the social, economic, political, and cultural history of African-American communities, including the historical and cultural impacts of slavery and discrimination, and the collective struggle for freedom, equality, and self-determination throughout U.S. history. Prerequisites: None.
Crosslisted: HIS204
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

Aircraft/Maintenance Technology (AMT)

AMT124 / Aircraft Forms, Regulations, Weight and Balance, Drawings and Ground Operations
5 Credits **/ 7.0 Periods for Lecture & Lab**
Federal Aviation maintenance regulations, publications, forms, and records. Overview of technician`s privileges and limitations. Perform aircraft weight and balance, aircraft ground operations, and fuel servicing techniques. Interpretation and production of drawings, symbols, and schematic diagrams. Emphasis on safety and other human factors. Prerequisites: Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+, or higher or a grade of C or better in ENG101 and RDG100 and (MAT120 or higher level mathematics course).
Division: Aviation and Applied Technology

AMT126 / Fundamentals of Mathematics and Electricity
9 Credits **/ 11.0 Periods for Lecture & Lab**
Mathematical computation of fundamental electrical circuit parameters. Basic definitions, laws, and concepts. Schematics, wiring, and parts placement diagrams. Test and troubleshoot electrical and electronic components and circuits. Prerequisites: Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+, or higher or a grade of C or better in ENG101 and RDG100 and (MAT120 or higher level mathematics course).
Division: Aviation and Applied Technology

AMT128 / Physics for Aviation, Corrosion Control, Materials, Hardware, Processes, Fluid Lines and Fittings
5 Credits **/ 7.0 Periods for Lecture & Lab**
General concepts of fluid lines and fittings, aircraft materials, hardware and processes, cleaning and corrosion control, physics for aviation, inspection concepts and techniques. Prerequisites: Appropriate District English, Reading, and Math placement into ENG101, RDG100 and MAT12+, or higher or a grade of C or better in ENG101 and RDG100 and (MAT120 or higher level mathematics course).
Division: Aviation and Applied Technology

AMT220 / Fundamentals of Bonded Composite and Wooden Aircraft Structures, Fabric Coverings and Finishes
3 Credits **/ 5.0 Periods for Lecture & Lab**
Concepts of aircraft structural design and materials including bonded composites, wooden structures, fabric coverings, and protective finishing maintenance. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT222 / Atmosphere Control, Fire Detection, Ice and Rain Protection Systems
4 Credits **/ 6.0 Periods for Lecture & Lab**
Operation and maintenance of aircraft auxiliary systems. Inspection, servicing, troubleshooting, and repair of environmental control, ice and rain control, fire protection, and warning systems. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT224 / Aircraft Metallic Structures
5 Credits **/ 7.0 Periods for Lecture & Lab**
Inspection, fabrication, and repair techniques of aircraft metallic structures. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT226 / Aircraft Hydraulics, Pneumatics, Fuel, Landing Gear, Positioning and Warning Systems
7 Credits **/ 9.0 Periods for Lecture & Lab**
Identification, inspection, troubleshooting, and repair techniques of aircraft hydraulics, pneumatics, landing gear, positioning and warning, and fuel systems. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT228 / Aircraft Electrical, Instruments, Communication and Navigation Systems
7 Credits **/ 9.0 Periods for Lecture & Lab**
Operation, inspection, installation, servicing, and troubleshooting of aircraft electrical, Direct Current (DC), Alternating Current (AC), instruments, communication, navigation systems, and fuel indication systems. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT230 / Airframe Assembly and Inspection
6 Credits **/ 8.0 Periods for Lecture & Lab**
Airframe inspection and special inspection techniques, reporting, and documentation procedures. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT263 / Aircraft Turbine Engines
5 Credits **/ 7.0 Periods for Lecture & Lab**
Turbine engine theory and maintenance. Focuses on operational characteristics and engine test techniques on the aircraft and in test cells. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT264 / Aircraft Reciprocating Engines
7 Credits **/ 9.0 Periods for Lecture & Lab**
Reciprocating engines theory, design, and operations. Focusing on techniques used in troubleshooting, overhaul, inspection, and repair of opposed and radial engines. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT266 / Engine Fuel Systems, Fuel Metering and Induction System
6 Credits **/ 8.0 Periods for Lecture & Lab**
Inspection, servicing, troubleshooting, overhaul, and repair of aircraft fuel delivery systems, fuel metering devices, turbochargers, superchargers, and induction system principles of operation and design. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT268 / Engine Electrical, Ignition and Starter Systems
6 Credits **/ 8.0 Periods for Lecture & Lab**
Maintain powerplant electrical systems including inspecting, servicing, troubleshooting, overhauling, and repairing engine electrical, ignition, starter systems, and components. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT270 / Engine Instruments, Fire Protection, Lubrication, Cooling, and Exhaust Systems
5 Credits **/ 7.0 Periods for Lecture & Lab**
Operation, inspection, and maintenance of engine instruments, fire detection and extinguishing, engine lubrication, cooling, and exhaust systems. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

AMT272 / Propeller Systems and Engine Inspections
4 Credits **/ 6.0 Periods for Lecture & Lab**
Propeller systems operation, inspection, troubleshooting, servicing, repair, and maintenance. Reciprocating and turbine engine inspection and documentation. Prerequisites: A grade of C or better in (AMT124, AMT126, and AMT128) or permission of Program Director.
Division: Aviation and Applied Technology

American Indian Studies (AIS)

AIS140 / American Indian History
3 Credits **/ 3.0 Periods for Lecture**
Survey of American Indian history with emphasis on the last 200 years. Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty. Prerequisites: None.
Crosslisted: HIS140
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

American Sign Language (ASL)

ASL101 / American Sign Language I
4 Credits **/ 4.0 Periods for Lecture**
Introduction of principles, methods, and techniques for communicating with deaf people who sign. Development of expressive and receptive sign skills, manual alphabet, numbers, and sign vocabulary. Overview of syntax, grammar, and culture related to American Sign Language (A.S.L.). Prerequisites: None. ASL103 suggested as a corequisite but not required.
Division: Languages, Humanities & Information Studies

ASL102 / American Sign Language II
4 Credits **/ 4.0 Periods for Lecture**
Continued development of knowledge and language skills for communicating with deaf people who sign. Includes numbers, fingerspelling, and culture. Emphasis on enhancement of receptive sign skills and continued development of expressive sign skills. Application of rudimentary, syntactical, and grammatical structure stressed with continued development of sign vocabulary. Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.
Division: Languages, Humanities & Information Studies

ASL103 / Introduction to the Deaf Community
1 Credit **/ 1.0 Periods for Lecture**
History and development of American Sign Language (ASL) and English codes. Overview of education for Deaf and Hard of Hearing children. Legal rights and common adaptive devices used by Deaf and Hard of Hearing individuals. Prerequisites: None.
Division: Languages, Humanities & Information Studies

ASL110 / Fingerspelling
3 Credits **/ 3.0 Periods for Lecture**
Introduction to fingerspelling techniques. Focus on methods, theory, and applications on receptive and expressive skills including manual alphabet production and numbers. In addition, skill development in speed, dexterity, clarity, and lexicalized fingerspelling, numeric incorporation, prefixes, suffixes, and polysyllabic words. Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.
Division: Languages, Humanities & Information Studies

ASL201 / American Sign Language III
4 Credits **/ 4.0 Periods for Lecture**
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.
Division: Languages, Humanities & Information Studies

ASL202 / American Sign Language IV
4 Credits **/ 4.0 Periods for Lecture**
Advanced American Sign Language skills including continued vocabulary. Emphasis on conversational techniques in a cross-cultural framework. Continued work on conceptual accurate signing of English idioms and words with multiple meanings. Prerequisites: A grade of C or better in ASL201 or permission of Department or Division. (ENG101 or ENG107), ASL200, and (CRE101 or equivalent as indicated by assessment) suggested but not required. Completion of prerequisites within the last three years is required.
Division: Languages, Humanities & Information Studies

ASL298AA / Special Projects
1 Credit **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Languages, Humanities & Information Studies

ASL298AB / Special Projects
2 Credits **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Languages, Humanities & Information Studies

ASL298AC / Special Projects
3 Credits **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Languages, Humanities & Information Studies

Anthropology (Science/Math) (ASM)

ASM104 / Bones, Stones, and Human Evolution
4 Credits **/ 5.0 Periods for Lecture & Lab**
Study of human evolution and variation; including fossil hominids and their tools, primate anatomy and behavior, human genetics, and the environment and human biology. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Social & Behavioral Sciences

ASM275 / Forensic Anthropology
4 Credits **/ 5.0 Periods for Lecture & Lab**
Survey of the role of forensic anthropologists, from the crime scene to the courtroom. Course focuses on how skeletal analysis can aid in medicolegal investigations, especially by identifying aspects of the life history of unknown individuals and by reconstructing events that took place at crime scenes. Covers both the legal aspects of forensic practice and the underlying biological basis for evidence obtained from skeletal remains. Examines applications of forensic anthropology in mass disasters, human rights investigations, and the deciphering of historic cases. Lab activities designed to illustrate techniques and principles central to the discipline. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Social & Behavioral Sciences

ASM298AA / Special Projects
1 Credit **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Social & Behavioral Sciences

Anthropology (Soc/Behv. Science) (ASB)

ASB102 / Introduction to Cultural Anthropology
3 Credits **/ 3.0 Periods for Lecture**
Introduces concepts and methods of cultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of cultural and social practices such as subsistence, economics, politics, marriage, kinship, gender and religion. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

ASB211 / Women Across Cultures
3 Credits **/ 3.0 Periods for Lecture**
Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

ASB214 / Magic, Witchcraft and Healing: An Introduction to Comparative Religion
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Global Awareness [G]; Global Awareness [G]-in combo
Division: Social & Behavioral Sciences

ASB222 / Buried Cities and Lost Tribes: Old World
3 Credits **/ 3.0 Periods for Lecture**
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 life ways, 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.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Global Awareness [G]; Global Awareness [G]-in combo
Division: Social & Behavioral Sciences

ASB223 / Buried Cities and Lost Tribes: New World
3 Credits **/ 3.0 Periods for Lecture**
Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which fragment societies. Examples drawn from North America, Central America, and South America. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

ASB253 / Death and Dying Across Cultures
3 Credits **/ 3.0 Periods for Lecture**
Responses to death and dying in cultures around the world. Explanations for particular cultural responses to death and dying. Examples drawn from ancient and contemporary cultures. Prerequisites: None. ASB102 suggested but not required.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Social & Behavioral Sciences

Art (ART)

ART111 / Drawing I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Fundamental principles of drawing. Emphasis on composition and facility in objective and expressive representation, using variety of drawing media. Prerequisites: None.
SUN SUN# ART 1111
Division: Communication & Fine Arts

ART112 / Two-Dimensional Design
3 Credits **/ 6.0 Periods for Lecture & Lab**
Study of fundamental elements and principles of two-dimensional design. Prerequisites: None.
SUN SUN# ART 1112
Division: Communication & Fine Arts

ART113 / Color
3 Credits **/ 6.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

ART115 / Three-Dimensional Design
3 Credits **/ 6.0 Periods for Lecture & Lab**
Fundamental principles of three-dimensional design. Prerequisites: None.
SUN SUN# ART 1115
Division: Communication & Fine Arts

ART116 / Life Drawing I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Use of form, structure and anatomy of draped and undraped human figure to develop basic principles of sound draftsmanship. Prerequisites: None.
Division: Communication & Fine Arts

ART117 / Life Drawing II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Further study of form, structure, and anatomy of the draped and undraped human figure with emphasis on composition. Prerequisites: ART116.
Division: Communication & Fine Arts

ART122 / Drawing and Composition II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Emphasis on composition and exploration of drawing media. Prerequisites: A grade of C or better in ART111.
Division: Communication & Fine Arts

ART131 / Photography I
3 Credits **/ 6.0 Periods for Lecture & Lab**
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 Notes: Camera required.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ART132 / Photography II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Advanced camera and darkroom techniques. Aesthetic awareness with personal expression. Prerequisites: A grade of C or better in ART131 or permission of Instructor.
Division: Communication & Fine Arts

ART133 / Photography III
3 Credits **/ 6.0 Periods for Lecture & Lab**
Refinement of aesthetic and technical aspects producing convincing images of highest quality. Prerequisites: A grade of C or better in ART132 or permission of Instructor.
Division: Communication & Fine Arts

ART137 / Alternative Photographic Processes
3 Credits **/ 6.0 Periods for Lecture & Lab**
This course focuses on the 19th-century photographic processes including new picture-making technologies. Discussing the history of photography in relation with techniques taught in class. Students encouraged to explore historical processes in combination with contemporary technologies. Through technical demonstrations, hands-on workshops, and technical assignments, students develop a working knowledge of a range of processes while developing their own visual language. Prerequisites: None.
Division: Communication & Fine Arts

ART151 / Sculpture I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Exploration of sculptural form and expression in clay, plaster, stone, wood and metal. Prerequisites: None.
Division: Communication & Fine Arts

ART161 / Ceramics I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Introduction to ceramic materials and techniques of hand construction, decorating, glazing and throwing on potters' wheel. Prerequisites: None.
Division: Communication & Fine Arts

ART162 / Ceramics II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Major emphasis on wheel throwing, glaze making and decorating techniques. Prerequisites: A grade of C or better in ART161.
Division: Communication & Fine Arts

ART165 / Watercolor Painting I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Transparent and Gouache watercolor painting. Prerequisites: A grade of C or better in (ART111 and ART112), or permission of Instructor.
Division: Communication & Fine Arts

ART166 / Watercolor Painting II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Painting in water soluble media. Emphasis on individual techniques and design. Prerequisites: A grade of C or better in ART165.
Division: Communication & Fine Arts

ART167 / Painting I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Exploration of technical and expressive possibilities of various media in painting. Prerequisites: A grade of C or better in (ART111 and ART112), or permission of Instructor.
Division: Communication & Fine Arts

ART168 / Painting II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Continued refinement of painting skills and investigation of new possibilities in painting. Prerequisites: A grade of C or better in ART167 or permission of Instructor.
Division: Communication & Fine Arts

ART234 / Color Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Basic principles of color theory, camera and input and output techniques using analog or digital photography. Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor. Course Notes: Film or digital camera is required.
Division: Communication & Fine Arts

ART255 / Art Marketing
3 Credits **/ 3.0 Periods for Lecture**
Career goals, presentation of artist and art work (portfolio, resume, business cards, catalog), pricing and selling works, networking, establishing a studio, promotion and publicity, writing press releases, proposal writing, business ethics, artist rights, copyright law, contracts and agreements, royalties, record keeping, and communication skills. Prerequisites: None.
Division: Communication & Fine Arts

ART290AC / Studio Art
3 Credits **/ 6.0 Periods for Lecture & Lab**
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. ART290AC may be repeated for credit.
Division: Communication & Fine Arts

ART290BC / Studio Art: Drawing
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART111 or permission of Instructor. Course Notes: ART290BC may be repeated for credit.
Division: Communication & Fine Arts

ART290DC / Studio Art: Life Drawing
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART117 or permission of Instructor. Course Notes: ART290DC may be repeated for credit.
Division: Communication & Fine Arts

ART290EC / Studio Art: Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART132 or permission of Instructor. Course Notes: ART290EC may be repeated for credit.
Division: Communication & Fine Arts

ART290GC / Studio Art: Ceramics
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART162 or permission of Instructor. Course Notes: ART290GC may be repeated for credit.
Division: Communication & Fine Arts

ART290JC / Studio Art: Color
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART113 or permission of Instructor. Course Notes: ART290JC may be repeated for credit.
Division: Communication & Fine Arts

ART290MC / Studio Art: Digital Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in AVC143 or permission of Instructor. Course Notes: ART290MC may be repeated for credit.
Division: Communication & Fine Arts

ART290PC / Studio Art: Painting
3 Credits **/ 6.0 Periods for Lecture & Lab**
Studio course for art majors allowing continuation in a subject field. Prerequisites: A grade of C or better in ART168 or permission of Instructor. Course Notes: ART290PC may be repeated for credit.
Division: Communication & Fine Arts

Art Humanities (ARH)

ARH100 / Introduction to Art
3 Credits **/ 3.0 Periods for Lecture**
Understanding and enjoyment of visual art through the study of art media, design elements, techniques and processes, and cultural contexts. Building awareness of the meaning, functions, and significance of art. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH101 / Art from Prehistory Through Middle Ages
3 Credits **/ 3.0 Periods for Lecture**
History of art from the Paleolithic period through the Middle Ages.
SUN SUN# ART 1101
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH102 / Art from Renaissance to Modernism
3 Credits **/ 3.0 Periods for Lecture**
History of art from the Renaissance through Modernism.
SUN SUN# ART 1102
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH110 / History of Graphic Design
3 Credits **/ 3.0 Periods for Lecture**
Survey of the history of graphic design from its origins to the present. Traces the characteristics, aesthetics, and relationships between graphic design and society. Includes movements, individual artists, and interpretation. Emphasizes the function of graphic design as a branch of human visual communication. Prerequisites: None.
Division: Communication & Fine Arts

ARH112 / Introduction to Modern and Contemporary Art
3 Credits **/ 3.0 Periods for Lecture**
Study of art and theory from the mid-nineteenth century to the present. Focus on European and American modern and contemporary art while considering other regions of the world. Examination of the historical, social, and cultural contexts of artistic developments. Application of various interpretive models to examine modern and contemporary art. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH115 / History of Photography
3 Credits **/ 3.0 Periods for Lecture**
Survey of history of photography from beginning to present. Emphasizes the reciprocal relationship between the medium's development and reception, society, and other visual arts. Technical developments, photographic practices, and sociocultural themes are studied. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH202 / Art of Africa, Oceania, and Americas
3 Credits **/ 3.0 Periods for Lecture**
Study of the material cultures of Africa, America, and Oceania, with an emphasis on diverse worldviews and their expression within a contemporary global context. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Communication & Fine Arts

ARH203 / Art of Ancient Egypt
3 Credits **/ 3.0 Periods for Lecture**
The art and culture of ancient Egypt from prehistoric through the Greco-Roman period. Prerequisites: None.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

ARH217 / Mexican Art History
3 Credits **/ 3.0 Periods for Lecture**
Art of Mexico and related cultures, from the prehistoric to the contemporary period. Prerequisites: None.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

Art and Visual Communication (AVC)

AVC100 / Introduction to Digital Arts
1 Credit **/ 2.0 Periods for Lecture & Lab**
Foundation course in digital arts and design, with emphasis in the production of art using the computer. Prerequisites: None.
Division: Communication & Fine Arts

AVC120 / Inking for Sequential Art
3 Credits **/ 6.0 Periods for Lecture & Lab**
Development of inking materials and techniques used in sequential art. Emphasis on the types of tools used in the industry and the various means of employing them. Understanding the duties of the inker and the process of computer finishing. Prerequisites: None.
Division: Communication & Fine Arts

AVC138 / Commercial Photography I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Basic techniques of lighting, camera work, and reproduction of commercial photography. Cooperation with commercial art community. Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor.
Division: Communication & Fine Arts

AVC139 / Commercial Photography II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Advanced techniques with portfolio organization and presentation. Prerequisites: A grade of C or better in AVC138.
Division: Communication & Fine Arts

AVC140 / Portrait Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Fundamentals of portrait photography. Basic techniques of lighting, posing, design, and digital workflows applicable to the industry. Theory and practices of a portrait photography business. Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor. Course Notes: Digital camera with manual settings required.
Division: Communication & Fine Arts

AVC142 / Introduction to Digital Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Fundamentals of digital photography. Includes camera operations, exposure techniques, introduction to digital output, and theory of digital photography. Prerequisites: None. Course Notes: Digital camera required.
Division: Communication & Fine Arts

AVC143 / Intermediate Digital Photography
3 Credits **/ 6.0 Periods for Lecture & Lab**
Intermediate theory and techniques of digital photography. Aesthetic awareness and personal expression from image capture through intermediate techniques in the digital darkroom. Introduction to high-resolution digital output. Prerequisites: A grade of C or better in AVC142 or permission of Instructor. Course Notes: Semi-adjustable, high-resolution digital camera is required.
Division: Communication & Fine Arts

AVC169 / 2D Media Design
3 Credits **/ 6.0 Periods for Lecture & Lab**
Generation of two-dimensional (2D) images, designs, and media using digital and traditional methods of visual problem solving. Understanding digital and design-based techniques and workflows. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC177 / Digital Photographic Imaging I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Introduction to multiple elements of digital imaging. Basic foundation in photographic manipulation of images, with special attention to aesthetic foundations underlying photographic composition. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC178 / Digital Arts Studies
3 Credits **/ 6.0 Periods for Lecture & Lab**
Designed for broad overview of the digital arts. Experience in digital based media, creative problem solving, design and aesthetics. Prerequisites: A grade of C or better in AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC181 / Graphic Design I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Basic understanding of design principles and the stages of graphic design, with an emphasis on final product and presentation. Prerequisites: A grade of C or better in AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC183 / Digital Graphic Arts I
3 Credits **/ 6.0 Periods for Lecture & Lab**
Graphic design use in microcomputer; black and white graphics, standard and color brushes, lines, shapes, area fills and fonts. Application to illustration, advertising graphics, typography, and video interaction. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.
Division: Communication & Fine Arts

AVC219 / Coloring, Toning and Lettering for Sequential Art
3 Credits **/ 6.0 Periods for Lecture & Lab**
Understanding of the digital rules and programs used in coloring, toning and lettering comics, and the problems presented therein within the sequential narrative. Emphasis on rules and guidelines within the industry, and digital coloring and lettering. Prerequisites: A grade of C or better in (AVC100 and AVC119) or permission of Instructor. AVC120 recommended.
Division: Communication & Fine Arts

AVC270 / Digital Photographic Imaging II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Intermediate digital photographic imaging techniques. Refinement of aesthetic awareness and personal expression. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC177.
Division: Communication & Fine Arts

AVC274 / Digital Photographic Imaging III
3 Credits **/ 6.0 Periods for Lecture & Lab**
Advanced digital photographic imaging techniques. Advanced manipulation techniques of photographic images and time-based media. Continued development of aesthetic awareness and personal expression. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC270.
Division: Communication & Fine Arts

AVC280AA / Digital Media Arts and Design Capstone
1 Credit **/ 2.0 Periods for Lecture & Lab**
Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design. Prerequisites: Permission of Program Director or Instructor. Course Notes: AVC280AA requires 80 clock hours of designated work per credit hour.
Division: Communication & Fine Arts

AVC280AB / Digital Media Arts and Design Capstone
2 Credits **/ 4.0 Periods for Lecture & Lab**
Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design. Prerequisites: Permission of Program Director or Instructor. Course Notes: AVC280AB requires 80 clock hours of designated work per credit hour.
Division: Communication & Fine Arts

AVC280AC / Digital Media Arts and Design Capstone
3 Credits **/ 6.0 Periods for Lecture & Lab**
Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design. Prerequisites: Permission of Program Director or Instructor. Course Notes: AVC280AC requires 80 clock hours of designated work per credit hour.
Division: Communication & Fine Arts

AVC283 / Digital Graphic Arts II
3 Credits **/ 6.0 Periods for Lecture & Lab**
Advanced skill development of graphic design through use of microcomputer. Emphasis on computer design and techniques for producing all types of camera-ready advertising art for printed matter and package design. Includes illustration, typography, photo imaging, and color separation. Prerequisites: A grade of C or better in AVC183 or permission of Instructor.
Division: Communication & Fine Arts

Artificial Intelligence and Machine Learning (AIM)

AIM100 / Introduction to Artificial Intelligence
3 Credits **/ 3.0 Periods for Lecture**
Basic concepts and applications of artificial intelligence (AI), including AI project cycles. Focus on issues surrounding AI including ethics, bias, culture, regulations, and professional expectations. Prerequisites: None.
Division: Physical Sciences and Engineering

AIM110 / Introduction to Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to machine learning concepts and Python applications, including data acquisition, supervised and unsupervised learning, and data modeling. Prerequisites: A grade of C or better in AIM100, CIS156, and MAT206.
Division: Physical Sciences and Engineering

AIM111 / Introduction to Data Science
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the basics of data science, including data handling, problem framing in a data-centric context, the foundational techniques of exploratory data analysis (EDA), data visualization, and data ethics. Students will gain practical experience in using various data science libraries and tools through hands-on exercises and projects. Prerequisites: A grade of C or better in (CSC101 and AIM100) or permission of Program Director.
Division: Physical Sciences and Engineering

AIM210 / Natural Language Processing
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental concepts in Natural Language Processing (NLP) and text processing. Focus on knowledge and skills necessary to create a language recognition application. Prerequisites: A grade of C or better in AIM110.
Division: Physical Sciences and Engineering

AIM220 / Artificial Intelligence for Computer Vision
3 Credits **/ 4.0 Periods for Lecture & Lab**
Understand and apply the basic techniques to process images using OpenCV and Python libraries. Prerequisites: A grade of C or better in AIM110.
Division: Physical Sciences and Engineering

AIM230 / Artificial Intelligence for Business Solutions
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamentals of artificial intelligence (AI) and machine learning to support business solutions. Prerequisites: A grade of C or better in AIM210 and AIM220.
Division: Physical Sciences and Engineering

AIM240 / Artificial Intelligence Capstone Project
3 Credits **/ 4.0 Periods for Lecture & Lab**
Focus on how a social issue is explored, brought through the Artificial Intelligence (AI) Project cycle, and delivered as a solution using the different domains of AI, including computer vision and natural language processing. Prerequisites: A grade of C or better in AIM210 and AIM220.
Division: Physical Sciences and Engineering

AIM250 / Machine Learning I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of statistical machine learning algorithms and Python applications with an introduction to deep learning. Emphasis on data input, algorithm selection, hyperparameter tuning, and model evaluation and selection. Prerequisites: A grade of C or better in [AIM111, (MAT230 or MAT231), MAT225, and MAT206] or permission of Program Director.
Division: Physical Sciences and Engineering

Astronomy (AST)

AST101 / Survey of Astronomy
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Survey of astronomy for the nontechnical student. The history, content, and evolution of the solar system and the universe in general. Astronomical principles and instrumentation. The planets, moons, sun, comets, stars and star formation, galaxies, and cosmology. Prerequisites: None.
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Physical Sciences and Engineering

AST106 / Life in the Universe
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduction to the search for life in the universe for the non-science major. Earth's location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets. Prerequisites: A grade of C or better in MAT090 or MAT091 or MAT092 or completion of higher level mathematics course, or satisfactory placement.
Crosslisted: GLG106
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

AST111 / Introduction to Solar System Astronomy
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduction to astronomy for the non-science major. The scientific method, properties of light, astronomical instruments, our Solar System and solar systems around other stars. Includes hands-on astronomical observations and laboratory exercises. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory district placement.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

AST112 / Introduction to Stars, Galaxies, and Cosmology
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduction to astronomy for the non-science major. Structure and evolution of stars; supernovae, black holes, and quasars; nebulae; star clusters; galaxies; cosmology, including the birth and death of the universe. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory district placement. Course Notes: Note that AST111 is not a prerequisite for this course.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

Automated Industrial Technology (AIT)

AIT100 / Industrial Safety
1 Credit **/ 1.0 Periods for Lecture**
Introductory course in workplace safety training, including an overview of critical safety policies, procedures, and practices that help prevent injuries and keep the workplace safe and productive. Prerequisites: None.
Division: Aviation and Applied Technology

AIT124 / Composites
3 Credits **/ 4.0 Periods for Lecture & Lab**
Basic composite materials, construction, and repair. Manufacturing methods and equipment. Assessment and repair of composite structures using vacuum bagging and other approved procedures. Corrosion control, electrical bonding, materials substitutions, machining of composite components, mold fabrication. Hot bond repair of composite components including complex shapes and varied materials. Prerequisites: None.
Division: Aviation and Applied Technology

AIT126 / Energy Industry Fundamentals
3 Credits **/ 3.0 Periods for Lecture**
Various types of energy and their conversion to useable energy such as electrical power. How generated electrical power is transmitted and distributed to the point of use. Prerequisites: None.
Division: Aviation and Applied Technology

AIT132 / Industrial Technology for the Semiconductor Industry
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to semiconductor manufacturing concepts, processes, and hands-on application. Includes electrical theory, circuits, schematics, hand tools, safety, clean room protocols, model based problem solving, lean manufacturing, vacuum technology, and troubleshooting. Prerequisites: None.
Division: Aviation and Applied Technology

Baccalaureate Artificial Intelligence Machine Learning (BAM)

BAM305 / Mathematics for Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced mathematical concepts essential for understanding and applying techniques in machine learning using Python programming language. Focus on vector-based calculus, probability distributions, continuous optimization, and information theory. Prerequisites: A grade of C or better in (AIM250 and MAT227) or permission of Program Director.
Crosslisted: MAT305
Division: Physical Sciences and Engineering

BAM310 / Machine Learning II: Deep Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of deep learning algorithms and Python applications. Emphasis on data input, algorithm selection, hyperparameter tuning, and deep learning model evaluation and selection. Prerequisites: A grade of C or better in AIM250 or permission of Program Director.
Division: Physical Sciences and Engineering

BAM320 / Computer Vision
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of vision with computers utilizing Python tools and libraries. Emphasis on image processing and feature detection as it applies to various computer vision tasks, utilizing visualizations for transparency. Includes statistical and deep computer vision techniques. Prerequisites: A grade of C or better in (BAM310 and BAM/MAT305) or permission of Program Director.
Division: Physical Sciences and Engineering

BAM330 / Natural Language Processing for Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of natural language processing utilizing Python tools and libraries. Emphasis on computer linguistic understanding as it applies to various natural language tasks. Statistical and deep natural language techniques will be covered including large language models. Prerequisites: A grade of C or better in (BAM310 and BAM/MAT305) or permission of Program Director.
Division: Physical Sciences and Engineering

BAM440 / Hardware Optimization for Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Explores advanced techniques in parallel computing for optimizing performance in machine learning applications. Focus on design, implementation, and evaluation of parallel algorithms across various hardware architectures, including CPUs, GPUs, and custom artificial intelligence accelerators. Includes hands-on projects and real-world case studies to develop the skills necessary to leverage parallel computing effectively to accelerate machine learning tasks. Prerequisites: A grade of C or better in CSC/EEE230, CSC240++, BAM/MAT305, and BAM310.
Division: Physical Sciences and Engineering

BAM450 / Planning and Optimization for Automation
3 Credits **/ 4.0 Periods for Lecture & Lab**
Explores optimization path for automation. Covers a diverse array of techniques including evolutionary algorithms, reinforcement learning, and swarm intelligence to navigate complex environments. Emphasis on hands-on projects and theoretical exploration, including design and implementation of optimized paths. Prerequisites: A grade of C or better in CSC310, BAM/MAT305, and BAM310.
Division: Physical Sciences and Engineering

BAM490 / Artificial Intelligence Capstone I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Capstone project with opportunities for research and application of artificial intelligence and machine learning knowledge and skills obtained throughout the student's program of study. Focus on project research, selection, design, and implementation with emphasis on communication, critical thinking, and technical skills. Prerequisites: A grade of C or better in BAM320, BAM330, and CSC310.
Division: Physical Sciences and Engineering

BAM499 / Artificial Intelligence Capstone II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Completion of capstone project using research and application of artificial intelligence and machine learning knowledge and skills obtained throughout the student's program of study. Focus on project testing, enhancement, and evaluation. Emphasis on self-assessment, development of a written report, project defense, and career development. Prerequisites: A grade of C or better in BAM490.
Division: Physical Sciences and Engineering

Biology (BIO)

BIO100 / Biology Concepts
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
This course will introduce students to the basic principles and concepts of biology, from the smallest molecules to the largest ecosystems. Students will learn about the methods of scientific inquiry that biologists use to study life. Prerequisites: None.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO105 / Environmental Biology
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Fundamentals of ecology and their relevance to human impact on natural ecosystems. Prerequisites: None.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO145 / Marine Biology
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
A survey of marine environments and their biotic communities with emphasis on the natural history of marine organisms. Prerequisites: None.
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Biological Sciences

BIO156 / Introductory Biology for Allied Health
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
An introductory biology course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics. Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college level chemistry is strongly recommended.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO160 / Introduction to Human Anatomy and Physiology
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
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.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO181 / General Biology (Majors) I
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics. Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly recommended.
SUN SUN# BIO 1181
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

BIO182 / General Biology (Majors) II
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology. Prerequisites: A grade of C or better in BIO181, or BIO181XT, or permission of Department or Division.
SUN SUN# BIO 1182
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Biological Sciences

BIO201 / Human Anatomy and Physiology I
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Prerequisites: A grade of C or better in (BIO156, or BIO156XT, or BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.
SUN SUN# BIO 2201
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Biological Sciences

BIO202 / Human Anatomy and Physiology II
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Continuation of structure and function of the human body. Topics include endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems, pregnancy and development, and fluid and electrolyte balance. Prerequisites: A grade of C or better in BIO201 or BIO201XT.
SUN SUN# BIO 2202
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Biological Sciences

BIO205 / Microbiology
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Study of microorganisms and their relationship to health, ecology, and related fields. Prerequisites: A grade of C or better in (BIO156, or BIO156XT, or BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.
SUN SUN# BIO 2205
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Biological Sciences

BIO290AA / Biology Internship
1 Credit **/ 0.0 Periods for Laboratory**
Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology. Course Notes: BIO290AA requires a minimum of 80 clock hours in the internship setting. BIO290AA may be repeated for a total of two (2) credit hours.
Division: Biological Sciences

BIO290AB / Biology Internship
2 Credits **/ 0.0 Periods for Laboratory**
Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology. Prerequisites: Permission of Instructor. Course Notes: BIO290AB requires a minimum of 160 clock hours in the internship setting. BIO290AB may be repeated for a total of four (4) credit hours.
Division: Biological Sciences

BIO290AC / Biology Internship
3 Credits **/ 0.0 Periods for Laboratory**
Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology. Prerequisites: Permission of Instructor. Course Notes: BIO290AC requires a minimum of 240 clock hours in the internship setting. BIO290AC may be repeated for a total of six (6) credit hours
Division: Biological Sciences

Business-Personal Computers (BPC)

BPC110 / Computer Usage and Applications
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

BPC111AA / Computer Keyboarding I
1 Credit **/ 1.7 Periods for Lecture & Lab**
Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols. Prerequisites: None.
Crosslisted: OAS111AA
Division: Business and Computing Studies

BPC171 / Recycling Used Computer Technology
1 Credit **/ 2.0 Periods for Lecture & Lab**
Use of hardware maintenance knowledge and skills to refurbish used computers. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: BPC170 or permission of instructor. Course Notes: BPC171 may be repeated for a total of three (3) credit hours.
Division: Business and Computing Studies

BPC170 / A+ Exam Prep: Computer Hardware Configuration and Support
3 Credits **/ 4.0 Periods for Lecture & Lab**
Explore technical aspects of personal computers, including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis placed on hardware installation, maintenance, mobile devices, and hardware troubleshooting. Helps prepare students for the CompTIA A+ examinations. Prerequisites: None.
Division: Business and Computing Studies

BPC270 / A+ Exam Prep: Operating System Configuration and Support
3 Credits **/ 4.0 Periods for Lecture & Lab**
Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on OS installation, maintenance, mobile devices, security, software troubleshooting, and on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

Chemistry (CHM)

CHM107 / Chemistry and Society
3 Credits **/ 3.0 Periods for Lecture**
A survey of chemistry and its impact on society and the environment. Prerequisites: None. Course Notes: Completion of CHM107LL required to meet the Natural Science requirement.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM107LL / Chemistry and Society Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM107. Prerequisites or Corequisites: CHM107. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM107
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM130 / Fundamental Chemistry
3 Credits **/ 3.0 Periods for Lecture**
A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Prerequisites: A grade of C or better in [(CHM100, or high school algebra, or MAT140 or higher, or an EdReady-Quantitative Reasoning, Algebra and Statistics score of 70 or higher, or an EdReady-College Algebra score of 80 or higher) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM130LL. Arizona Shared Unique Number SUN# CHM 1130 in combination with: CHM130LL. Students may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA.
SUN SUN# CHM 1130
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM130AA / Fundamental Chemistry with Lab
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Prerequisites: A grade of C or better in [(CHM100, or high school algebra, or MAT140 or higher, or an EdReady-Quantitative Reasoning, Algebra and Statistics score of 70 or higher, or an EdReady-College Algebra score of 80 or higher) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair. Course Notes: Student may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA.
SUN SUN# CHM 1130
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM130LL / Fundamental Chemistry Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM130. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM130. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM130. Arizona Shared Unique Number SUN# CHM 1130 in combination with: CHM130. Students may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA.
SUN SUN# CHM 1130
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM140AA / General Chemistry for Engineers with Lab
6 Credits **/ 9.0 Periods for Lecture & Lab**
Generalized study of the principles of chemistry as they relate to fields of engineering. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of Instructor, or Department or Division Chair. Completion of prerequisites within the last two years is recommended.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM151 / General Chemistry I
3 Credits **/ 3.0 Periods for Lecture**
Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM151LL. Arizona Shared Unique Number SUN# CHM 1151 in combination with: CHM151LL. Completion of all prerequisites within the last two years is recommended. Students may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.
SUN SUN# CHM 1151
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM151AA / General Chemistry I with Lab
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.
SUN SUN# CHM 1151
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM151LL / General Chemistry I Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM150 or CHM151. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM150 or CHM151. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM150 or CHM151. Arizona Shared Unique Number SUN# CHM 1151 in combination with: CHM150 or CHM151. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.
SUN SUN# CHM 1151
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM152 / General Chemistry II
3 Credits **/ 3.0 Periods for Lecture**
A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of CHM152LL required to meet the Natural Science requirement. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with CHM152LL.
SUN SUN# CHM 1152
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM152AA / General Chemistry II with Lab
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.
SUN SUN# CHM 1152
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM152LL / General Chemistry II Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM152. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM152. Course Notes: Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM152.
SUN SUN# CHM 1152
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM230 / Fundamental Organic Chemistry
3 Credits **/ 3.0 Periods for Lecture**
Chemistry of representative groups of organic compounds, emphasizing biological applications. Prerequisites: A grade of C or better in (CHM130 and CHM130LL) or [(CHM150 or CHM151) and CHM151LL], or permission of Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230LL. Arizona Shared Unique Number SUN#: CHM 2230. Completion of prerequisites within the last two years recommended. CHM230 course content is designed to meet the needs of students in such areas as agriculture, home economics, nursing, pre-physician assistant, and physical education among others. Students may receive credit for only one of the following: CHM230 and CHM230LL, or CHM230AA.
SUN SUN# CHM 2230
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM230LL / Fundamental Organic Chemistry Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Laboratory experience in support of CHM230. Prerequisites: A grade of C or better in CHM130LL or CHM151LL, or equivalent. Prerequisites or Corequisites: CHM230. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230. CHM230LL students may receive credit for only one of the following: (CHM230 and CHM230LL), or CHM230AA. Completion of prerequisites within the last two years recommended. Designed for students in agriculture, dental hygiene, home economics, nursing, and physical therapy.
SUN SUN# CHM 2230
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

CHM235 / General Organic Chemistry I
3 Credits **/ 3.0 Periods for Lecture**
Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized. Prerequisites: A grade of C or better in (CHM152 and CHM152LL), or CHM152AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Student may receive credit for only one of the following: CHM235 and CHM235LL, or CHM235AA. Completion of prerequisites within the last two years recommended.
SUN SUN# CHM 2235
Division: Physical Sciences and Engineering

CHM235LL / General Organic Chemistry I Laboratory
1 Credit **/ 4.0 Periods for Laboratory**
Laboratory experience in support of CHM235. Prerequisites: A grade of C or better in CHM235 or Corequisites: CHM235. Completion of prerequisites within the last two years recommended.
SUN SUN# CHM 2235
Division: Physical Sciences and Engineering

CHM236 / General Organic Chemistry II
3 Credits **/ 3.0 Periods for Lecture**
Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Prerequisites: A grade of C or better in (CHM235 and CHM235LL) or CHM235AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Student may receive credit for only one of the following: CHM236 and CHM236LL, or CHM236AA. Completion of prerequisites within the last two years recommended.
SUN SUN# CHM 2236
Division: Physical Sciences and Engineering

CHM236LL / General Organic Chemistry II Laboratory
1 Credit **/ 4.0 Periods for Laboratory**
Laboratory experience in support of CHM236. Prerequisites: A grade of C or better in CHM236 or Corequisites: CHM236. Completion of prerequisites within the last two years recommended.
SUN SUN# CHM 2236
Division: Physical Sciences and Engineering

Chicana and Chicano Studies (CCS)

CCS101 / Chicana and Chicano Studies
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the wealth and diversity of Chicana and Chicano Studies research from a variety of disciplinary perspectives through the use of a series of historical and social scientific studies, novels, testimonies, and films. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

Child/Family Studies (CFS)

CFS176 / Child Development
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: ECH176
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Cisco Network Technology (CNT)

CNT140AB / Introduction to Networks
4 Credits **/ 6.0 Periods for Lecture & Lab**
Focus on the architecture, structure, functions, components, and models of the Internet and other computer networks. Principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Students will build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Preparation for Cisco certification examination. Prerequisites: None.
Division: Business and Computing Studies

CNT150AB / Switching, Routing, and Wireless Essentials
4 Credits **/ 6.0 Periods for Lecture & Lab**
Focus on configuring switches and routers for use in small and medium size networks. Including Virtual Local Area Networks (VLANs), VLAN trunking, Inter-VLAN routing, Spanning Tree Protocol (STP), EtherChannel, Dynamic Host Configuration Protocol (DHCP), First Hop Redundancy, Local area Network (LAN) and Switch security, and Static routing. Knowledge and skills needed to implement a Wireless Local Area Network (WLAN) is also covered. Preparation for Cisco certification examination. Prerequisites: A grade of C or better in CNT140AB or permission of Instructor.
Division: Business and Computing Studies

CNT160AB / Enterprise Networking, Security, and Automation
4 Credits **/ 6.0 Periods for Lecture & Lab**
Focus on the configuration of routers and switches within small and medium size networks for advanced functionality including Open Shortest Path First (OSPF), Network security, Access Control Lists (ACLs), Network Address Translation (NAT), Wide Area Network (WAN) concepts, Virtual Private Networks (VPNs), Quality of Service (QOS), network management, design, troubleshooting, virtualization, and automation. Preparation for Cisco certification examination. Prerequisites: A grade of C or better in CNT150AB or permission of Instructor.
Division: Business and Computing Studies

CNT205 / Cisco Certified Network Associate Security
4 Credits **/ 6.0 Periods for Lecture & Lab**
Associate-level knowledge and skills required to secure Cisco networks. Development of a security infrastructure, identification of threats and vulnerabilities to networks. Mitigation of security threats. Core security technologies. Installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Competency in the technologies that Cisco uses in its security structure. Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) certification, or permission of Instructor.
Division: Business and Computing Studies

Cloud Computing (CLD)

CLD110 / Amazon Web Services Cloud Foundations
3 Credits **/ 4.0 Periods for Lecture & Lab**
Provides a detailed overview of cloud concepts, Amazon Web Services (AWS) core services, security, architecture, pricing, and support. Intended for students who seek an overall understanding of cloud computing concepts, independent of specific technical roles. Helps to prepare students for the AWS Certified Cloud Practitioner exam. Prerequisites: None. CIS105 suggested but not required.
Division: Business and Computing Studies

Communication (COM)

COM100 / Introduction to Human Communication
3 Credits **/ 3.0 Periods for Lecture**
Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication. Prerequisites: None.
SUN SUN# COM 1100
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

COM110 / Interpersonal Communication
3 Credits **/ 3.0 Periods for Lecture**
Theory and practice of interpersonal communication skills which affect day-to-day social interactions with other persons. May include using verbal and nonverbal symbols, active listening, resolving interpersonal conflict, understanding cultural perspectives, and developing and maintaining personal and professional relationships. Prerequisites: None.
SUN SUN# COM 1110
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

COM207 / Introduction to Communication Inquiry
3 Credits **/ 3.0 Periods for Lecture**
Overview of theory and methodological practice in communication with particular attention to scholarly writing skills. Emphasis on development of critical thinking skills through active participation in the research process. Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent, and COM100 or equivalent, or permission of Instructor. Course Notes: Recommended for the communication major.
Division: Communication & Fine Arts

COM225 / Public Speaking
3 Credits **/ 3.0 Periods for Lecture**
Designed to enhance the student's ability to present public speeches confidently and competently. Also designed to improve information literacy and critical thinking skills. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Communication & Fine Arts

COM230 / Small Group Communication
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# COM 2271
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

COM263 / Elements of Intercultural Communication
3 Credits **/ 3.0 Periods for Lecture**
Diverse cultural contexts are explored through basic concepts, principles, and theories of intercultural communication. Discovering effective interaction and appropriate communication in a global community is emphasized. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

Computer Information Systems (CIS)

CIS101 / Technician IT Fundamentals
3 Credits **/ 3.0 Periods for Lecture & Lab**
Survey of computer fundamentals. Focus on basic knowledge and skills, including components and hardware, word processing, presentations, spreadsheets, and email. Prerequisites: None.
Division: Business and Computing Studies

CIS102DA / IT Customer Support
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examines skills, tools and strategies necessary for becoming a computer help-desk or end-user support professional. Prerequisites: None.
Division: Business and Computing Studies

CIS103 / Introduction to Social Media
3 Credits **/ 4.0 Periods for Lecture & Lab**
Identify and explain social media and Web 2.0 technologies for personal, academic, professional, and business applications. Create and maintain accounts on various sites to socialize, write, and share multimedia, while understanding the related ethics, privacy and security issues. Prerequisites: None. Course Notes: Students must be 13 years or older to enroll in CIS103 as students are required to create social media accounts for course participation.
Division: Business and Computing Studies

CIS105 / Survey of Computer Information Systems
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
SUN SUN# CIS 1120
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS111 / Ethics in Information Technology
3 Credits **/ 3.0 Periods for Lecture**
Ethical issues that arise as a result of increasing use of computers, and the responsibilities of those who work with computers, either as computer science professionals or end users. Critical inquiry and review of ethical challenges in information technology business, including professional and corporate responsibility, government regulation, fiduciary responsibilities of information, infringement of intellectual property, security risk assessment, Internet crime, identity theft, employee surveillance, privacy, compliance, social networking, and the ethics of IT corporations. Prerequisites: None.
Division: Business and Computing Studies

CIS113DE / Microsoft Word: Word Processing
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Division: Business and Computing Studies

CIS114DE / Excel Spreadsheet
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Division: Business and Computing Studies

CIS117DM / Microsoft Access: Database Management
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to Microsoft Access. Emphasis on features, design, and database management. Prerequisites: None. Course Notes: CIS117DM combines the contents of CIS117AM, CIS117BM and CIS117CM. CIS117DM may be repeated for a total of nine (9) credit hours.
Division: Business and Computing Studies

CIS118DB / Desktop Presentation: PowerPoint
3 Credits **/ 4.0 Periods for Lecture & Lab**
Use of PowerPoint to produce professional-quality presentation visuals with animation and sound. Prerequisites: None.
Division: Business and Computing Studies

CIS119DO / Introduction to Oracle: SQL
3 Credits **/ 4.0 Periods for Lecture & Lab**
Use of Oracle tools and methodologies to fulfill real-world business information requirements. Hands-on exercises for designing, creating, and maintaining database structures to store, retrieve, update, and display data in a relational database using the SQL programming language. Creating and maintaining database objects. Advanced retrieval techniques. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS119DP / Oracle: Database Administration
3 Credits **/ 4.0 Periods for Lecture & Lab**
Basic administrative tasks performed by a database administrator (DBA). Conceptual understanding and hands-on applications of the Oracle database architecture and interaction of its components. Prerequisites: A grade of C or better in CIS119DO, or permission of Instructor. CIS126++ or CIS121++ is recommended.
Division: Business and Computing Studies

CIS120DA / Introduction to Adobe Premiere
3 Credits **/ 4.0 Periods for Lecture & Lab**
Foundations of video import, export, and editing. Includes parts and function of a video camera, preproduction and production, incorporating photographs, titles, graphics, animation and audio, capturing, editing, rendering and outputting digital video. Prepares students for the Adobe Certifications related to Adobe Premiere. Prerequisites: None.
Division: Business and Computing Studies

CIS120DB / Introduction to Adobe Illustrator
3 Credits **/ 4.0 Periods for Lecture & Lab**
Provides students with the knowledge and skills to use Adobe Illustrator graphics software on a computer. Basic foundation course in the use of electronic techniques to create, manipulate, and edit images, text, abstract art, graphics design, color graphics and business charts; determine file formats appropriate for web and print; utilize tools to optimize graphics and create a PDF file. Prerequisites: None.
Division: Business and Computing Studies

CIS120DC / Introduction to Adobe Animate
3 Credits **/ 4.0 Periods for Lecture & Lab**
Focuses on entry-level skill expectations for digital animation using Adobe Animate. Covers basic animation techniques used in the creation, manipulation, and editing of animation graphics. Prepares students for the Adobe certifications related to Adobe Animate. Prerequisites: None.
Division: Business and Computing Studies

CIS120DF / Introduction to Adobe Photoshop
3 Credits **/ 4.0 Periods for Lecture & Lab**
Focuses on entry-level skills and knowledge for digital imaging using Adobe Photoshop. Prepares students for the Adobe Certifications related to Photoshop. Prerequisites: None.
Division: Business and Computing Studies

CIS121AB / Microsoft Command Line Operations
1 Credit **/ 2.0 Periods for Lecture & Lab**
Use of the Microsoft command line interface: basic concepts, internal and external commands, subdirectories, and editor. Prerequisites: None.
Division: Business and Computing Studies

CIS121AE / Windows Operating System: Level I
1 Credit **/ 2.0 Periods for Lecture & Lab**
Specific topics include Windows basics, navigating and customizing the desktop, maintaining hardware and software, improving performance, configurations, securing your computer, taskbar, organizing, searching and managing folders and files, installing and uninstalling applications, Internet Explorer fine tuning, security, and searching, including advanced search techniques, keyboard shortcuts, and current topics. Prerequisites: None.
Division: Business and Computing Studies

CIS121AH / Microsoft PowerShell/Command Line Operations
3 Credits **/ 4.0 Periods for Lecture & Lab**
Day-to-day command line administration tasks of Microsoft Windows. PowerShell used to create scripts to administer Microsoft windows environment. Prerequisites: None. MST150 suggested but not required.
Division: Business and Computing Studies

CIS124AA / Project Management Software: Level I
1 Credit **/ 1.7 Periods for Lecture & Lab**
Utilization of project management software packages by managers and advanced business students to solve critical management planning tasks. Evaluation of management opportunities utilizing software packages to monitor project progress and resource allocation. Includes "what-if" analyses, and preparation of management reports. Prerequisites: None.
Division: Business and Computing Studies

CIS124BA / Project Management Software: Level II
1 Credit **/ 1.7 Periods for Lecture & Lab**
Advanced use of project management software. Covers features and functions to solve critical management planning tasks. Project communications, scheduling, resource allocation, tracking processes and importing and exporting data also covered. Project consolidation emphasized. Prerequisites: A grade of C or better in CIS124AA or permission of Instructor.
Division: Business and Computing Studies

CIS126DL / Linux Operating System
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Division: Business and Computing Studies

CIS126RH / Red Hat System Administration I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps prepare for the Red Hat certification exams using a hands-on, task-focused curriculum. Prerequisites: None.
Division: Business and Computing Studies

CIS133DA / Internet/Web Development Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Overview of the Internet/World Wide Web (WWW) and its resources. Hands-on experience with various Internet/WWW resource discovery, information retrieval, and social media tools. Design and Development of multi-page websites using current Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS) standards. Prerequisites: None.
Division: Business and Computing Studies

CIS136 / Content Management Systems: WordPress
3 Credits **/ 4.0 Periods for Lecture & Lab**
Overview of WordPress Content Management System. Includes hands-on design and creation of web pages and blogs for the World Wide Web. Designed to cover best practices for web site/blog creation. Prerequisites: None.
Division: Business and Computing Studies

CIS150AB / Object-Oriented Programming Fundamentals
3 Credits **/ 4.0 Periods for Lecture & Lab**
Structured and Object-Oriented design and logic tools. Use of computer problems to demonstrate and teach concepts using an appropriate programming language. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS151 / Computer Game Development -Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to object-oriented game development, game design, and game theory. Use of computer software to demonstrate and teach concepts using an appropriate game development platform to model real-time simulations and create computer games using object oriented tools. Introduction to developing PC games, educational software, and training software using windows based object oriented developments tools. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS154 / Database Modeling and Design
3 Credits **/ 4.0 Periods for Lecture & Lab**
Top-down, systematic approach to defining a database design based on analysis of business information and requirements. Identifying and evaluating standard data model and design patterns. Developing an entity-relationship (ER) diagram that accurately reflects the business. Mapping the ER diagram to an initial database design and revising for complex entities, attributes, and relationships. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS156 / Python Programming: Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to Python programming. Includes general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS159 / Visual Basic Programming I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Use of the Visual Basic programming language to solve problems using suitable examples from business or other disciplines. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS162 / C Programming I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Beginning C programming. Includes features needed to construct programs, functions, pointers, input and output options, data types, structures, and unions, and disk file operations. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS162AB / C++: Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to C++ programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS162AD / C#: Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to C# programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS163AA / Java Programming: Level I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to Java programming. Includes features needed to construct Java Applets, Java Applications, control structures, methods, arrays, character and string manipulation, graphics, and object-oriented programming. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CIS164AB / Oracle: PL/SQL Programming
3 Credits **/ 4.0 Periods for Lecture & Lab**
Writing PL/SQL procedures, functions, and packages. Creating and managing PL/SQL program units and database triggers in Oracle development environment. Managing dependencies and manipulating large objects. Prerequisites: A grade of C or better in CIS119DO, or permission of the Instructor.
Division: Business and Computing Studies

CIS165 / Introduction to IOS Application Development
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to iOS device programming utilizing the XCode application, and the programming languages Objective-C and/or Swift, utilizing various iOS frameworks. Understand iOS hardware and feature basics. Go through the entire design process from concept to final product delivery. Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.
Division: Business and Computing Studies

CIS165DA / Introduction to Android Application Development
3 Credits **/ 4.0 Periods for Lecture & Lab**
Beginning with an overview of Android features, this class explores the required software tools and programming techniques for developing Android device applications from creating the user interface, working with activities, intents and views, to using databases, providing data persistence, accessing device services, to debugging and publishing applications. Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.
Division: Business and Computing Studies

CIS166AA / Introduction to Javascript
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to basic JavaScript programming concepts including syntax. Covers Hypertext Markup Language (HTML), programming logic and debugging, as well as forms manipulation and animation. Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.
Division: Business and Computing Studies

CIS190 / Introduction to Networking
3 Credits **/ 4.0 Periods for Lecture & Lab**
Overview of networks. Emphasis on the elements of a network, current issues and products, and use of a network. Includes terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Helps prepare students for the CompTIA Network+ examination. Prerequisites: None. Corequisites: CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS213DE / Advanced Microsoft Word: Word Processing
3 Credits **/ 4.0 Periods for Lecture & Lab**
Using advanced word processing software features to perform tasks such as mail merge, collaboration, web pages, math functions, macros, photo enhancements, graphics, tables, forms and manage long documents. Prerequisites: A grade of C or better in CIS113DE or (CIS113AE and CIS113BE and CIS113CE), or permission of Instructor.
Division: Business and Computing Studies

CIS214DA / Advanced Excel for Data Analytics
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced Excel spreadsheet features for data analytics including advanced functions, PivotTables, Data Modelling, Dashboard creation and forecasting for Business Intelligence (BI). Includes capstone project of an interactive dashboard using a multi-table Excel Data Model. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [CIS114DE and (CIS117DM or CIS276DA or CIS276DB)], or permission of Instructor. Course Notes: A basic understanding of statistics is required.
Division: Business and Computing Studies

CIS214DE / Advanced Excel Spreadsheet: Level II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced Excel spreadsheet features including formatting techniques, macros and Visual Basic for applications. Templates, built-in functions and lists as well as analysis tools including Pivot Tables and Goal Seek covered. Import and export data, workgroup collaboration and Internet features of Excel emphasized. Prerequisites: A grade of C or better in CIS114DE, or permission of Instructor.
Division: Business and Computing Studies

CIS215 / Foundations of Data Analytics and Programming
3 Credits **/ 4.0 Periods for Lecture & Lab**
Overview of data analytics and programming, concepts, terminology, and how analytics and programming are used professionally in business. Use of office application software, dashboards and Integrated Development Environments (IDEs). Includes exploration of relevant emergent technologies. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.
Division: Business and Computing Studies

CIS217AM / Advanced Microsoft Access: Database Management
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced database concepts including database design, primary and secondary key selection and relationships between tables. Queries, sub forms, macros, events, Visual Basic modules and Access Internet features also covered. Prerequisites: A grade of C or better in CIS117DM.
Division: Business and Computing Studies

CIS225AB / Object-Oriented Analysis and Design
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Division: Business and Computing Studies

CIS233DA / Internet/Web Development Level II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Plan, design and create web sites using HTML and Advanced Cascading Style Sheets (CSS). Expedite the development process using CSS frameworks and libraries. Enhance user experience and web site functionality using supporting technologies. Exploration of User Interface (UI) and User Experience (UX), best practices, accessibility, strategies, and careers in web design and development. Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.
Division: Business and Computing Studies

CIS235 / E-Commerce
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to Electronic Commerce on the Internet. Designing an electronic storefront including web page content and development, e-commerce site marketing, advertisement, legal and security considerations, credit card and other debit transaction covered. Also includes current issues in e-commerce. Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.
Division: Business and Computing Studies

CIS238DL / Linux System Administration
3 Credits **/ 4.0 Periods for Lecture & Lab**
Managing Linux Operating Systems including sophisticated manipulation of file structures, backup systems, printing processes, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, kernel customization, and system resource control. Preparation for industry certifications such as the CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1). Prerequisites: A grade of C or better in CIS126DL or CIS126RH or permission of Instructor.
Division: Business and Computing Studies

CIS238RH / Red Hat System Administration II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Continue to develop core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps to prepare students for the Red Hat certification exams using a hands-on, task-focused curriculum. Prerequisites: A grade of C or better in CIS126RH, or permission of Instructor.
Division: Business and Computing Studies

CIS239DL / Linux Shell Scripting
3 Credits **/ 4.0 Periods for Lecture & Lab**
Linux Shell Scripting syntax and methods including the automation of system tasks as well as interpreted user-level programming. Course includes the Linux Borne Again Shell (BASH) as well as a variety of industry competitors. Prerequisites: A grade of C or better in CIS238DL or CIS238RH or permission of Instructor.
Division: Business and Computing Studies

CIS240DL / Linux Network Administration
3 Credits **/ 4.0 Periods for Lecture & Lab**
In depth networking based on Linux servers and the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite. Integrating Linux servers and workstations into a network environment with multi-platform network operating systems including a variety of open-standard and proprietary protocols. Preparation for industry certifications such as the CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1). Prerequisites: A grade of C or better in CIS238DL or permission of Instructor.
Division: Business and Computing Studies

CIS240RH / Red Hat System Administration III
3 Credits **/ 4.0 Periods for Lecture & Lab**
Provides solid understanding of how to automate services on a Linux system. Covers use of Ansible to automate provisioning, configuration, application deployment, and orchestration on Red Hat Enterprise Linux 8. Content aligns with the Red Hat Certified Engineer (RHCE - EX294) exam, a professional certification. Prerequisites: A grade of C or better in CIS238RH or permission of Instructor.
Division: Business and Computing Studies

CIS250 / Management of Information Systems
3 Credits **/ 4.0 Periods for Lecture & Lab**
The study of business information systems and its management, communication, e-business strategies, emerging technologies, database concepts, and project management. Overview of systems analysis and design. Learn about the competitive and strategic uses of information systems and how they are transforming organizations and their management. Prerequisites: A grade of C or better in CIS105.
Division: Business and Computing Studies

CIS252 / Introduction to Kubernetes Administration
4 Credits **/ 5.0 Periods for Lecture & Lab**
Provides students skills and knowledge to perform the responsibilities of a Kubernetes administrator. Includes covering the cluster architecture, installation, configuration, workloads, scheduling, services, networking, storage and troubleshooting. Helps students prepare for the Certified Kubernetes Administrator (CKA) certification. Prerequisites: A grade of C or better in CIS238DL or CIS238RH or permission of Instructor.
Division: Business and Computing Studies

CIS256 / Python Programming Level II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced Python object-oriented programming concepts and applications. Emphasis on code documenting, versioning, unit testing strategies, and security practices for Python project/package development. Includes Python applications for data analysis, networking, database manipulation, and web application development. Prerequisites: A grade of C or better in CIS156 or permission of Instructor.
Division: Business and Computing Studies

CIS256CN / Python for Cybersecurity and Networking
3 Credits **/ 4.0 Periods for Lecture & Lab**
Focus on practical applications of Python frameworks and libraries to support offensive and defensive cybersecurity operations and the management of network devices. Prerequisites: A grade of C or better in (CIS156 and CNT140AB), or permission of Instructor.
Division: Business and Computing Studies

CIS256DA / Python for Data Analysis
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to data analysis concepts using Python's rich set of tools, libraries, and packages. Includes basic data analysis, creation of meaningful data visualizations, and advanced topics such as supervised and unsupervised machine learning techniques. Prerequisites: A grade of C or better in CIS156 or permission of Instructor.
Division: Business and Computing Studies

CIS259 / Visual Basic Programming II
3 Credits **/ 4.0 Periods for Lecture**
Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines. Prerequisites: A grade of C or better in CIS159, or permission of Instructor.
Division: Business and Computing Studies

CIS260BI / Data Visualization: Power Business Intelligence (BI)
3 Credits **/ 4.0 Periods for Lecture & Lab**
This data visualization course covers the graphic representation of data and how to effectively and efficiently communicate it from singular and disparate data sources using Power Business Intelligence (BI). Helps students prepare for the Microsoft Power BI Data Analyst certification. Prerequisites: A grade of C or better in CIS114DE, and (CIS215 or CIS214DA), and (CIS276DA or CIS276DB), or permission of Instructor.
Division: Business and Computing Studies

CIS260TB / Data Visualization: Tableau
3 Credits **/ 4.0 Periods for Lecture & Lab**
This data visualization course covers the graphic representation of data and how to effectively and efficiently communicate it from singular and disparate data sources using Tableau. Helps students prepare for the Tableau Certified Data Analyst certification. Prerequisites: A grade of C or better in CIS114DE, and (CIS215 or CIS214DA), and (CIS276DA or CIS276DB), or permission of Instructor.
Division: Business and Computing Studies

CIS263AA / Java Programming: Level II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Intermediate Java programming. Includes features needed to construct object-oriented programming, multithreading, multimedia, files, streams and data structure. Prerequisites: A grade of C or better in CIS163AA or permission of Instructor.
Division: Business and Computing Studies

CIS271DL / Linux Security
3 Credits **/ 4.0 Periods for Lecture & Lab**
Implementing in-depth security methods and techniques in a Linux-based network environment. Utilize programs, utilities and configuration techniques to provide user-level, file system, and network security. Gain knowledge in a variety of security cracking techniques and how to guard against them. In all aspects of security, the standard of practicing professional ethics seriously emphasized. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC. Prerequisites: A grade of C or better in CIS240DL or permission of Instructor.
Division: Business and Computing Studies

CIS276DB / SQL Server Database
3 Credits **/ 4.0 Periods for Lecture & Lab**
A broad overview of the Microsoft Structured Query Language (SQL) Server database. Includes SQL instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install SQL Server, model and create new databases, manage users, authentication, and stored procedures, and develop backup/restore strategies. Prerequisites: A grade of C or better in CIS105, or CIS117DM, or permission of Instructor.
Division: Business and Computing Studies

CIS290AA / Computer Information Systems Internship
1 Credit **/ 0.0 Periods for Laboratory**
Work experience in business or industry. Prerequisites: Permission of Instructor.
Division: Business and Computing Studies

CIS290AB / Computer Information Systems Internship
2 Credits **/ 0.0 Periods for Laboratory**
Work experience in business or industry. Prerequisites: Permission of Instructor.
Division: Business and Computing Studies

CIS290AC / Computer Information Systems Internship
3 Credits **/ 0.0 Periods for Laboratory**
Work experience in business or industry. Prerequisites: Permission of Instructor.
Division: Business and Computing Studies

CIS296WB / Cooperative Education
2 Credits **/ 0.0 Periods for Laboratory**
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.
Division: Business and Computing Studies

CIS296WC / Cooperative Education
3 Credits **/ 0.0 Periods for Laboratory**
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.
Division: Business and Computing Studies

CIS298AC / Special Projects
3 Credits **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Business and Computing Studies

Computer Science (CSC)

CSC100 / Introduction to Computer Science (C++)
3 Credits **/ 3.0 Periods for Lecture & Lab**
Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC100AA / Introduction to Computer Science (C++)
3 Credits **/ 4.0 Periods for Lecture & Lab**
Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC100AB / Introduction to Computer Science (C++)
4 Credits **/ 4.0 Periods for Lecture & Lab**
Concepts of problem-solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC101 / Introduction to Computing with Python
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to computing using the Python programming language. Focus on basic concepts of computer science, algorithms, and the fundamentals of the Python programming language. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC110 / Introduction to Computer Science (Java)
3 Credits **/ 3.0 Periods for Lecture & Lab**
Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair. Course Notes: Students may receive credit for only one of the following: CSC110 OR CSC110AA OR CSC110AB.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC110AA / Introduction to Computer Science (Java)
3 Credits **/ 4.0 Periods for Lecture & Lab**
Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair. Course Notes: Students may receive credit for only one of the following: CSC110 OR CSC110AA OR CSC110AB.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC110AB / Introduction to Computer Science (Java)
4 Credits **/ 4.0 Periods for Lecture & Lab**
Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair. Course Notes: Students may receive credit for only one of the following: CSC110 OR CSC110AA OR CSC110AB.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC120 / Digital Design Fundamentals
4 Credits **/ 6.0 Periods for Lecture & Lab**
Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, Read Only Memory (ROMs), Programmable Logic Device (PLDs), synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: None. Corequisites: CSC100 or (CSC110 or CSC110AB) or permission of Instructor or Division or Department Chair.
Crosslisted: EEE120
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC180AA / Computer Literacy
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC180AB / Computer Literacy
4 Credits **/ 4.0 Periods for Lecture**
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.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC181AA / Applied Problem Solving With Visual Basic
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC182AA / Principles Of Programming With C#.NET
3 Credits **/ 4.0 Periods for Lecture & Lab**
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.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC205 / Object Oriented Programming and Data Structures
3 Credits **/ 3.0 Periods for Lecture & Lab**
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of Instructor. Course Notes: Students may receive credit for only one of the following: CSC205 OR CSC205AA OR CSC205AB OR CSC205AC OR CSC205AD
SUN SUN# CSC 2205
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC205AA / Object Oriented Programming and Data Structures
3 Credits **/ 4.0 Periods for Lecture & Lab**
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of Instructor. Course Notes: Students may receive credit for only one of the following: CSC205 OR CSC205AA OR CSC205AB OR CSC205AC OR CSC205AD
SUN SUN# CSC 2205
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC220 / Programming for Computer Engineering
3 Credits **/ 5.0 Periods for Lecture & Lab**
Introduction to procedural programming (C/C++) and hardware description language (VHDL). Prerequisites: A grade of C or better in (CSC/EEE120 and CSC205), or permission of Instructor or Division or Department Chair.
Crosslisted: EEE220
Division: Business and Computing Studies

CSC230 / Computer Organization and Assembly Language
4 Credits **/ 5.0 Periods for Lecture & Lab**
Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: A grade of C or better in [(CSC100 or CSC110 or CSC110AB) and CSC/EEE120], or permission of Instructor or Division or Department Chair.
Crosslisted: EEE230
Division: Business and Computing Studies

CSC240 / Introduction to Different Programming Languages
3 Credits **/ 5.0 Periods for Lecture & Lab**
Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.
Division: Business and Computing Studies

CSC240AA / Introduction to Different Programming Languages
4 Credits **/ 4.0 Periods for Lecture**
Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.
Division: Business and Computing Studies

CSC310 / Data Structures and Algorithms
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced algorithmic concepts and data structures, including algorithm analysis and design, trees, graphs, hashing, and advanced sorting techniques. Implementation of advanced algorithms and data structures in an object-oriented language. Prerequisites: A grade of C or better in [CSC240, and (MAT230 or MAT231), and MAT227], or permission of Program Director.
Division: Business and Computing Studies

CSC350 / Logic Programming for Artificial Intelligence
3 Credits **/ 4.0 Periods for Lecture & Lab**
Introduction to the fundamentals of logic and logic programming, a paradigm that uses formal logic to express computational algorithms. Focus on propositional and predicate logic, basics of proof techniques, principles of computational logic, and logic programming concepts using Prolog-based logic programming languages. Emphasis on application to artificial intelligence. Prerequisites: A grade of C or better in (CSC240++ and MAT227) or permission of Program Director.
Division: Business and Computing Studies

Counseling and Applied Psychology (CAP)

CAP240 / Introduction to Counseling Skills
3 Credits **/ 3.0 Periods for Lecture**
Introduction to basic skills and techniques used in the counseling field. Focuses on active listening, self-awareness, and other related skills. Prerequisites: A grade of C or better in CAP120.
Division: Health Science, Public Service, & Counseling

CAP260 / Career and Professional Preparation for the Helping Professions
3 Credits **/ 3.0 Periods for Lecture**
Overview of the process of career and life planning through self-awareness for students interested in helping fields. Focus on current occupational trends and outlook, the learning models of the individual, the world of work, and decision-making. Emphasis on individual application and workplace diversity. Design materials for use in the professional world such as resumes, online presence, career portfolio. Prerequisites: A grade of C or better in ENG101.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Health Science, Public Service, & Counseling

Counseling and Personal Development (CPD)

CPD160 / Introduction to Multiculturalism
3 Credits **/ 3.0 Periods for Lecture**
Examination of the multiple cultures and subcultures within the contemporary United States. Personal exploration of awareness and appreciation of multiculturalism. Activities for experiencing diverse cultural perspectives. Critical thinking skills for recognizing, analyzing, and mediating cultural and psychological factors impacting conflict and accord between diverse cultures through written and oral discourse. Prerequisites: A grade of C or better in ENG101 or ENG107, or permission of Instructor.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Health Science, Public Service, & Counseling

Creative Writing (CRW)

CRW150 / Introduction to Creative Writing
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the basic aesthetics and techniques in contemporary creative writing within a variety of genres. Introduction to the analytical concepts and terminology necessary to understand, interpret, and enact contemporary creative writing. Facilitation of writing practices and evaluation. Introduction to literature's role in society. Prerequisites: None.
Division: Composition, Creative Writing, and Literature

CRW160 / Introduction to Writing Poetry
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Composition, Creative Writing, and Literature

CRW170 / Introduction to Writing Fiction
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Composition, Creative Writing, and Literature

CRW172 / Introduction to Comic Book Writing
3 Credits **/ 3.0 Periods for Lecture**
Introduction to elements and techniques of comic book writing in its specific form; teaches terminology and concepts needed for the successful participation in writing workshops; focuses on proposal outline, planning, structure facilitates writing practice (including character study) and evaluation; offers individual suggestions in the student's development in this genre. Prerequisites:None.
Division: Composition, Creative Writing, and Literature

CRW180 / Introduction to Writing Nonfiction
3 Credits **/ 3.0 Periods for Lecture**
Practice in writing creative nonfiction, including autobiography and biography, the essay, reviews, and humor using a process of invention and discovery, writing, analysis, evaluation, and revision. Combines lecture, discussion, and workshop, leading to the production of marketable quality creative nonfiction. Prerequisites: None. CRW150 recommended but not required.
Division: Composition, Creative Writing, and Literature

CRW200 / Readings for Writers
1 Credit **/ 0.0 Periods for Laboratory**
Close analysis and interpretation of selected literary texts designed to strengthen the students' own writing by extending their familiarity with the genre in which they write and their knowledge of selected literary elements. One-on-one meetings between student and instructor. Prerequisites: A grade of C or better in CRW150 or permission of Instructor. Course Notes: CRW200 may be repeated for a total of six (6) credits.
Division: Composition, Creative Writing, and Literature

CRW201 / Portfolio
1 Credit **/ 0.0 Periods for Laboratory**
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.
Division: Composition, Creative Writing, and Literature

CRW272 / Planning and Structuring the Novel
3 Credits **/ 3.0 Periods for Lecture**
Focus on planning, structuring, and beginning a novel; prewriting, writing, analysis, evaluation, and revision of novel plans and excerpts. Prerequisites: A grade of C or better in CRW150 or permission of Instructor.
Division: Composition, Creative Writing, and Literature

Critical Reading (CRE)

CRE101 / College Critical Reading and Critical Thinking
3 Credits **/ 3.0 Periods for Lecture**
Develop and apply critical thinking skills through critically reading varied and challenging materials. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks. Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG100, or RDG100LL, or RDG111, or RDG112, or RDG113)], or a grade of B or better in ALT100, or an appropriate district placement, or permission of Instructor. Course Notes: Students may only receive credit for one of the following: CRE101, CRE101AT, CRE101BM, CRE101BS, CRE101CS, CRE101CT, CRE101ED, CRE101HS, CRE101SM, CRE101VA.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

Dance (DAN)

DAN101AC / Social Dance: Latin
1 Credit **/ 2.0 Periods for Lecture & Lab**
Theory and practice of Latin dance. Development of movement quality and performance skills individually, with a partner or in a group setting. Prerequisites: None.
Division: Communication & Fine Arts

DAN102 / Hip Hop I
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of Hip Hop dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN102 may be repeated for credit.
Division: Communication & Fine Arts

DAN103 / Hip Hop II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of Hip Hop dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN102 or permission of Instructor. Course Notes: DAN103 may be repeated for credit.
Division: Communication & Fine Arts

DAN129 / Musical Theatre Dance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

DAN130 / Musical Theatre Dance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of musical theatre dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN129 or permission of Instructor. Course Notes: DAN130 may be repeated for credit.
Division: Communication & Fine Arts

DAN131 / Ballet I
1 Credit **/ 3.0 Periods for Lecture & Lab**
Level one ballet theory and practice. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN131 may be repeated for credit.
Division: Communication & Fine Arts

DAN131PA / Ballet I: Community
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Level one ballet theory and practice. Prerequisites: None. Prior dance experience suggested but not required. Course Notes: DAN131PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN132 / Modern Dance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

DAN132PA / Modern Dance Basic Level
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Introduction to the theory and practice of modern dance at the basic level. Prerequisites: None. Prior dance experience suggested but not required. Course Notes: DAN132PA may be repeated credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN133 / Jazz Dance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN133 may be repeated for credit.
Division: Communication & Fine Arts

DAN133PA / Jazz Basic Level
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the basic level. Prerequisites: None. Prior dance experience suggested but not required. Course Notes: DAN133PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN134 / Ballet II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Level two ballet theory and practice. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN131 or permission of Instructor. Course Notes: DAN134 may be repeated for credit.
Division: Communication & Fine Arts

DAN134PA / Ballet II: Community
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Level two ballet theory and practice. Prerequisites: A grade of C or better in DAN131PA or permission of Department or Division. Course Notes: DAN134PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN135 / Modern Dance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of modern dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN132 or permission of Instructor. Course Notes: DAN135 may be repeated for credit.
Division: Communication & Fine Arts

DAN135PA / Modern Dance Beginning Level
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Theory and practice of modern dance at the beginning level. Course Notes: DAN135PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN136 / Jazz Dance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of jazz dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN133 or permission of Instructor. Course Notes: DAN136 may be repeated for credit.
Division: Communication & Fine Arts

DAN136PA / Jazz Beginning Level
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN133PA or permission of Department or Division. Course Notes: DAN136PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN140 / Tap Dance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
An introduction to the theory and practice of tap dance. Prerequisites: None. Course Notes: DAN140 may be repeated for credit.
Division: Communication & Fine Arts

DAN141 / Dance Workshop
1 Credit **/ 3.0 Periods for Lecture & Lab**
An intensive experience in the process of choreography, performance, and production elements. Prerequisites: None. Course Notes: DAN141 may be repeated for credit.
Division: Communication & Fine Arts

DAN145 / Tap Dance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of tap dance at an advanced beginning level. Prerequisites: A grade of C or better in DAN140 or permission of Instructor. Course Notes: DAN145 may be repeated for credit.
Division: Communication & Fine Arts

DAN150 / Dance Performance I
1 Credit **/ 3.0 Periods for Lecture & Lab**
An introduction to the process and practice of dance performance. Prerequisites: None. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN150 may be repeated for credit.
Division: Communication & Fine Arts

DAN155 / Dance Performance II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continued study of the process and practice of dance performance at advanced beginning level. Prerequisites: A grade of C or better in DAN150 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN155 may be repeated for credit.
Division: Communication & Fine Arts

DAN202 / Hip Hop III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of Hip Hop dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN103 or permission of Instructor. Course Notes: DAN202 may be repeated for credit.
Division: Communication & Fine Arts

DAN203 / Hip Hop IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of Hip Hop dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN202 or permission of Instructor. Course Notes: DAN203 may be repeated for credit.
Division: Communication & Fine Arts

DAN210 / Dance Production I
3 Credits **/ 3.0 Periods for Lecture & Lab**
Introduction to the elements of pre-production and production, including but not limited to production organization, production management, lighting design, and sound design as they relate to the art of dance. Prerequisites: None.
Division: Communication & Fine Arts

DAN221 / Rhythmic Awareness I
3 Credits **/ 3.0 Periods for Lecture**
Exploration of rhythm in dance performance, choreography and pedagogy. Emphasis on the basic understanding of rhythm and cultivating awareness of rhythm in everyday life. Prerequisites: None.
Division: Communication & Fine Arts

DAN229 / Musical Theatre Dance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of musical theatre dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN130 or permission of Instructor. Course Notes: DAN229 may be repeated for credit.
Division: Communication & Fine Arts

DAN230 / Musical Theatre Dance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of musical theatre dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN229 or permission of Instructor. Course Notes: DAN230 may be repeated for credit.
Division: Communication & Fine Arts

DAN231 / Ballet III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Level three ballet theory and practice. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN134 or permission of Instructor. Course Notes: DAN231 may be repeated for credit.
Division: Communication & Fine Arts

DAN231PA / Ballet III: Community
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Level three ballet theory and practice. Prerequisites: A grade of C or better in DAN134PA or permission of Department or Division. Course Notes: DAN231PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN232 / Modern Dance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN135 or permission of Instructor. Course Notes: DAN232 may be repeated for credit.
Division: Communication & Fine Arts

DAN232PA / Modern Dance Intermediate Level
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Theory and practice of modern dance at the intermediate level. Prerequisites: A grade of C or better in DAN135PA or permission of Department or Division. Course Notes: DAN232PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN233 / Jazz Dance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of jazz dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN136 or permission of Instructor. Course Notes: DAN233 may be repeated for credit.
Division: Communication & Fine Arts

DAN233PA / Jazz Intermediate Level
0.5 Credits **/ 1.5 Periods for Lecture & Lab**
Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the intermediate level. Prerequisites: A grade of C or better in DAN136PA or permission of Department or Division. Course Notes: DAN233PA may be repeated for credit. Course is not intended for dance majors.
Division: Communication & Fine Arts

DAN234 / Ballet IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Level four ballet theory and practice. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN231 or permission of Instructor. Course Notes: DAN234 may be repeated for credit.
Division: Communication & Fine Arts

DAN235 / Modern Dance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of modern dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN232 or permission of Instructor. Course Notes: DAN235 may be repeated for credit.
Division: Communication & Fine Arts

DAN236 / Jazz Dance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of jazz dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: A grade of C or better in DAN233 or permission of Instructor. Course Notes: DAN236 may be repeated for credit.
Division: Communication & Fine Arts

DAN237 / Ballet Pointe I
1 Credit **/ 1.0 Periods for Lecture & Lab**
An introduction to the theory and practice of level one pointe work. Development of strength and movement quality. Prerequisites: A grade of C or better in DAN134 or permission of Instructor. Corequisites: DAN231 or DAN234. Course Notes: DAN237 may be repeated for credit.
Division: Communication & Fine Arts

DAN240 / Tap Dance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of tap dance at a beginning intermediate level. Prerequisites: A grade of C or better in DAN145 or permission of Instructor. Course Notes: DAN240 may be repeated for credit.
Division: Communication & Fine Arts

DAN245 / Tap Dance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Theory and practice of tap dance at an intermediate level. Prerequisites: A grade of C or better in DAN240 or permission of Instructor. Course Notes: DAN245 may be repeated for credit.
Division: Communication & Fine Arts

DAN250 / Dance Performance III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continued study of the process and practice of dance performance at beginning intermediate level. Prerequisites: A grade of C or better in DAN155 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN250 may be repeated for credit.
Division: Communication & Fine Arts

DAN255 / Dance Performance IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continued study of the process and practice of dance performance at the intermediate level. Prerequisites: A grade of C or better in DAN250 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance. Course Notes: DAN255 may be repeated for credit.
Division: Communication & Fine Arts

DAN264 / Choreography I
3 Credits **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

DAN265 / Choreography II
3 Credits **/ 3.0 Periods for Lecture & Lab**
Exploration of choreography at the intermediate level. Experimentation with the various approaches to creative practice as established by 20th and 21st century artists. Prerequisites: A grade of C or better in DAN264 or permission of Instructor.
Division: Communication & Fine Arts

DAN280 / Dance Practicum
2 Credits **/ 3.0 Periods for Lecture & Lab**
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. Course Notes: DAN280 may be repeated for credit.
Division: Communication & Fine Arts

DAN298AA / Special Projects
1 Credit **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor. Course Notes: DAN298AA may be repeated for credit.
Division: Communication & Fine Arts

Dance Humanities (DAH)

DAH100 / Introduction to Dance in the United States
3 Credits **/ 3.0 Periods for Lecture**
Overview of the field of dance focusing on origins, historical development, cultural characteristics of the various styles of dance and their contemporary practice in the United States, and dance as a vital part of the human experience. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

DAH201 / Dance, Culture, and Global Contexts
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the study of dance as culture in diverse global contexts.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

DAH250 / Dance in Popular Culture
3 Credits **/ 3.0 Periods for Lecture**
Interdisciplinary approach investigating diverse cultural dance practices that have shaped American popular culture from the late 19th century to the present. Highlights issues of power, class, race, ethnicity, gender, age and sexuality. Emphasis is on revealing diverse cultural influences in U.S. popular culture.Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Communication & Fine Arts

DAH255 / Hip Hop: Arts, Aesthetic and Culture
3 Credits **/ 3.0 Periods for Lecture**
Selective survey and historico-cultural analysis of hip hop arts, aesthetics and culture organized around the founding elements of DJing, MCing, B-boy and B-girling, graffiti arts and knowledge. Prerequisites: A grade of C or better in ENG101 or ENG107.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

Early Education (EED)

EED115 / Digital Literacy for Teaching and Learning in Education
3 Credits **/ 3.0 Periods for Lecture**
Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education. Prerequisites: None.
Crosslisted: EDU115
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Social & Behavioral Sciences

EED200 / Foundations of Early Childhood Education
3 Credits **/ 3.0 Periods for Lecture**
Overview of early childhood education (birth to age eight) in American society, including current issues and responsibilities. Emphasis on issues of professionalism, ethics and program types. Opportunities for students to explore potential career paths. Prerequisites: None. Course Notes: EED200 includes practicum designed to explore the field of early childhood education.
Division: Social & Behavioral Sciences

EED215 / Early Learning: Health, Safety, Nutrition and Physical Fitness
3 Credits **/ 3.0 Periods for Lecture**
Consideration of public health issues and safety procedures within early childhood settings that serve young children birth to age eight. Overview of nutritional needs and issues of physical fitness and well-being in young children. Includes practicum designed to explore the field of early childhood education. Prerequisites: None.
Division: Social & Behavioral Sciences

EED222 / Introduction to the Exceptional Young Child: Birth to Age Eight
3 Credits **/ 3.0 Periods for Lecture**
Overview of the exceptional learner (birth - age eight), one who differs from the average or the norm, with emphasis on observation, techniques, characteristics, identification, types of programs, and work with families. Issues related to learning exceptionalities, sensory and communication disorders, social and emotional problems, physical and health related disorders, and giftedness. Includes practicum designed to explore the field of early childhood education. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Economics (ECN)

ECN211 / Macroeconomic Principles
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# ECN 2201
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

ECN212 / Microeconomic Principles
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# ECN 2202
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Education (EDU)

EDU115 / Digital Literacy for Teaching and Learning in Education
3 Credits **/ 3.0 Periods for Lecture**
Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education. Prerequisites: None.
Crosslisted: EED115
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Social & Behavioral Sciences

EDU220 / Introduction to Serving English Language Learners (ELL)
3 Credits **/ 3.0 Periods for Lecture**
Historical overview of current educational and legal issues for serving English Learners (EL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), Sheltered English Instruction, and bilingual/Dual Language Immersion (DLI). Includes SEI, Sheltered English Instruction, and bilingual/DLI strategies. Prerequisites: None.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Social & Behavioral Sciences

EDU221 / Introduction to Education
3 Credits **/ 3.0 Periods for Lecture**
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 Notes: EDU221 requires a minimum of 30 hours of field experience in elementary or secondary classroom environment.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

EDU222 / Introduction to the Exceptional Learner
3 Credits **/ 3.0 Periods for Lecture**
Overview of the exceptional learner with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mild disabilities, severe disabilities, emotional and behavioral disorders, intellectual disabilities, and students who are gifted. Prerequisites: None. Course Notes: EDU222 requires an approved field experience.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

EDU230 / Cultural Diversity In Education
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Social & Behavioral Sciences

EDU236 / Classroom Relationships
3 Credits **/ 3.0 Periods for Lecture**
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 Notes: Requires a 20-hour field experience in a K-12 classroom.
Division: Social & Behavioral Sciences

EDU291 / Children's Literature
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: ENH291
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Social & Behavioral Sciences

EDU292 / The Art of Storytelling
3 Credits **/ 3.0 Periods for Lecture**
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None.
Crosslisted: HUM292, STO292
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Social & Behavioral Sciences

Electrical Engineering (EEE)

EEE120 / Digital Design Fundamentals
4 Credits **/ 6.0 Periods for Lecture & Lab**
Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, Read Only Memory (ROMs), Programmable Logic Device (PLDs), synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: None. Corequisites: CSC100 or (CSC110 or CSC110AB) or permission of Instructor or Division or Department Chair.
Crosslisted: CSC120
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Physical Sciences and Engineering

EEE202 / Circuits and Devices
5 Credits **/ 3.0 Periods for Laboratory, 4.0 Periods for Lecture**
Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks. Prerequisites: None. Corequisites: (PHY131, or permission of Instructor or Division or Department Chair) and (MAT276 or permission of Instructor or Division or Department Chair).
Division: Physical Sciences and Engineering

EEE230 / Computer Organization and Assembly Language
4 Credits **/ 5.0 Periods for Lecture & Lab**
Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: A grade of C or better in [(CSC100 or CSC110 or CSC110AB) and CSC/EEE120], or permission of Instructor or Division or Department Chair.
Crosslisted: CSC230
Division: Physical Sciences and Engineering

Emergency Medical Technology (EMT)

EMT101 / Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers
0.5 Credits **/ 0.5 Periods for Lecture**
Designed to provide the allied healthcare provider with the knowledge and skills to perform Basic Life Support (BLS) according to current guidelines for emergency cardiovascular care (ECC). Prerequisites: None. Course Notes: EMT101 may be repeated for credit.
Division: Health Science, Public Service, & Counseling

EMT104 / Emergency Medical Technology
10 Credits **/ 10.0 Periods for Lecture**
Designed as the Emergency Medical Technician (EMT) lecture to prepare students for scope of practice and standard of care with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies and non-emergencies. Prerequisites: (A grade of C or better in EMT101, or current validation in Basic Life Support Health Care Provider/Professional Rescuer) and (Accuplacer: 74 or higher, or Next Gen Accuplacer 249 or higher, or Asset 42 or higher, or Compass 83 or higher, or EDReady Critical Reading & Thinking 90 or higher, OR High School GPA 3.0 or higher, or Associate's Degree or higher). Corequisites: EMT104AB. Course Notes: Students must meet National Registry of EMT requirements for certification. Additional information available at nremt.org. EMT104 may be repeated for credit.
Division: Health Science, Public Service, & Counseling

EMT104AB / Applied Practical Studies for Emergency Medical Technology
0.5 Credits **/ 0.5 Periods for Laboratory**
Simulation of actual emergency responses, with practical application of techniques and skills covered in EMT curricula. Scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum. Practical application of anatomy, physiology, patient assessment, and treatment of medically or traumatically compromised patients, special hazards and medical operations. Also includes patient-assisted medication administration, semi-automatic external defibrillator and blood glucose monitoring. Students operate in outside, scenario based environments. Prerequisites: None. Corequisites: EMT104. Course Notes: EMT/FSC104AB may be repeated for credit.
Division: Health Science, Public Service, & Counseling

EMT104LL / Emergency Medical Technology Practicum
2 Credits **/ 4.0 Periods for Laboratory**
Laboratory-based course provides structured, hands-on practice of EMT skills in a controlled learning environment. Students apply standards of care, patient assessment techniques, and evidence-based procedures through simulated medical and trauma emergencies using manikins and training devices. Emphasis is placed on decision-making, patient advocacy, and professional behaviors with immediate instructor feedback. The course follows national and state curricula to ensure skill development prior to clinical or practicum experience. Prerequisites: A grade of C or better in EMT104 or permission of Instructor or Corequisites: EMT104. Course Notes: EMT104LL may be repeated for credit. Students must meet National Registry of EMT requirements for certification. Additional information available at nremt.org
Division: Health Science, Public Service, & Counseling

Engineering Science (ECE)

ECE102 / Engineering Analysis Tools and Techniques
2 Credits **/ 4.0 Periods for Lecture & Lab**
Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design. Prerequisites: A grade of C or better in MAT15+ or higher-level mathematics course, or an appropriate District placement above MAT15+, or permission of Instructor or Division or Department Chair. Course Notes: Arizona Shared Unique Number SUN# EGR 1102 - In combination with: ECE103
SUN SUN# EGR 1102
Division: Physical Sciences and Engineering

ECE103 / Engineering Problem Solving and Design
2 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamentals of the design process: engineering modeling, communication and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession. Prerequisites: A grade of C or better in ECE102 or permission of Instructor or Division or Department Chair. Course Notes: Student may receive credit for only one of the following: ECE103 or ECE103EP.
SUN SUN# EGR 1102
Division: Physical Sciences and Engineering

ECE105 / MATLAB Programming
1 Credit **/ 2.0 Periods for Lecture & Lab**
Use MATLAB to solve engineering problems. An overview of programming, including matrices, structures, strings, functions, control flow, file management, data analysis, graphing capabilities, and mathematical calculations. Prerequisites: A grade of C or better in [(MAT150 or MAT151 or MAT152 or MAT155 or MAT156) and MAT182] or (MAT187 or MAT188) or higher level mathematics course or permission of Instructor or Division or Department Chair.
Division: Physical Sciences and Engineering

ECE150 / Exploring Engineering and its Impact on Society
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the profession of engineering and its impact on culture and society. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Physical Sciences and Engineering

ECE211 / Engineering Mechanics-Statics
3 Credits **/ 2.0 Periods for Laboratory, 3.0 Periods for Lecture**
Modeling of static equilibrium in particles and rigid bodies through analysis of forces and mechanical properties. Prerequisites: A grade of C or better in PHY121 or permission of Instructor or Division or Department Chair. Corequisites: MAT230 or MAT231 or permission of Instructor or Division or Department Chair.
Division: Physical Sciences and Engineering

ECE212 / Engineering Mechanics-Dynamics
3 Credits **/ 2.0 Periods for Laboratory, 3.0 Periods for Lecture**
Modeling of dynamic motion in particles and rigid bodies through kinetics and kinematics. Work and energy principles; impulse and momentum principles; planar kinematics; equations of motion; conservation of energy and momentum. A grade of C or better required in all Prerequisites. Prerequisites: (ECE211 and PHY121) or permission of Instructor or Division or Department Chair. Prerequisites or Corequisites: MAT240, or MAT241, or permission of Instructor or Division or Department Chair.
Division: Physical Sciences and Engineering

ECE215 / Mechanics of Materials
3 Credits **/ 5.0 Periods for Lecture & Lab**
Designed to provide students with a strong fundamental foundation in the mechanics of solids. Includes the concepts of stress and strain applied to the analysis and design of members subjected to axial and torsional loads and members subjected to shear and bending, applications and transformation of plane stress and plane strain, deformation of beams, and elastic buckling of columns. Prerequisites: A grade of C or better in ECE211 or ECE214 or permission of Instructor or Division or Department Chair.
Division: Physical Sciences and Engineering

ECE216 / Computer-Aided Engineering
2 Credits **/ 2.0 Periods for Lecture**
Introduction to engineering graphics, including tolerancing and fasteners, as well as creation and use of engineering drawings. Prerequisites: A grade of C or better in ECE103 or permission of Instructor or Division or Department Chair. Corequisites: ECE216LL.
Division: Physical Sciences and Engineering

ECE216AA / Computer-Aided Engineering
3 Credits **/ 4.0 Periods for Lecture & Lab**
Study and application of engineering graphics, parts modeling, assemblies modeling, and engineering drawings including tolerancing and fasteners using Computer-Aided Design (CAD) software. Prerequisites: A grade of C or better in ECE103 or permission of Instructor or Division or Department Chair. Course Notes: Students may receive credit for only one of the following: (ECE216 and ECE216LL), or ECE216AA.
Division: Physical Sciences and Engineering

ECE216LL / Computer-Aided Engineering Laboratory
1 Credit **/ 2.0 Periods for Laboratory**
Laboratory experience in support of ECE216. Prerequisites: A grade of C or better in ECE103 or permission of Instructor. Corequisites: ECE216.
Division: Physical Sciences and Engineering

ECE297WA / Engineering Internship
1 Credit **/ 0.0 Periods for Laboratory**
Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes. Prerequisites: Permission of Instructor or Division Chair or Department Chair.
Division: Physical Sciences and Engineering

ECE297WB / Engineering Internship
2 Credits **/ 0.0 Periods for Laboratory**
Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes. Prerequisites: Permission of Instructor or Division Chair or Department Chair.
Division: Physical Sciences and Engineering

ECE297WC / Engineering Internship
3 Credits **/ 0.0 Periods for Laboratory**
Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes. Prerequisites: Permission of Instructor or Division Chair or Department Chair.
Division: Physical Sciences and Engineering

ECE297WD / Engineering Internship
4 Credits **/ 0.0 Periods for Laboratory**
Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes. Prerequisites: Permission of Instructor or Division Chair or Department Chair.
Division: Physical Sciences and Engineering

English (ENG)

ENG101 / First-Year Composition
3 Credits **/ 3.0 Periods for Lecture**
Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ESL097 or WAC101), or (a grade of B or better in ALT100), or (a grade of C in ALT100 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+), or (a grade of C or better in ESL202 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+).
SUN SUN# ENG 1101
Fulfills: First-Year Composition (FYC)
Division: Composition, Creative Writing, and Literature

ENG102 / First-Year Composition
3 Credits **/ 3.0 Periods for Lecture**
Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total. Prerequisites: Grade of C or better in ENG101.
SUN SUN# ENG 1102
Fulfills: First-Year Composition (FYC)
Division: Composition, Creative Writing, and Literature

ENG111 / Technical and Professional Writing
3 Credits **/ 3.0 Periods for Lecture**
Introduces students to the genres, style, and design of technical documents that are used in various professional fields. Includes examining the role of workplace writing, preparing documents appropriate to diverse audiences, and integrating data and graphics into work-related documents. Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENG200 / Reading and Writing About Literature
3 Credits **/ 3.0 Periods for Lecture**
Emphasis on critical analysis of various genres of literature; includes study of necessary terminology, introduction to methods of literary criticism, and practice in interpretation and evaluation. Prerequisites: A grade of C or better in ENG102.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENG217 / Personal and Exploratory Writing
3 Credits **/ 3.0 Periods for Lecture**
Using writing to explore one's self and the world one lives in; emphasis on journal writing as a source and inspiration for public writing. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

English Humanities (ENH)

ENH110 / Introduction to Literature
3 Credits **/ 3.0 Periods for Lecture**
Introduction to international literature through various forms of literary expression; e.g., poetry, drama, essay, autobiographical fiction, short story, and novel. Provides a global overview of literature with special emphasis on diverse cultural contributions of women, African Americans, Asian Americans, Hispanic Americans, and Native Americans. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH111 / Literature and the American Experience
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the foundations and diversity of American culture through a survey of its literature, including minority and women writers. Exploration of various facets of American culture including frontier, regional, rural, and urban life; ethnic, racial, and immigrant experience; and political and social philosophies. Prerequisites: None.
Division: Composition, Creative Writing, and Literature

ENH112 / Chicano Literature
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the works of Mexican-American writers. Samples poetry, fiction, and essays viewed in their relationship to American cultural heritage and to contemporary culture. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH113 / Writers/Directors and Current Issues
3 Credits **/ 3.0 Periods for Lecture**
In-depth analysis of literary texts by contemporary writers/directors throughout the world, including essayists, journalists, playwrights, novelists, directors, short story writers, and/or poets. Examines perspectives representing a variety of cultures. Critical responses to current issues of worldwide interest examined, including topics as environment, technology, medicine, economics, politics, education, human rights, law and order. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH190 / Introduction to US Ethnic Literature
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the US ethnic literatures of African Americans, Arab Americans, Asian Americans, Latinas/os, Native Americans, Mixed Race, and other emerging ethnic groups through various expressions. Examines the interconnections of the various experiences of racialized groups living in the US. Provides ethnic US literature a global context through study of the interconnections with the literatures of Africa, Asia, Latin America, and Oceania. Focus on literary production of at least four specific US ethnic groups and relevant international literatures. Prerequisites or Corequisites: ENG101 or ENG107.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Composition, Creative Writing, and Literature

ENH222 / Survey of English Literature After 1800
3 Credits **/ 3.0 Periods for Lecture**
Emphasizes the social and political backgrounds as well as the form and content of English literature in the nineteenth and twentieth centuries. Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 or ENG206 suggested but not required.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH241 / American Literature Before 1860
3 Credits **/ 3.0 Periods for Lecture**
Includes literature written prior to 1860 in the United States. Prerequisites: A grade of C or better in ENG101.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENH242 / American Literature After 1860
3 Credits **/ 3.0 Periods for Lecture**
Includes literature written after 1860 in the United States. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH251 / Mythology
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH253 / Contemporary Global Literature and Film
3 Credits **/ 3.0 Periods for Lecture**
Characteristics of literary and cinematic mediums. Challenges of adapting literature to film. Global examination of historical, religious, socioeconomic, political, and colonial/post colonial themes depicted in Western and non-Western literature and film (e. g., Africa, Asia, and Latin America) outside the United States. Use of narrative in each medium and how it translates various global/international perspectives and cultural assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENH254 / Literature and Film
3 Credits **/ 3.0 Periods for Lecture**
Presents works of literature and their film versions and analyzes distinguishing techniques of each medium. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENH255 / Contemporary U.S. Literature and Film
3 Credits **/ 3.0 Periods for Lecture**
A discussion of the strengths and weaknesses of literature created by U.S. authors and film created by U.S. or other filmmakers. Includes the challenges of adapting literature to film; addressing the racial, ethnic, sex, sexuality, gender, class, and religious differences among cultures and mediums; the use of narrative in each medium and how it translates various cultural values and assumptions particular to U.S. society and culture; the specific genres present in literature and film; and the cultural metaphors and symbols used in literature and film. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

ENH260 / Literature of the Southwest
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH284 / 19th Century Women Writers
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: WST284
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

ENH285 / Contemporary Women Writers
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: WST285
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

Environmental Sciences (ENV)

ENV101 / Introduction to Environmental Science
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduces the interconnected nature of environmental science and solutions to environmental issues. Prerequisites: None.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Biological Sciences

ENV225 / Our Changing Planet
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Evaluates biogeochemical cycles and energy flows supporting life on Earth using the scientific method. Integrates core concepts of atmospheric science, geology, hydrology, ecology, and soil science to provide a foundational understanding of the critical zone and its relationship to environmental issues. Examines the influences of human activity on the functioning of the critical zone with consideration of management best practices and restoration actions for long-term sustainability. Emphasizes the communication of scientific information. Prerequisites: None.
Division: Biological Sciences

Exercise Science (EXS)

EXS101 / Introduction to Exercise Science
3 Credits **/ 3.0 Periods for Lecture**
Introductory course that will provide the student with a general overview of the key theories and concepts, professions, and research areas associated with the field of Exercise Science. Educational pathways and career options will also be examined. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

EXS125 / Introduction to Exercise Physiology
3 Credits **/ 3.0 Periods for Lecture**
Principles of exercise science applied to fitness instruction. Major factors related to the function of the human body will be examined/ introduced with an emphasis on exercise physiology and functional anatomy. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS146 / Introduction to Exercise Testing
1 Credit **/ 2.0 Periods for Lecture & Lab**
Introductory course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of common evidence-based assessments for apparently healthy populations. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor. Prior completion of or concurrent enrollment in EXS125 is recommended.
Division: Health Science, Public Service, & Counseling

EXS215 / Resistance Training and Recovery Techniques
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental methods for safe and effective instruction of resistance, functional, and athletic conditioning exercises. Application of foundational principles of physiology and kinesiology. Overview of warm-up, cooldown, and recovery techniques. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS217 / Cardiorespiratory and Flexibility Training
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental methods for safe and effective instruction of cardiorespiratory and flexibility training exercises. Application of foundational principles of physiology and kinesiology. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS246 / Advanced Exercise Testing
2 Credits **/ 3.0 Periods for Lecture & Lab**
Advanced course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of evidence-based assessments for apparently healthy and athletic populations. Pharmacology, special populations, and environmental conditions are also examined. Prerequisites: A grade of C or better in EXS146 or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS255 / Program Design: Muscular Fitness and Performance
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced principles of muscular fitness, sports performance, and recovery techniques including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments also examined. Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS257 / Program Design: Cardiorespiratory Fitness
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced principles of cardiorespiratory fitness and weight management including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments are also examined. Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.
Division: Health Science, Public Service, & Counseling

EXS270 / Exercise Science Internship
3 Credits **/ 0.0 Periods for Laboratory**
A capstone experience in a fitness or health related facility. Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director. Course Notes: CPR and AED certifications must be current through the duration of the internship. EXS270 may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS270AA / Exercise Science Internship
1 Credit **/ 0.0 Periods for Laboratory**
A capstone experience in a fitness or health related facility. Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director. Course Notes: CPR certification must be current through the duration of the internship. EXS270AA may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS270AB / Exercise Science Internship
2 Credits **/ 0.0 Periods for Laboratory**
A capstone experience in a fitness or health related facility. Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director. Course Notes: CPR and AED certifications must be current through the duration of the internship. EXS270AB may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS275 / Sport Science Internship
3 Credits **/ 0.0 Periods for Lecture & Lab**
A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: EXS275 may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS275AA / Sport Science Internship
1 Credit **/ 0.0 Periods for Lecture & Lab**
A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: EXS275AA may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS275AB / Sport Science Internship
2 Credits **/ 0.0 Periods for Lecture & Lab**
A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division. Course Notes: EXS275AB may be repeated for a maximum of six (6) credits.
Division: Health Science, Public Service, & Counseling

EXS280AB / Special Topics in Exercise Science
1 Credit **/ 1.0 Periods for Lecture**
Conceptual and research basis of current topics in exercise science. Prerequisites: None. Course Notes: EXS280AB may be repeated for credit.
Division: Health Science, Public Service, & Counseling

EXS290 / Introduction to Evidence-Based Practice
3 Credits **/ 3.0 Periods for Lecture**
Introduction to Evidence-Based Practice (EBP) as a framework for logical reasoning and informed decision-making in professional settings, particularly in the movement sciences. Students formulate professional questions, acquire and appraise relevant evidence, synthesize findings, and explore practical applications. Specific emphasis on the use of data to inform recommendations and consideration of audience, purpose and context to communicate effectively in both written and oral presentations. Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor. EXS101 OR HES100 OR FON100 OR FON241 recommended.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Health Science, Public Service, & Counseling

First Year Experience (FYE)

FYE101 / Introduction to College, Career and Personal Success
1 Credit **/ 1.0 Periods for Lecture**
Focus on student success through exploration of academic, career and life skills. Includes study of goal-setting/success strategies, academic mindset and financial literacy. Develop an education/career plan utilizing career assessments and other college resources. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

FYE103 / Exploration of College, Career and Personal Success
3 Credits **/ 3.0 Periods for Lecture**
Focus on student success through exploration of academic, career, and life skills. Includes study of goal-setting/success strategies, academic mindset, interpersonal skills, financial literacy, self-care strategies, diverse perspectives, and campus tools and resources. Develop an education/career plan utilizing career assessments and other college resources. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

Food and Nutrition (FON)

FON100 / Introductory Nutrition
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Health Science, Public Service, & Counseling

FON125 / Introduction to Professions in Food, Nutrition, and Dietetics
1 Credit **/ 1.0 Periods for Lecture**
Overview and discussion of career opportunities in the fields of food, nutrition, and dietetics. Includes information about history, ethics, standards of practice, communication and counseling skills. Emphasis on how to become a Registered Dietitian Nutritionist or a Dietetic Technician Registered. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

FON142AB / Science of Food
3 Credits **/ 5.0 Periods for Lecture & Lab**
Exploration and Application of Scientific Principles of Food; experiences with ingredient functionality and application in cooking techniques. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

FON241 / Principles of Human Nutrition
3 Credits **/ 3.0 Periods for Lecture**
Scientific principles of human nutrition. Emphasis on scientific literacy and the study of nutrients for disease prevention. Includes macronutrients and micronutrients, human nutrient metabolism and nutrition's role in the health of the human body throughout the life cycle. Addresses nutrition principles for prevention of nutrition-related health conditions. Course Notes: General Education Designation: Natural Sciences (General) - [SG] in combination with: FON241LL
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Health Science, Public Service, & Counseling

FON241LL / Principles of Human Nutrition Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
Self-evaluative laboratory experience to complement FON241, Principles of Human Nutrition using anthropometric, biochemical, clinical, and dietary analysis. Includes the use of qualitative and quantitative methodology to determine nutritional status and evaluate methodological applications. Prerequisites: A grade of C or better in FON241 or Corequisites: FON241. Course Notes: General Education Designation: Natural Sciences (General) - [SG] in combination with: FON241
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Health Science, Public Service, & Counseling

Game Studies (GST)

GST202 / Games, Culture and Aesthetics
3 Credits **/ 3.0 Periods for Lecture**
Considers games as artifacts and expressions of our basic consciousness, humanity, and potential. Explores through the lens of world cultures such concepts as values, power relations, gender roles, arts, aesthetics, and desire. Compares games across cultural, temporal, geographic, and linguistic divides, for the purpose of examining and appreciating the experiences, contributions, and values of diverse populations, as conveyed through the global phenomenon of games. Prerequisites: A grade of C or better in RDG100, or RDG100LL, or (RDG100AA and RDG100AB and RDG100AC), or RDG111, or RDG112, or RDG113, or eligibility for ENG101 as indicated by appropriate writing assessment test score.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

General Business (GBS)

GBS109 / Introduction to Esports Management
3 Credits **/ 3.0 Periods for Lecture**
Introduction to Esports will introduce the business, economics, operations and marketing of the Esports industry. Historical and cultural implications will be examined from the early days of competitive video gaming, to today's billion dollar industry. Global awareness and diverse cultural viewpoints and trends will be studied as they relate to the Esports industry. This course will introduce students to the numerous business opportunities to work and grow in the dynamic Esports industry. Prerequisites: None.
Division: Business and Computing Studies

GBS120 / Workplace Communication Skills
3 Credits **/ 3.0 Periods for Lecture & Lab**
Reviews planning, organization, development, and evaluation of written and oral communication in business settings, including informative and persuasive messages. Prerequisites: None.
Division: Business and Computing Studies

GBS131 / Business Calculations
3 Credits **/ 3.0 Periods for Lecture**
Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups. Prerequisites: None.
Division: Business and Computing Studies

GBS132 / Personal and Family Financial Security
3 Credits **/ 3.0 Periods for Lecture**
Principles and practices of personal and family financial planning, includes savings, budgeting, credit, buying versus renting, and general principles of consumerism. Prerequisites: None.
Division: Business and Computing Studies

GBS151 / Introduction to Business
3 Credits **/ 3.0 Periods for Lecture**
Characteristics and activities of current local, national, and international business. An overview of economics, marketing, management and finance. Prerequisites: None.
Division: Business and Computing Studies

GBS205 / Legal, Ethical, and Regulatory Issues in Business
3 Credits **/ 3.0 Periods for Lecture**
Legal theories, ethical issues and regulatory climate affecting business policies and decisions. Prerequisites: None.
Division: Business and Computing Studies

GBS220 / Quantitative Methods in Business
3 Credits **/ 3.0 Periods for Lecture**
Business applications of quantitative optimization methods in operations management decisions. Prerequisites: (A grade of C or better in MAT150 or MAT151 or MAT152) or satisfactory District math placement.
Division: Business and Computing Studies

GBS221 / Business Statistics
3 Credits **/ 3.0 Periods for Lecture**
Business applications of descriptive and inferential statistics, measurement of relationships, and statistical process management. Includes the use of spreadsheet software for business statistical analysis. Prerequisites: A grade of C or better in GBS220 or MAT217 or MAT218.
SUN SUN# BUS 2201
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

GBS233 / Business Communication
3 Credits **/ 3.0 Periods for Lecture**
Internal and external business communications, including verbal and nonverbal techniques. Prerequisites: ENG101 or ENG107 with grade of "C" or better, or permission of Department or Division.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Business and Computing Studies

GBS261 / Investments I
3 Credits **/ 3.0 Periods for Lecture**
Evaluation of various investment forms including study of inflation, taxation, government securities, stocks and bonds, real estate and retirement plans. Securities industry knowledge and skills for individuals to prepare for careers in Financial Services. Includes capital markets, types of products and their risks, trading, customer accounts, prohibited activities, and regulatory agencies and their functions. Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for entry-level positions in the security industry. Prerequisites: None. Corequisites: Concurrent enrollment in GBS261LL recommended but not required. Course Notes: Students interested in taking the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination should also enroll in the GBS261LL Securities Industry Essentials (SIE) Exam Prep course.
Division: Business and Computing Studies

GBS261LL / Securities Industry Essentials (SIE) Exam Prep
1 Credit **/ 1.0 Periods for Lecture & Lab**
Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for prospective securities industry professionals. Focuses on reviewing key concepts, practicing skills, and preparing to successfully demonstrate existing knowledge on the SIE certification exam. The course is designed to provide an overview of exam topics and study and test-taking strategies. It also will include structured study time, group discussions, and the use of practice exams to assess test readiness. Prerequisites: None. Corequisites: Concurrent enrollment in GBS261 recommended but not required. Course Notes: GBS261 is recommended for students who are not already employed in the financial services industry and need more in-depth content related to the SIE exam.
Division: Business and Computing Studies

Geology (GLG)

GLG101IN / Physical Geology: Dynamic Earth
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Introduction to Earth's materials, surface and internal geologic processes, plate tectonics and geologic time. Includes practical experience in rock and mineral identification, topographic maps, and applied problems in geology. Prerequisites: None. Course Notes: Enrollment in both a GLG101IN lecture section and a GLG101IN laboratory section is required. Students may receive credit for only one of the following: GLG101 and GLG103 or GLG101IN.
SUN SUN# GLG 1101
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

GLG102IN / Historical Geology: Primordial to Present
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
The origin and history of the Earth, its dynamic geographic and climatic changes. Evolution and sequence of life recorded in the fossil record; tectonic evolution of major continents through time. Prerequisites: None. Course Notes: Enrollment in both a GLG102IN lecture section and a GLG102IN laboratory section is required. Students may receive credit for only one of the following: GLG102 and GLG104 or GLG102IN.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Physical Sciences and Engineering

GLG105 / Introduction to Planetary Science
4 Credits **/ 6.0 Periods for Lecture & Lab**
A survey of solar system objects and their geologic evolution, surfaces, interiors, and atmospheres, and the methods used to study them; weekly laboratory for data analysis and experiments; possible weekend field trip. Prerequisites: None.
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Physical Sciences and Engineering

GLG110IN / Geological Disasters and the Environment
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Acquaints students with the use and importance of geological studies as they apply to the interactions between people and the Earth. Includes geological processes and hazards such as earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources. Prerequisites: None. Course Notes: Enrollment in both a GLG110IN lecture section and a GLG110IN laboratory section is required. Students may receive credit for only one of the following: GLG110 and GLG111 or GLG110IN.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

GLG230AA / Field Geology of the Southwest
1 Credit **/ 5.0 Periods for Laboratory**
Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena. Prerequisites: None. GLG103 suggested but not required. Course Notes: GLG230AA may be repeated for a total of four (4) credit hours.
Division: Physical Sciences and Engineering

Health Care Related (HCR)

HCR210 / Clinical Health Care Ethics
3 Credits **/ 3.0 Periods for Lecture**
An introduction to health care ethics with emphasis on analysis and ethical decision making at both the clinical and health policy levels for health care professionals. Theoretical foundation of bioethics reviewed within historical and contemporary contexts. Prerequisites: A grade of C or better in ENG102 or ENG108 or permission of Instructor.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Nursing and Health Sciences

HCR220 / Introduction to Nursing and Health Care Systems
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the social, political, and economic contexts of the nursing profession and health care systems in the United States. Prerequisites: A grade of C or better in ENG102 or ENG108 or permission of Instructor.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Nursing and Health Sciences

HCR230 / Culture And Health
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo
Division: Nursing and Health Sciences

HCR240 / Human Pathophysiology
4 Credits **/ 4.0 Periods for Lecture**
Chemical, biological, biochemical, and psychological processes as a foundation for the understanding of alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered. Prerequisites: A grade of C or better in BIO202 or BIO205, or permission of Instructor.
Division: Nursing and Health Sciences

Health Core Curriculum (HCC)

HCC130 / Fundamentals in Health Care Delivery
3 Credits **/ 3.0 Periods for Lecture**
Overview of current and recent development of health care professions, including career and labor market information, health care delivery systems, third party payers, and facility ownership. Health organization structure, patient rights and quality care. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Basic communication skills which facilitate inter-professional teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies. Prerequisites: None.
Division: Nursing and Health Sciences

HCC145 / Medical Terminology for Health Care Professionals
3 Credits **/ 3.0 Periods for Lecture**
Medical terminology used in health care, with special care populations and in special services. Body systems approach to terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing terms using word parts. Medical abbreviations and symbols and term spelling. Prerequisites: None.
Division: Nursing and Health Sciences

HCC145AA / Medical Terminology for Health Care Professionals I
1 Credit **/ 1.0 Periods for Lecture**
Introduction to medical terms used in health care. Body systems approach to selected terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using basic word parts. Selected medical abbreviations and symbols and term spelling. Prerequisites: None.
Division: Nursing and Health Sciences

HCC145AB / Medical Terminology for Health Care Professionals II
1 Credit **/ 1.0 Periods for Lecture**
Selected medical terms used in health care. Body systems approach to more detailed terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using standard word parts. Selected abbreviations and symbols and term spelling. Prerequisites: A grade of C or better in HCC145AA.
Division: Nursing and Health Sciences

Health Science (HES)

HES100 / Healthful Living
3 Credits **/ 3.0 Periods for Lecture**
Examines health-related behaviors and issues associated with a modern lifestyle. Explores current topics of interest related to mental, physical, social and environmental health such as stress management, nutrition, and fitness. Identifies and evaluates personal and community strategies to promote an optimal lifestyle. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

HES210 / Cultural Aspects of Health and Illness
3 Credits **/ 3.0 Periods for Lecture**
Examines how culture influences health, illness, health maintenance practices, barriers to health care, interactions with healthcare professionals, and health disparities worldwide. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo
Division: Health Science, Public Service, & Counseling

History (HIS)

HIS101 / History of Western Civilization Middle Ages to 1789
3 Credits **/ 3.0 Periods for Lecture**
Survey of the history of the Western world from the emergence of Western civilization in the Middle Ages to the start of the French Revolution. Prerequisites: None.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS102 / History of Western Civilization 1789 to Present
3 Credits **/ 3.0 Periods for Lecture**
Survey of the history of the Western world from the French Revolution to the present. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS103 / United States History to 1865
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# HIS 1131
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS104 / United States History 1865 to Present
3 Credits **/ 3.0 Periods for Lecture**
The political, economic, and social development of United States from 1865 to the present time. Prerequisites: None.
SUN SUN# HIS 1132
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS109 / Mexican American History and Culture
3 Credits **/ 3.0 Periods for Lecture**
Examination of the origins and development of Mexican American peoples. Including culture, history and contributions within the United States. Emphasis on educational, social, and economic conditions of Mexican Americans of the southwest. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS110 / World History to 1500
3 Credits **/ 3.0 Periods for Lecture**
A global survey of the economic, social, cultural, environmental, and political elements of world history to 1500. Prerequisites: None.
SUN SUN#: HIS 1100
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

HIS111 / World History 1500 to the Present
3 Credits **/ 3.0 Periods for Lecture**
A survey of the economic, social, cultural, and political elements of world history from 1500 to the present. Prerequisites: None.
SUN SUN#: HIS 1111
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

HIS140 / American Indian History
3 Credits **/ 3.0 Periods for Lecture**
Survey of American Indian history with emphasis on the last 200 years. Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty. Prerequisites: None.
Crosslisted: AIS140
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS145 / History of Mexico
3 Credits **/ 3.0 Periods for Lecture**
Survey of the major forces that shaped the history of Mexico and its culturally diverse communities from pre-Columbian times to the present. Also examines how these historical forces continue to shape contemporary Mexican society and its place within the world. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS201 / History of Women in America
3 Credits **/ 3.0 Periods for Lecture**
Introduction to women's history from the colonial period to the present. Explores changes and developments which have influenced the lives of women. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS203 / African-American History to 1865
3 Credits **/ 3.0 Periods for Lecture**
History and cultural heritage of African-Americans from ancestral origins in Ancient Africa through the experience of chattel slavery in the Americas to eventual emancipation and participation in the American Civil War. Prerequisites: None.
Crosslisted: AFR203
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Languages, Humanities & Information Studies

HIS204 / African-American History 1865 to Present
3 Credits **/ 3.0 Periods for Lecture**
The multifaceted history and cultural heritage of African-American communities since the Civil War, presented within the broader context of U.S. history. This course explores the social, economic, political, and cultural history of African-American communities, including the historical and cultural impacts of slavery and discrimination, and the collective struggle for freedom, equality, and self-determination throughout U.S. history. Prerequisites: None.
Crosslisted: AFR204
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

HIS209 / The Chicana/o in 20th and 21st Century America
3 Credits **/ 3.0 Periods for Lecture**
Analysis of the 20th and 21st century Chicano experience. Interdisciplinary approach to contemporary Mexican American history and culture in the borderlands. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

Honors (HON)

HON201 / Leadership Development: Historical and Contemporary Perspectives
3 Credits **/ 3.0 Periods for Lecture**
Interdisciplinary study of leadership focusing on development of leadership skills. Prerequisites: Admission to the college honors program or permission of Instructor.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Humanities (HUM)

HUM108 / Contemporary Humanities
3 Credits **/ 3.0 Periods for Lecture**
An exploration of human expression in contemporary arts and sciences. Prerequisites: None.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM201 / Humanities: Universal Themes
3 Credits **/ 3.0 Periods for Lecture**
Study of worldviews in a variety of historical and contemporary world cultures, including analysis of origin and creation myths, artistic expression, spirituality, and the natural environment. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM205 / Introduction to Cinema
3 Credits **/ 3.0 Periods for Lecture**
Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.
Crosslisted: THF205
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM209 / Women and Films
3 Credits **/ 3.0 Periods for Lecture**
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.
Crosslisted: WST209
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM213 / Hispanic Film
3 Credits **/ 3.0 Periods for Lecture**
Analysis of Hispanic film as art form and as social commentary. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM245 / Introduction to Holocaust Studies
3 Credits **/ 3.0 Periods for Lecture**
Introduction to essential information about the Holocaust. Provides theological, social and political background to establish contexts of anti-Semitism, especially in 19th and 20th centuries, with particular attention to National Socialist ideologies. Ghetto and camp life, including resistance, are explored. Emphasis is on texts of the Holocaust, including historical documents, participant testimonies, fiction, creative non-fiction, and poetry, much of which involves theological and moral debate. Includes analysis of supplementary visual material and some performing arts. Prerequisites: None. CRE101 or equivalent as indicated by appropriate reading placement recommended but not required.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Composition, Creative Writing, and Literature

HUM250 / Ideas and Values in the Humanities: Early Civilizations to the Renaissance
3 Credits **/ 3.0 Periods for Lecture**
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the early civilizations to the Renaissance, including Western and non-Western cultures. Prerequisites: A grade of C or better in ENG101.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

HUM251 / Ideas and Values in the Humanities: Renaissance to the Contemporary World
3 Credits **/ 3.0 Periods for Lecture**
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the Renaissance to modern period, including Western and non-Western cultures. Prerequisites: A grade of C or better in ENG101.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

Information Studies (IFS)

IFS110 / Critical Research for College Success
1 Credit **/ 1.0 Periods for Lecture**
Access, evaluate, and incorporate sources appropriately into academic projects. Prerequisites: None. Course Notes: IFS110 may be repeated for a total of four (4) credit hours.
Division: Languages, Humanities & Information Studies

IFS150 / Social Media, Society, and Ourselves
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the role of social media in historical, social, cultural, and political contexts. Examine social media experience through the lens of creator and consumer. Analysis of the impact of social media on information and communication, including its influence on mental health, relationships, and identity formation. Prerequisites: None.
Division: Languages, Humanities & Information Studies

IFS201 / Information in a Post-Truth World
3 Credits **/ 3.0 Periods for Lecture**
Develop a critical approach to using information as both a consumer and creator. Explore the impact of culture and worldview on how information is created, shared, understood, and used. Utilize analysis, evaluation, interpretation, and synthesis through substantial writing and/or speaking tasks. Prerequisites: A grade of C or better in ENG101 or ENG107.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

IFS210 / Digital Information and Access in a Global Society
3 Credits **/ 3.0 Periods for Lecture**
An investigation into digital information access in a global environment. Explores the evolving cultures and socioeconomic factors related to the digital flow of information. Examines emerging technologies to produce and distribute information ethically within a global society. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

IFS213 / Hacking and Open Source Culture
3 Credits **/ 3.0 Periods for Lecture**
Focus on the multi-dimensions of hacking and open source culture, including rule-breaking, innovation, and creative use of programming/technology. Social, economic, cultural, and political implications of hacking and technology, in historical and contemporary contexts will be addressed. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Languages, Humanities & Information Studies

Information Technology Security (ITS)

ITS110 / Information Security Fundamentals
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental concepts of information technology security. Topics include authentication methods, access control, cryptography, Public Key Infrastructure (PKI), network attack and defense methods, hardening of operating systems and network devices, securing remote access and wireless technologies and securing infrastructures and topologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and Microsoft (MS) Windows and Linux Administration. Prerequisites: A grade of C or better in CIS126DL, or CIS126RH, or permission of Program Director. Corequisites: BPC270 or MST150++.
Division: Business and Computing Studies

ITS240 / Ethical Hacking and Network Defense
3 Credits **/ 4.0 Periods for Lecture & Lab**
Preparation for the EC-Council Certified Ethical Hacking examination. In-depth exploration of how to effectively protect computer networks from risks ranging from malicious infiltration to cyber-warfare. Includes examination of ethical hacking, relevant tools and methodologies, and its importance to network security. Resources to identify new computer network vulnerabilities and counter security strategies will be discussed as well as an overview of relevant computer crime laws and penalties. Prerequisites: A grade of C or better in ITS110, or CNT205, or CIS270, or permission of Instructor.
Division: Business and Computing Studies

ITS291 / Computer Forensics Foundations
4 Credits **/ 5.0 Periods for Lecture & Lab**
Development of foundational computer forensic skills. Introduction to preserving, identifying, extracting, interpreting, and documenting computer data as part of a forensically sound analysis. Examination of the physical and logical structure of hard drives. Study of the logical structure of Windows-based file systems and common applications. Introduction to the logical structure of Unix/Linux-based file systems and common applications of commercial forensic tools. Prerequisites: A grade of C or better in BPC170 and ITS110 or permission of Instructor.
Division: Business and Computing Studies

ITS292 / Advanced Computer Forensics
4 Credits **/ 5.0 Periods for Lecture & Lab**
Advanced computer forensics analysis techniques with commercial tools. Introduction to open-source forensic tools. Emphasis on data recovery from complex applications and media types. Study of the logical structure of Unix/Linux-based file systems. Advanced search techniques. Analysis of unallocated space, compound files, and NTFS artifacts. Prerequisites: A grade of C or better in ITS291 or permission of Instructor.
Division: Business and Computing Studies

International Business (IBS)

IBS101 / Introduction to International Business
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Business and Computing Studies

Journalism (JRN)

JRN201 / News Writing
3 Credits **/ 3.0 Periods for Lecture**
Writing and producing news for the media. Associated Press (AP) editing style, writing skills, and organizational structure for news. Prerequisites: A grade of C or better in ENG101 or ENG107.
SUN SUN# JRN 2201
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Composition, Creative Writing, and Literature

Law Enforcement Training (LET)

LET173 / Introduction to Leadership in Public Safety
2 Credits **/ 2.0 Periods for Lecture**
Introduction to leadership in the field of public safety. Covers stages of adult human development, generational differences, and characteristics of effective leaders. Also includes characteristics of leaders, including values, ethics, attitudes, behavior, and response techniques in addition to identification of personal strengths and determination of a personal leadership style. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

LET174 / Organizational Culture and Leadership
3 Credits **/ 3.0 Periods for Lecture**
Examination of organizational structure and its application to the field of public safety. Covers characteristics and principles of effective organizations, systems and process management, and phases of process building in addition to characteristics of a process enterprise. Also includes levels of leadership and characteristics, ethical considerations, restrictions, and best behaviors of each. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LET173.
Division: Health Science, Public Service, & Counseling

LET175 / Public Safety Leadership Capstone
1 Credit **/ 3.0 Periods for Laboratory**
Completion and professional presentation of a capstone project such as a formal staff study or leadership portfolio in the field of public safety, including steps for problem identification, research, and analyzing and reporting of information. Prerequisites: A grade of C or better in LET174.
Division: Health Science, Public Service, & Counseling

Management (MGT)

MGT101 / Techniques of Supervision
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Business and Computing Studies

MGT126 / Customer Service Skills and Strategies
3 Credits **/ 3.0 Periods for Lecture & Lab**
Explores strategies to help improve job performance and develop a service-oriented philosophy. Uses practical training concepts and techniques to demonstrate how superior customer service can lead to competitive advantage and profitability in business. Focuses on both internal and external customers, interactions among people, processes, and systems within the organization and how to integrate these areas into a total quality delivery program. Prerequisites: None.
Division: Business and Computing Studies

MGT175 / Business Organization and Management
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Business and Computing Studies

MGT180 / Retail Management
3 Credits **/ 3.0 Periods for Lecture**
The role of management in retailing and retail performance. Challenges and processes of retail management across various institutions. Prerequisites: None.
Division: Business and Computing Studies

MGT229 / Management and Leadership I
3 Credits **/ 3.0 Periods for Lecture**
Covers management concepts and applications for business, industry, and government organizations. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Business and Computing Studies

MGT251 / Human Relations in Business
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Business and Computing Studies

MGT253 / Owning and Operating a Small Business
3 Credits **/ 3.0 Periods for Lecture**
Starting, organizing, and operating a small business, including location, finance management processes, advertisement and promotion, credit, inventory control and ethics. Prerequisites: None.
Division: Business and Computing Studies

MGT286 / Human Resource Employment Management
3 Credits **/ 3.0 Periods for Lecture**
Techniques and methodology for coordinating and monitoring effective employment selection practices. Includes description of employment functions, staffing analysis, employment recruitment and advertising, applicant screening, interviewing and reference checking, employee selection and placement within a human resources division. Prerequisites: A grade of C or better in MGT276 or permission of Department or Division.
Division: Business and Computing Studies

Marketing (MKT)

MKT101 / Introduction to Public Relations
3 Credits **/ 3.0 Periods for Lecture**
Emphasizes public relations techniques used both within and outside the business organization, including operation of a PR counseling firm. Prerequisites: None.
Division: Business and Computing Studies

MKT110 / Marketing and Social Networking
3 Credits **/ 3.0 Periods for Lecture**
Theory and practice in the use of social media in marketing. Topics may include a history of social media, preparation for social marketing, the power of collective influence, and how to engage with social media. Reviews social mediums, social networks, platforms and other marketing tools used to create a social media campaigns. Prerequisites: None.
Division: Business and Computing Studies

MKT111 / Applied Marketing and Social Networking
3 Credits **/ 4.0 Periods for Lecture & Lab**
Examination of the strategic use of digital and social media marketing platforms and tools for global communication and networking, including analysis of various digital and social media platforms and tools for developing brands, creating professional networks and creating engaging content. Hands-on use of social media platforms and tools to conduct research, develop strategies for creating, integrating, and evaluating social media marketing campaigns, and development of metrics to measure effectiveness. Prerequisites: A grade of C or better in MKT110.
Division: Business and Computing Studies

MKT112 / Retail Customer Service
1 Credit **/ 1.0 Periods for Lecture**
Introduction to the field of retail sales. Emphasis on customer service and sales techniques. Prerequisites: None.
Division: Business and Computing Studies

MKT114 / Retail Inventory Control
1 Credit **/ 1.0 Periods for Lecture**
Retail inventory control procedures. Emphasis on the role of the professional sales associate within a retail company and in the handling of merchandise. Prerequisites: A grade of C or better in MKT112.
Division: Business and Computing Studies

MKT267 / Principles of Sales
3 Credits **/ 3.0 Periods for Lecture**
Analyzes and applies the steps and techniques used in personal selling. Highlights the role of the professional sales representative and his/her functions as they relate to the company's mission and customer expectations. Prerequisites: None.
Division: Business and Computing Studies

MKT271 / Principles of Marketing
3 Credits **/ 3.0 Periods for Lecture**
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.
Division: Business and Computing Studies

MKT280AB / Marketing Internship
2 Credits **/ 0.0 Periods for Lecture & Lab**
Marketing work experience in a business or industry. Prerequisites: Permission of Department or Division.
Division: Business and Computing Studies

Mass Communications (MCO)

MCO120 / Media and Society
3 Credits **/ 3.0 Periods for Lecture**
Study of historical and contemporary roles of media and its pervasiveness in society as it relates to culture, politics and education. Prerequisites: Eligibility for ENG101 or ENG107 or permission of Instructor.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Communication & Fine Arts

Mathematics (MAT)

MAT051 / Number Sense I
1 Credit **/ 1.0 Periods for Lecture**
Primary emphasis on conceptual understanding of whole numbers, integers and mathematical operations. Use systems of measure and Pythagorean Theorem. Focus on mathematical language, connections, patterns and reasoning. Prerequisites: None.
Division: Mathematics

MAT052 / Number Sense II
1 Credit **/ 1.0 Periods for Lecture**
Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction addition and subtraction. Solving problems involving decimals and fractions. Focus on mathematical language, connections, patterns and reasoning. Prerequisites: A grade of C or better in MAT051, or an appropriate district placement.
Division: Mathematics

MAT053 / Multiplicative and Proportional Reasoning
1 Credit **/ 1.0 Periods for Lecture**
Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction multiplication and division. Solving problems involving decimals, fractions, and percentages. Focus on additive and multiplicative reasoning including proportionality and similarity. Prerequisites: A grade of C or better in each of the following courses: (MAT051 and MAT052), or an appropriate district placement.
Division: Mathematics

MAT055 / Algebraic Structures
1 Credit **/ 1.0 Periods for Lecture**
Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Prerequisites: None.
Division: Mathematics

MAT056 / Functions I
1 Credit **/ 1.0 Periods for Lecture**
Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Prerequisites: A grade of C or better in MAT055, or an appropriate district placement.
Division: Mathematics

MAT057 / Functions II
1 Credit **/ 1.0 Periods for Lecture**
Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change. Prerequisites: A grade of C or better in MAT055 and MAT056, or an appropriate district placement.
Division: Mathematics

MAT112 / Mathematical Concepts and Applications
3 Credits **/ 3.0 Periods for Lecture**
A problem solving approach to mathematics as it applies to real-life situations. Development, use and communication of mathematical concepts and applications that relate to measurement, percentage, practical geometry, statistics, finance, and unit conversions. Prerequisites: None.
Division: Mathematics

MAT121 / Intermediate Algebra
4 Credits **/ 4.0 Periods for Lecture**
Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions. Prerequisites: A grade of C or better in each of the following courses: (MAT055, MAT056, and MAT057), OR a grade of C or better in MAT09+, OR an appropriate district placement. Course Notes: Students may receive credit for only one of the following: MAT120, OR MAT121, OR MAT122 OR MAT126.
Division: Mathematics

MAT141 / College Mathematics
4 Credits **/ 4.0 Periods for Lecture**
Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics. Prerequisites: An appropriate District placement, or a grade of C or better in (MAT052, MAT053, and MAT055), or (MAT055, MAT056, and MAT057), or MAT09+, or MAT103, or MAT114, or MAT115, or MAT12+. Course Notes: MAT141 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146.
SUN SUN# MAT 1142
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT142 / College Mathematics
3 Credits **/ 3.0 Periods for Lecture**
Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics. Prerequisites: An appropriate District placement, or a grade of C or better in (MAT052, MAT053, and MAT055), or (MAT055, MAT056, and MAT057), or MAT09+, or MAT103, or MAT114, or MAT115, or MAT12+. Course Notes: MAT142 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146.
SUN SUN# MAT 1142
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT151 / College Algebra/Functions
4 Credits **/ 4.0 Periods for Lecture**
Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair. Course Notes: Students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156.
SUN SUN# MAT 1151
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT152 / College Algebra/Functions
3 Credits **/ 3.0 Periods for Lecture**
Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems. Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair. Course Notes: Students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156.
SUN SUN# MAT 1151
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT187 / Precalculus
5 Credits **/ 5.0 Periods for Lecture**
Topics in algebra and trigonometry in preparation for calculus. Prerequisites: A grade of C or better in MAT15+, or an appropriate district placement. Course Notes: Students may receive credit for only one of the following: MAT182, or MAT187, or MAT188.
SUN SUN# MAT 1187
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT188 / Precalculus
4 Credits **/ 4.0 Periods for Lecture**
Topics in algebra and trigonometry in preparation for calculus. Prerequisites: A grade of C or better in MAT15+, or an appropriate district placement. Course Notes: Students may receive credit for only one of the following: MAT182 OR MAT187 OR MAT188.
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT206 / Elements of Statistics
3 Credits **/ 3.0 Periods for Lecture**
Basic concepts and applications of statistics, including data description, estimation and hypothesis tests. Prerequisites: A grade of C or better in MAT14+, or MAT15+, or MAT187, or MAT188, or equivalent, or an appropriate District placement, or permission of Department/Division Chair.
SUN SUN# MAT 1160
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Mathematics

MAT213 / Brief Calculus
4 Credits **/ 4.0 Periods for Lecture**
Introduction to the theory, techniques, and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences. Prerequisites: A grade of C or better in MAT15+, or MAT187, or MAT188, or an appropriate District placement. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.
SUN SUN# MAT 2212
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT217 / Mathematical Analysis for Business
3 Credits **/ 3.0 Periods for Lecture**
An introduction to the mathematics required for the study of business. Includes multivariable optimization, Lagrange multipliers, linear programming, linear algebra, probability, random variables, discrete and continuous distributions. Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221. Course Notes: Students may receive credit for only one of the following: MAT217 or MAT218.
Division: Mathematics

MAT220 / Calculus with Analytic Geometry I
5 Credits **/ 5.0 Periods for Lecture**
Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: A grade of C or better in MAT187, or MAT188, or an appropriate District placement. Course Notes: Students may receive credit for only one of the following: MAT220 OR MAT221.
SUN SUN# MAT 2220
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT221 / Calculus with Analytic Geometry I
4 Credits **/ 4.0 Periods for Lecture**
Limits, continuity, differential and integral calculus of functions of one variable. Prerequisites: A grade of C or better in MAT187, or MAT188, or an appropriate District placement. Course Notes: Students may receive credit for only one of the following: MAT220, or MAT221.
SUN SUN# MAT 2220
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT225 / Elementary Linear Algebra
3 Credits **/ 3.0 Periods for Lecture**
Introduction to matrices, systems of linear equations, determinants, vector spaces, linear transformations and eigenvalues. Emphasizes the development of computational skills. Prerequisites: A grade of C or better in MAT212 or MAT213 or MAT220 or MAT221, or equivalent.
Division: Mathematics

MAT227 / Discrete Mathematical Structures
3 Credits **/ 3.0 Periods for Lecture**
Course emphasizes discrete mathematics connections to computer science by exposing students to foundational concepts of set theory, logic, counting, induction, proof techniques, graph theory, and algorithms. Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221, or permission of Department/Division Chair.
SUN SUN# MAT 2227
Division: Mathematics

MAT230 / Calculus with Analytic Geometry II
5 Credits **/ 5.0 Periods for Lecture**
Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series. Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent. Course Notes: Students may receive credit for only one of the following: MAT230 or MAT231.
SUN SUN# MAT 2230
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT231 / Calculus with Analytic Geometry II
4 Credits **/ 4.0 Periods for Lecture**
Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series. Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent. Course Notes: Student may receive credit for only one of the following: MAT230 or MAT231.
SUN SUN# MAT 2230
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT240 / Calculus with Analytic Geometry III
5 Credits **/ 5.0 Periods for Lecture**
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 Notes: Student may receive credit for only one of the following: MAT240 or MAT241.
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT241 / Calculus with Analytic Geometry III
4 Credits **/ 4.0 Periods for Lecture**
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 Notes: Student may receive credit for only one of the following: MAT240 or MAT241.
SUN SUN# MAT 2241
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT256 / Investigating Quantity: Number, Operations and Numeration Systems
4 Credits **/ 4.0 Periods for Lecture**
Explore number, numeration systems and operations on numbers. Techniques of problem solving with an emphasis on exploring a variety of strategies. Use a variety of visualization techniques to develop a conceptual understanding of these topics. Prerequisites: A grade of C or better in (MAT15+ or higher), or (MAT12+ and MAT14+), or [MAT14+ and (MAT114 or MAT115)], or (MAT14+ and an appropriate District placement into MAT150, MAT151, or MAT152), or permission of Department/ Division Chair. Course Notes: MAT256 is designed to meet requirements for prospective elementary education teachers.
Division: Mathematics

MAT257 / Investigating Geometry, Probability and Statistics
4 Credits **/ 4.0 Periods for Lecture**
Explores geometry, measurement, probability and statistics. Uses visualization, technologies, problem solving, reasoning and proof to develop a conceptual understanding of these topics. Prerequisites: A grade of C or better in MAT256 or permission of Department/Division Chair. Course Notes: MAT257 is designed to meet the requirements for prospective elementary education teachers.
Division: Mathematics

MAT276 / Modern Differential Equations
4 Credits **/ 4.0 Periods for Lecture**
Introduces differential equations, theoretical and practical solution techniques with applications. Problem-solving using technology. Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department/Division Chair.
Fulfills: Mathematics [MA]; Mathematics [MA]-in combo
Division: Mathematics

MAT280 / Foundational Statistics for Engineers
3 Credits **/ 5.0 Periods for Lecture & Lab**
Fundamentals of probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, regression analysis, analysis of variance, and design of experiments. Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent.
Crosslisted: ECE280
Division: Mathematics

MAT282AA / Service-Learning Experience in Mathematics
1 Credit **/ 0.0 Periods for Laboratory**
Unpaid Service-Learning (SL) experience, completed with approved community partner. Prerequisites: Permission of Instructor. Course Notes: MAT282AA may be repeated for a total of six (6) credit hours. Standard grading is available according to procedures outlined in catalog.
Division: Mathematics

MAT305 / Mathematics for Machine Learning
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced mathematical concepts essential for understanding and applying techniques in machine learning using Python programming language. Focus on vector-based calculus, probability distributions, continuous optimization, and information theory. Prerequisites: A grade of C or better in (AIM250 and MAT227) or permission of Program Director.
Crosslisted: BAM305
Division: Mathematics

Microsoft Technology (MST)

MST150WT / Installing and Configuring Microsoft Windows 10
3 Credits **/ 4.0 Periods for Lecture & Lab**
In-depth exploration of how to effectively install and configure Windows 10. Includes features of Windows 10, virtualization improvements, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. Designed to prepare students for the Microsoft Windows 10 certification examination. Prerequisites: None. CIS190 or CNT140AB suggested but not required.
Division: Business and Computing Studies

Mortuary Science Program (MSP)

MSP101 / Mortuary Science: Orientation and History
3 Credits **/ 3.0 Periods for Lecture**
Designed to orient prospective students to the roles, functions, and responsibilities of funeral service professionals. Overview of the requirements, governing agencies, and employment outlook in the field. Includes a historical overview of funeral service with emphasis on individuals, events, and forces that have influenced contemporary funeral principles and practices. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

MSP105 / Cremation for Mortuary Science
1 Credit **/ 1.0 Periods for Lecture**
Overview of cremation topics, including proper procedures, legal considerations, services, merchandise, trends, and the history of cremation. Prerequisites: Permission of Instructor. Course Notes: Course is aligned with American Board of Funeral Service Education (ABFSE) standards. Does not meet the requirements for Arizona Department of Health Services crematory operator training.
Division: Health Science, Public Service, & Counseling

MSP201 / Mortuary Science, Sociology, and Religion
3 Credits **/ 3.0 Periods for Lecture**
Survey of basic principles of sociology as they relate to funeral service. Emphasis on family structures, social structures, and social factors. Exploration of cultural and religious funeral customs. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP202 / Embalming
3 Credits **/ 3.0 Periods for Lecture**
Study of the disinfection, temporary preservation and restoration of the deceased human body by physical and chemical means for the specific purpose to delay organic decomposition and apply practices for reverent care of the deceased. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP202LL / Embalming Lab
1 Credit **/ 2.0 Periods for Laboratory**
Field experience involving observation and practice of embalming processes in a laboratory setting. Includes writing case study reports. Study of anatomical considerations for mortuary science students. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP202 and admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP203 / Microbiology for Mortuary Science
3 Credits **/ 3.0 Periods for Lecture**
Survey of basic principles of microbiology. Emphasis on sanitation, disinfection, public health, and embalming practice. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP204 / Chemistry for Mortuary Science
3 Credits **/ 3.0 Periods for Lecture**
Survey of the basic principles of chemistry as they relate to funeral service. Emphasis on the chemical principles and precautions involved in the preservation and disinfection of the deceased human body. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP205 / Funeral Directing I
3 Credits **/ 3.0 Periods for Lecture**
Funeral directing, documentation procedures, and regulatory compliance from time of death to disposition. Includes establishing professional relationships with family members and funeral profession and allied colleague. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP206 / Funeral Directing II
3 Credits **/ 3.0 Periods for Lecture**
Operation of the established funeral home, including principles and product knowledge in the area of funeral service management and merchandising. Prerequisites: A grade of C or better in MSP205.
Division: Health Science, Public Service, & Counseling

MSP207 / Mortuary Science Restorative Art
3 Credits **/ 3.0 Periods for Lecture**
Care and restoration of the deceased human body to create natural form and appearance. Includes anatomical aspects and color theory. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP207LL / Mortuary Science Restorative Art Lab
1 Credit **/ 2.0 Periods for Laboratory**
Care and restoration of the deceased human body to create natural form and appearance. Includes anatomical aspects and color theory. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP207 and admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP208 / Funeral Service Law: Legal, Ethical, and Regulatory Considerations
3 Credits **/ 3.0 Periods for Lecture**
Exploration of funeral service regulation by state and federal government agencies. Includes cemetery code, dispositions, Federal Trade Commission (FTC), licensing, and crematory law. Examination of torts, wills, estates, contract law, liability, and probate considerations for the funeral service practitioner. Includes ethical considerations, rights, duties, and responsibilities for the funeral service practitioner. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP209 / Pathology for Mortuary Science
3 Credits **/ 3.0 Periods for Lecture**
Study of disease processes and their impact on the human body, with emphasis on those conditions which relate to or affect the handling of human remains. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP210 / Psychology and Counseling for Mortuary Science
2 Credits **/ 2.0 Periods for Lecture**
Survey of the basic principles of psychology and counseling, as they relate to funeral service. Includes psychological concepts in the areas of grief, bereavement, mourning, aftercare and crisis intervention with emphasis in the role of the funeral service practitioner. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

MSP211 / Compendium for Mortuary Science
3 Credits **/ 3.0 Periods for Lecture**
Comprehensive review of exam skills and coursework prior to taking the National Board Exam for Mortuary Science. Analysis of skills and tasks an entry-level funeral practitioner would possess. This course develops skills for recall, application, and analysis of content in the domains of funeral service arts and funeral service sciences. Prerequisites: Admission to the Mortuary Science program.
Division: Health Science, Public Service, & Counseling

Music: Commercial/Business (MUC)

MUC109 / Music Business: Content Creation and Copyright
3 Credits **/ 3.0 Periods for Lecture**
Designed to provide an overview of content creation and copyright considerations within the Music Industry. Topics include songwriting and music creation, copyright, publishing and licensing, studio production, media applications of music, business ownership and operations, and emerging technologies. Prerequisites: None.
Division: Communication & Fine Arts

MUC110 / Music Business: Marketing and Monetization
3 Credits **/ 3.0 Periods for Lecture**
Designed to provide an overview of the marketing and monetization of music. Topics include music label operations; contracts; marketing, promotion, and merchandising; agents, managers, and attorneys; concert promotion and touring; and unions and guilds. Prerequisites: None.
Division: Communication & Fine Arts

MUC111 / Digital Audio Workstation I (DAW I)
3 Credits **/ 5.0 Periods for Lecture & Lab**
Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MUC195, or MUC195AA, or FMP105, or permission of Instructor.
Division: Communication & Fine Arts

MUC112 / Digital Audio Workstation II (DAW II)
3 Credits **/ 5.0 Periods for Lecture & Lab**
Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: A grade of C or better in MUC111, and (MUC195 or MUC195AA).
Division: Communication & Fine Arts

MUC140 / Songwriting
3 Credits **/ 3.0 Periods for Lecture**
An introduction to the art and craft of songwriting through the study and analysis of diverse songwriters and musical styles, and creation of original songs. Prerequisites: A grade of C or better in MTC101, or MTC105, or permission of Instructor. Course Notes: MUC140 may be repeated for a total of six (6) credits.
Division: Communication & Fine Arts

MUC180 / Computer Literacy for the Music Business
3 Credits **/ 3.0 Periods for Lecture & Lab**
Basic computer literacy, including business applications used in the Music Industry, with hands-on experience. Prerequisites: A grade of C or better in MUC109, or permission of Instructor or Department or Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Communication & Fine Arts

MUC181 / Popular Music Orchestration and Arranging
3 Credits **/ 3.0 Periods for Lecture**
Basic orchestration and arranging techniques as used in popular music genres including jazz, pop, and rock music for vocal and instrumental music performance ensembles. Idiomatic uses of harmony, melodic rhythm, voicing, tonal color and notation. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: (MTC155 or higher level of MTC music theory course) and MTC180.
Division: Communication & Fine Arts

MUC195 / Studio Music Recording I
3 Credits **/ 5.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

MUC196 / Studio Music Recording II
3 Credits **/ 5.0 Periods for Lecture & Lab**
Emphasis on signal-processing equipment, mixing consoles, and advanced musical recording session procedures, production, and engineering. Includes mix-down and resultant master tape of a musical recording session. Prerequisites: A grade of C or better in MUC195 or MUC195AA.
Division: Communication & Fine Arts

MUC197 / Live Sound Reinforcement I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Basic principles of live sound engineering. Emphasis on signal flow, acoustic, sound reinforcement set-ups and installation, signal processing, microphone selections and placement. Includes setting up sound systems and mixing live music. Prerequisites: None.
Division: Communication & Fine Arts

MUC298AA / Special Projects
1 Credit **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Communication & Fine Arts

Music: History/Literature (MHL)

MHL145 / American Jazz and Popular Music
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Communication & Fine Arts

MHL146 / Survey of Broadway Musicals
3 Credits **/ 3.0 Periods for Lecture**
Survey of Broadway musicals traced from their origins to the present viewed in their cultural, political, and socioeconomic contexts. Emphasis on stylistic periods, composers, lyricists, directors, and choreographers. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

MHL153 / Rock Music and Culture
3 Credits **/ 3.0 Periods for Lecture**
History of Rock music and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Communication & Fine Arts

MHL155 / Survey of American Music
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Communication & Fine Arts

MHL194 / Music and Culture
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the study of multicultural music in its social, cultural, historical and economic contexts. Performance of music using percussion, rhythm, and the human body. Historical and social aspects of global cultures' musical expressions. Prerequisites: A grade of C or better in MTC101 or a higher level MTC course; or Corequisites: MTC105 and MTC106 or permission of Instructor.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

MHL204 / Hip-Hop Music and Culture
3 Credits **/ 3.0 Periods for Lecture**
A history of Hip-Hop's musical and artistic elements and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: A grade of C or better in ENG101 or ENG107, or permission of Instructor.
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]; Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

Music: Performance (MUP)

MUP101AA / Private Instruction: Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AA may be repeated for credit.
Division: Communication & Fine Arts

MUP101AD / Private Instruction: Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AD may be repeated for credit.
Division: Communication & Fine Arts

MUP101AM / Private Instruction: Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AM may be repeated for credit.
Division: Communication & Fine Arts

MUP101AP / Private Instruction: Trumpet
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AP may be repeated for credit.
Division: Communication & Fine Arts

MUP101AS / Private Instruction: French Horn
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AS may be repeated for credit.
Division: Communication & Fine Arts

MUP101AV / Private Instruction: Trombone
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AV may be repeated for credit.
Division: Communication & Fine Arts

MUP101AY / Private Instruction: Euphonium
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101AY may be repeated for credit.
Division: Communication & Fine Arts

MUP101BB / Private Instruction: Tuba
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BB may be repeated for credit.
Division: Communication & Fine Arts

MUP101BE / Private Instruction: Flute
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BE may be repeated for credit.
Division: Communication & Fine Arts

MUP101BH / Private Instruction: Oboe
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BH may be repeated for credit.
Division: Communication & Fine Arts

MUP101BK / Private Instruction: Clarinet
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BK may be repeated for credit.
Division: Communication & Fine Arts

MUP101BN / Private Instruction: Bassoon
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BN may be repeated for credit.
Division: Communication & Fine Arts

MUP101BQ / Private Instruction: Saxophone
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP101BT / Private Instruction: Violin
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BT may be repeated for credit.
Division: Communication & Fine Arts

MUP101BW / Private Instruction: Viola
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BW may be repeated for credit.
Division: Communication & Fine Arts

MUP101BZ / Private Instruction: Violoncello
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP101CC / Private Instruction: Contrabass
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101CC may be repeated for credit.
Division: Communication & Fine Arts

MUP101CF / Private Instruction: Popular Music Bass Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CF may be repeated for credit.
Division: Communication & Fine Arts

MUP101CI / Private Instruction: Percussion
1 Credit **/ 0.6 Periods for Lecture & Lab**
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. Course Notes: MUP101CI may be repeated for credit.
Division: Communication & Fine Arts

MUP101CJ / Private Instruction: Harp
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP101CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP101CK / Private Instruction: Popular Music Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CK may be repeated for credit.
Division: Communication & Fine Arts

MUP101CL / Private Instruction: Popular Music Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CL may be repeated for credit.
Division: Communication & Fine Arts

MUP101CM / Private Instruction: Popular Music Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CM may be repeated for credit.
Division: Communication & Fine Arts

MUP101CN / Private Instruction: Popular Music Drum
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP101CN may be repeated for credit.
Division: Communication & Fine Arts

MUP102AA / Private Instruction: Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AA may be repeated for credit.
Division: Communication & Fine Arts

MUP102AD / Private Instruction: Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AD may be repeated for credit.
Division: Communication & Fine Arts

MUP102AM / Private Instruction: Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AM may be repeated for credit.
Division: Communication & Fine Arts

MUP102AP / Private Instruction: Trumpet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AP may be repeated for credit.
Division: Communication & Fine Arts

MUP102AS / Private Instruction: French Horn
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AS may be repeated for credit.
Division: Communication & Fine Arts

MUP102AV / Private Instruction: Trombone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AV may be repeated for credit.
Division: Communication & Fine Arts

MUP102AY / Private Instruction: Euphonium
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102AY may be repeated for credit.
Division: Communication & Fine Arts

MUP102BB / Private Instruction: Tuba
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BB may be repeated for credit.
Division: Communication & Fine Arts

MUP102BE / Private Instruction: Flute
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BE may be repeated for credit.
Division: Communication & Fine Arts

MUP102BH / Private Instruction: Oboe
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BH may be repeated for credit.
Division: Communication & Fine Arts

MUP102BK / Private Instruction: Clarinet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BK may be repeated for credit.
Division: Communication & Fine Arts

MUP102BN / Private Instruction: Bassoon
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BN may be repeated for credit.
Division: Communication & Fine Arts

MUP102BQ / Private Instruction: Saxophone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP102BT / Private Instruction: Violin
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BT may be repeated for credit.
Division: Communication & Fine Arts

MUP102BW / Private Instruction: Viola
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BW may be repeated for credit.
Division: Communication & Fine Arts

MUP102BZ / Private Instruction: Violoncello
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP102CC / Private Instruction: Contrabass
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102CC may be repeated for credit.
Division: Communication & Fine Arts

MUP102CF / Private Instruction: Popular Music Bass Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CF may be repeated for credit.
Division: Communication & Fine Arts

MUP102CI / Private Instruction: Percussion
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102CI may be repeated for credit.
Division: Communication & Fine Arts

MUP102CJ / Private Instruction: Harp
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: None. Course Notes: MUP102CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP102CK / Private Instruction: Popular Music Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CK may be repeated for credit.
Division: Communication & Fine Arts

MUP102CL / Private Instruction: Popular Music Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CL may be repeated for credit.
Division: Communication & Fine Arts

MUP102CM / Private Instruction: Popular Music Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CM may be repeated for credit.
Division: Communication & Fine Arts

MUP102CN / Private Instruction: Popular Music Drum
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: None. Course Notes: MUP102CN may be repeated for credit.
Division: Communication & Fine Arts

MUP127 / Class Guitar I
1 Credit **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

MUP128 / Class Guitar II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Note-reading range including second position and parts of higher positions. Classical, popular, Latin, and other styles of music. Theory including scales, keys, and chord construction. Technical exercises of both hands. Prerequisites: A grade of C or better in MUP127 or permission of Instructor.
Division: Communication & Fine Arts

MUP131 / Class Piano I
1 Credit **/ 3.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

MUP132 / Class Piano II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading. Prerequisites: A grade of C or better in MUP131 or permission of Instructor.
Division: Communication & Fine Arts

MUP133 / Class Voice I
1 Credit **/ 3.0 Periods for Lecture & Lab**
Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and performances in class of solo vocal literature. Prerequisites: None.
Division: Communication & Fine Arts

MUP134 / Class Voice II
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continuation of Class Voice I including the elements of stage presence and diction. Prerequisites: A grade of C or better in MUP133 or permission of Instructor.
Division: Communication & Fine Arts

MUP150 / Community Chorus
1 Credit **/ 3.0 Periods for Lecture & Lab**
A mixed chorus with emphasis on college/community participation and preparation of a variety of choral literature for public performance. Auditions may be required. Prerequisites: None. Course Notes: MUP150 may be repeated for credit.
Division: Communication & Fine Arts

MUP151AA / Private Instruction: Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP101AA. Course Notes: MUP151AA may be repeated for credit.
Division: Communication & Fine Arts

MUP151AD / Private Instruction: Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP101AD. Course Notes: MUP151AD may be repeated for credit.
Division: Communication & Fine Arts

MUP151AM / Private Instruction: Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP101AM. Course Notes: MUP151AM may be repeated for credit.
Division: Communication & Fine Arts

MUP151BT / Private Instruction: Violin
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP101BT. Course Notes: MUP151BT may be repeated for credit.
Division: Communication & Fine Arts

MUP151CF / Private Instruction: Popular Music Bass Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CF. Course Notes: MUP151CF may be repeated for credit.
Division: Communication & Fine Arts

MUP151CK / Private Instruction: Popular Music Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CK. Course Notes: MUP151CK may be repeated for credit.
Division: Communication & Fine Arts

MUP151CL / Private Instruction: Popular Music Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CL. Course Notes: MUP151CL may be repeated for credit.
Division: Communication & Fine Arts

MUP151CM / Private Instruction: Popular Music Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CM. Course Notes: MUP151CM may be repeated for credit.
Division: Communication & Fine Arts

MUP151CN / Private Instruction: Popular Music Drum
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP101CN. Course Notes: MUP151CN may be repeated for credit.
Division: Communication & Fine Arts

MUP152AA / Private Instruction: Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AA. Course Notes: MUP152AA may be repeated for credit.
Division: Communication & Fine Arts

MUP152AD / Private Instruction: Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AD. Course Notes: MUP152AD may be repeated for credit.
Division: Communication & Fine Arts

MUP152AM / Private Instruction: Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AM. Course Notes: MUP152AM may be repeated for credit.
Division: Communication & Fine Arts

MUP152AP / Private Instruction: Trumpet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AP. Course Notes: MUP152AP may be repeated for credit.
Division: Communication & Fine Arts

MUP152AS / Private Instruction: French Horn
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AS. Course Notes: MUP152AS may be repeated for credit.
Division: Communication & Fine Arts

MUP152AV / Private Instruction: Trombone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102AV. Course Notes: MUP152AV may be repeated for credit.
Division: Communication & Fine Arts

MUP152BB / Private Instruction: Tuba
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BB. Course Notes: MUP152BB may be repeated for credit.
Division: Communication & Fine Arts

MUP152BE / Private Instruction: Flute
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BE. Course Notes: MUP152BE may be repeated for credit.
Division: Communication & Fine Arts

MUP152BH / Private Instruction: Oboe
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BH. Course Notes: MUP152BH may be repeated for credit.
Division: Communication & Fine Arts

MUP152BK / Private Instruction: Clarinet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BK. Course Notes: MUP152BK may be repeated for credit.
Division: Communication & Fine Arts

MUP152BN / Private Instruction: Bassoon
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BN. Course Notes: MUP152BN may be repeated for credit.
Division: Communication & Fine Arts

MUP152BQ / Private Instruction: Saxophone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BQ. Course Notes: MUP152BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP152BT / Private Instruction: Violin
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BT. Course Notes: MUP152BT may be repeated for credit.
Division: Communication & Fine Arts

MUP152BW / Private Instruction: Viola
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BW. Course Notes: MUP152BW may be repeated for credit.
Division: Communication & Fine Arts

MUP152BZ / Private Instruction: Violoncello
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102BZ. Course Notes: MUP152BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP152CC / Private Instruction: Contrabass
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102CC. Course Notes: MUP152CC may be repeated for credit.
Division: Communication & Fine Arts

MUP152CF / Private Instruction: Popular Music Bass Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CF. Course Notes: MUP152CF may be repeated for credit.
Division: Communication & Fine Arts

MUP152CI / Private Instruction: Percussion
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102CI. Course Notes: MUP152CI may be repeated for credit.
Division: Communication & Fine Arts

MUP152CJ / Private Instruction: Harp
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP102CJ. Course Notes: MUP152CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP152CK / Private Instruction: Popular Music Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CK. Course Notes: MUP152CK may be repeated for credit.
Division: Communication & Fine Arts

MUP152CL / Private Instruction: Popular Music Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CL. Course Notes: MUP152CL may be repeated for credit.
Division: Communication & Fine Arts

MUP152CM / Private Instruction: Popular Music Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CM. Course Notes: MUP152CM may be repeated for credit.
Division: Communication & Fine Arts

MUP152CN / Private Instruction: Popular Music Drum
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP102CN. Course Notes: MUP152CN may be repeated for credit.
Division: Communication & Fine Arts

MUP153 / Concert Choir
1 Credit **/ 5.0 Periods for Lecture & Lab**
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.
Division: Communication & Fine Arts

MUP154AA / Jazz Vocal Ensemble
1 Credit **/ 3.0 Periods for Lecture & Lab**
Practical and performing experience in vocal jazz. Includes music from the 1920's through the present. Prerequisites: Auditions required or permission of Instructor. Course Notes: MUP154AA may be repeated for credit.
Division: Communication & Fine Arts

MUP158 / Popular Music Ensemble
1 Credit **/ 2.0 Periods for Lecture & Lab**
Emphasizes instrumental and vocal techniques and the preparation of all styles of rock band literature. Introduces music business. Requires participation in public and private performances throughout the semester. Prerequisites: None. Auditions may be required. Course Notes: MUP158 may be repeated for a total of four (4) credits.
Division: Communication & Fine Arts

MUP159 / Community Orchestra
1 Credit **/ 3.0 Periods for Lecture & Lab**
Emphasis on college/community participation and the preparation of orchestral literature for public performance. Prerequisites: None. Course Notes: MUP159 may be repeated for credit. Auditions may be required.
Division: Communication & Fine Arts

MUP161 / Community Band
1 Credit **/ 3.0 Periods for Lecture & Lab**
Emphasis on college/community participation and the preparation of band literature for public performance. Prerequisites: None. Course Notes: MUP161 may be repeated for credit. Auditions may be required.
Division: Communication & Fine Arts

MUP163 / Jazz Ensemble
1 Credit **/ 3.0 Periods for Lecture & Lab**
Practical and performance experience in various jazz styles. Prerequisites: None. Course Notes: MUP163 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.
Division: Communication & Fine Arts

MUP164 / Jazz Improvisation I
2 Credits **/ 3.0 Periods for Lecture & Lab**
Theoretical and performance skills in many styles of jazz improvisation. Prerequisites: None. Course Notes: MUP164 may be repeated for a total of six (6) credit hours.
Division: Communication & Fine Arts

MUP165 / Jazz Improvisation II
2 Credits **/ 3.0 Periods for Lecture & Lab**
Intermediate theoretical and performance skills in many styles of jazz improvisation. Prerequisites: A grade of C or better in MUP164 or permission of Instructor. Course Notes: MUP165 may be repeated for a total of six (6) credit hours.
Division: Communication & Fine Arts

MUP171 / Opera Workshop
2 Credits **/ 5.0 Periods for Lecture & Lab**
A workshop in the study and performance of operatic literature. Prerequisites: None. Course Notes: MUP171 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.
Division: Communication & Fine Arts

MUP181 / Chamber Music Ensembles
1 Credit **/ 2.0 Periods for Lecture & Lab**
Practical and performance experience in instrumental, vocal, and mixed ensembles. Prerequisites: None. Course Notes: MUP181 may be repeated for credit.
Division: Communication & Fine Arts

MUP182 / Chamber Singers
1 Credit **/ 3.0 Periods for Lecture & Lab**
Practical and performance experience in various styles of vocal music. Prerequisites: None. Course Notes: MUP182 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.
Division: Communication & Fine Arts

MUP183 / Jazz Combo
1 Credit **/ 2.0 Periods for Lecture & Lab**
Jazz Combo participation provides an opportunity for students to develop improvisational skills in a variety of styles from historical and contemporary jazz practice, while offering a creative outlet for composers and arrangers. Prerequisites: None. Course Notes: MUP183 may be repeated for credit.
Division: Communication & Fine Arts

MUP190 / Percussion Ensemble
1 Credit **/ 3.0 Periods for Lecture & Lab**
Practical and performance experience in various percussion styles. Percussion literature from a diverse number of world musical traditions. Western European art music, various African traditions, Indian music, Japanese music, Indonesian music, Mexican, Central, and South American music, and percussion compositions from the American Experimental Tradition rehearsed and performed. Concerts presented throughout the semester. Percussion techniques are studied and refined as they relate to the literature performed. Emphasis placed on reading and listening skills, increased aesthetic discrimination. Informed performance practice and skills on all percussion instruments and traditions. Prerequisites: None. Course Notes: MUP190 may be repeated for credit.
Division: Communication & Fine Arts

MUP201AA / Private Instruction: Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, harp and percussion. Prerequisites: A grade of C or better in MUP151AA. Course Notes: MUP201AA may be repeated for credit.
Division: Communication & Fine Arts

MUP201AD / Private Instruction: Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP151AD. Course Notes: MUP201AD may be repeated for credit.
Division: Communication & Fine Arts

MUP201AM / Private Instruction: Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP151AM. Course Notes: MUP201AM may be repeated for credit.
Division: Communication & Fine Arts

MUP201CF / Private Instruction: Popular Music Bass Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CF. Course Notes: MUP201CF may be repeated for credit.
Division: Communication & Fine Arts

MUP201CK / Private Instruction: Popular Music Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CK. Course Notes: MUP201CK may be repeated for credit.
Division: Communication & Fine Arts

MUP201CL / Private Instruction: Popular Music Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CL. Course Notes: MUP201CL may be repeated for credit.
Division: Communication & Fine Arts

MUP201CM / Private Instruction: Popular Music Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CM. Course Notes: MUP201CM may be repeated for credit.
Division: Communication & Fine Arts

MUP201CN / Private Instruction: Popular Music Drum
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP151CN. Course Notes: MUP201CN may be repeated for credit.
Division: Communication & Fine Arts

MUP202AA / Private Instruction: Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AA. Course Notes: MUP202AA may be repeated for credit.
Division: Communication & Fine Arts

MUP202AD / Private Instruction: Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AD. Course Notes: MUP202AD may be repeated for credit.
Division: Communication & Fine Arts

MUP202AM / Private Instruction: Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AM. Course Notes: MUP202AM may be repeated for credit.
Division: Communication & Fine Arts

MUP202AP / Private Instruction: Trumpet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AP. Course Notes: MUP202AP may be repeated for credit.
Division: Communication & Fine Arts

MUP202AS / Private Instruction: French Horn
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AS. Course Notes: MUP202AS may be repeated for credit.
Division: Communication & Fine Arts

MUP202AV / Private Instruction: Trombone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AV. Course Notes: MUP202AV may be repeated for credit.
Division: Communication & Fine Arts

MUP202AY / Private Instruction: Euphonium
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152AY. Course Notes: MUP202AY may be repeated for credit.
Division: Communication & Fine Arts

MUP202BB / Private Instruction: Tuba
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BB. Course Notes: MUP202BB may be repeated for credit.
Division: Communication & Fine Arts

MUP202BE / Private Instruction: Flute
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BE. Course Notes: MUP202BE may be repeated for credit.
Division: Communication & Fine Arts

MUP202BH / Private Instruction: Oboe
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BH. Course Notes: MUP202BH may be repeated for credit.
Division: Communication & Fine Arts

MUP202BK / Private Instruction: Clarinet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BK. Course Notes: MUP202BK may be repeated for credit.
Division: Communication & Fine Arts

MUP202BN / Private Instruction: Bassoon
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BN. Course Notes: MUP202BN may be repeated for credit.
Division: Communication & Fine Arts

MUP202BQ / Private Instruction: Saxophone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BQ. Course Notes: MUP202BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP202BT / Private Instruction: Violin
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BT. Course Notes: MUP202BT may be repeated for credit.
Division: Communication & Fine Arts

MUP202BW / Private Instruction: Viola
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BW. Course Notes: MUP202BW may be repeated for credit.
Division: Communication & Fine Arts

MUP202BZ / Private Instruction: Violoncello
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152BZ. Course Notes: MUP202BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP202CC / Private Instruction: Contrabass
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152CC. Course Notes: MUP202CC may be repeated for credit.
Division: Communication & Fine Arts

MUP202CF / Private Instruction: Popular Music Bass Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CF. Course Notes: MUP202CF may be repeated for credit.
Division: Communication & Fine Arts

MUP202CI / Private Instruction: Percussion
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152CI. Course Notes: MUP202CI may be repeated for credit.
Division: Communication & Fine Arts

MUP202CJ / Private Instruction: Harp
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP152CJ. Course Notes: MUP202CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP202CK / Private Instruction: Popular Music Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CK. Course Notes: MUP202CK may be repeated for credit.
Division: Communication & Fine Arts

MUP202CL / Private Instruction: Popular Music Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CL. Course Notes: MUP202CL may be repeated for credit.
Division: Communication & Fine Arts

MUP202CM / Private Instruction: Popular Music Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CM. Course Notes: MUP202CM may be repeated for credit.
Division: Communication & Fine Arts

MUP202CN / Private Instruction: Popular Music Drum
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP152CN. Course Notes: MUP202CN may be repeated for credit.
Division: Communication & Fine Arts

MUP209 / Elements of Conducting
2 Credits **/ 2.0 Periods for Lecture**
Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles. Prerequisites: None.
Division: Communication & Fine Arts

MUP217 / Music Theatre: Broadway Solos
1 Credit **/ 3.0 Periods for Lecture & Lab**
Study and in-class performance of scenes and solos from Broadway musical literature. Prerequisites: None.
Division: Communication & Fine Arts

MUP227 / Class Guitar III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Additional fingerboard positions. Ensemble techniques and performance. Prerequisites: A grade of C or better in MUP128 or permission of Instructor.
Division: Communication & Fine Arts

MUP228 / Class Guitar IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques. Prerequisites: A grade of C or better in MUP227 or permission of Instructor. Course Notes: MUP228 may be repeated for credit.
Division: Communication & Fine Arts

MUP231 / Class Piano III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants. Prerequisites: A grade of C or better in MUP132 or permission of Instructor.
Division: Communication & Fine Arts

MUP232 / Class Piano IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature. Prerequisites: A grade of C or better in MUP231 or permission of Instructor.
Division: Communication & Fine Arts

MUP233 / Class Voice III
1 Credit **/ 3.0 Periods for Lecture & Lab**
Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications. Prerequisites: A grade of C or better in MUP134.
Division: Communication & Fine Arts

MUP234 / Class Voice IV
1 Credit **/ 3.0 Periods for Lecture & Lab**
Emphasis on the preparation of solo vocal literature for the purpose of evaluation and the integration of the music with the drama of the music. Prerequisites: A grade of C or better in MUP233 or permission of Instructor. Course Notes: MUP234 may be repeated for credit.
Division: Communication & Fine Arts

MUP250AA / Survey Of Diction For Singers (English)
1 Credit **/ 2.0 Periods for Lecture & Lab**
Introduction to the use of phonetics in the study of English song literature. Prerequisites: None.
Division: Communication & Fine Arts

MUP250AB / Survey Of Diction For Singers (Italian/Latin)
1 Credit **/ 2.0 Periods for Lecture & Lab**
Introduction to the use of phonetics in the study of Italian/Latin song literature. Prerequisites: None.
Division: Communication & Fine Arts

MUP251AA / Private Instruction: Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP201AA. Course Notes: MUP251AA may be repeated for credit.
Division: Communication & Fine Arts

MUP251AD / Private Instruction: Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP201AD. Course Notes: MUP251AD may be repeated for credit.
Division: Communication & Fine Arts

MUP251AM / Private Instruction: Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP201AM. Course Notes: MUP251AM may be repeated for credit.
Division: Communication & Fine Arts

MUP251CF / Private Instruction: Popular Music Bass Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CF. Course Notes: MUP251CF may be repeated for credit.
Division: Communication & Fine Arts

MUP251CK / Private Instruction: Popular Music Voice
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CK. Course Notes: MUP251CK may be repeated for credit.
Division: Communication & Fine Arts

MUP251CL / Private Instruction: Popular Music Piano
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CL. Course Notes: MUP251CL may be repeated for credit.
Division: Communication & Fine Arts

MUP251CM / Private Instruction: Popular Music Guitar
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CM. Course Notes: MUP251CM may be repeated for credit.
Division: Communication & Fine Arts

MUP251CN / Private Instruction: Popular Music Drum
1 Credit **/ 0.6 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP201CN. Course Notes: MUP251CN may be repeated for credit.
Division: Communication & Fine Arts

MUP252AA / Private Instruction: Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AA. Course Notes: MUP252AA may be repeated for credit.
Division: Communication & Fine Arts

MUP252AD / Private Instruction: Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AD. Course Notes: MUP252AD may be repeated for credit.
Division: Communication & Fine Arts

MUP252AM / Private Instruction: Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AM. Course Notes: MUP252AM may be repeated for credit.
Division: Communication & Fine Arts

MUP252AP / Private Instruction: Trumpet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AP. Course Notes: MUP252AP may be repeated for credit.
Division: Communication & Fine Arts

MUP252AS / Private Instruction: French Horn
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AS. Course Notes: MUP252AS may be repeated for credit.
Division: Communication & Fine Arts

MUP252AV / Private Instruction: Trombone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AV. Course Notes: MUP252AV may be repeated for credit.
Division: Communication & Fine Arts

MUP252AY / Private Instruction: Euphonium
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202AY. Course Notes: MUP252AY may be repeated for credit.
Division: Communication & Fine Arts

MUP252BH / Private Instruction: Oboe
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BH. Course Notes: MUP252BH may be repeated for credit.
Division: Communication & Fine Arts

MUP252BK / Private Instruction: Clarinet
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BK. Course Notes: MUP252BK may be repeated for credit.
Division: Communication & Fine Arts

MUP252BQ / Private Instruction: Saxophone
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BQ. Course Notes: MUP252BQ may be repeated for credit.
Division: Communication & Fine Arts

MUP252BT / Private Instruction: Violin
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BT. Course Notes: MUP252BT may be repeated for credit.
Division: Communication & Fine Arts

MUP252BW / Private Instruction: Viola
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BW. Course Notes: MUP252BW may be repeated for credit.
Division: Communication & Fine Arts

MUP252BZ / Private Instruction: Violoncello
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202BZ. Course Notes: MUP252BZ may be repeated for credit.
Division: Communication & Fine Arts

MUP252CC / Private Instruction: Contrabass
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202CC. Course Notes: MUP252CC may be repeated for credit.
Division: Communication & Fine Arts

MUP252CF / Private Instruction: Popular Music Bass Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CF. Course Notes: MUP252CF may be repeated for credit.
Division: Communication & Fine Arts

MUP252CI / Private Instruction: Percussion
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202CI. Course Notes: MUP252CI may be repeated for credit.
Division: Communication & Fine Arts

MUP252CJ / Private Instruction: Harp
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. Prerequisites: A grade of C or better in MUP202CJ. Course Notes: MUP252CJ may be repeated for credit.
Division: Communication & Fine Arts

MUP252CK / Private Instruction: Popular Music Voice
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CK. Course Notes: MUP252CK may be repeated for credit.
Division: Communication & Fine Arts

MUP252CL / Private Instruction: Popular Music Piano
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CL. Course Notes: MUP252CL may be repeated for credit.
Division: Communication & Fine Arts

MUP252CM / Private Instruction: Popular Music Guitar
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CM. Course Notes: MUP252CM may be repeated for credit.
Division: Communication & Fine Arts

MUP252CN / Private Instruction: Popular Music Drum
2 Credits **/ 1.2 Periods for Lecture & Lab**
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music. Prerequisites: A grade of C or better in MUP202CN. Course Notes: MUP252CN may be repeated for credit.
Division: Communication & Fine Arts

MUP270 / Musical Theatre Workshop
2 Credits **/ 5.0 Periods for Lecture & Lab**
Workshop in the study and performance of Musical Theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: None. Course Notes: MUP/THO270 may be repeated for credit.
Crosslisted: THO270
Division: Communication & Fine Arts

MUP270AA / Musical Theatre Workshop
1 Credit **/ 3.0 Periods for Laboratory**
Workshop in the study and performance of musical theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: None. Course Notes: MUP/THO270AA may be repeated for a total of two (2) credits.
Crosslisted: THO270AA
Division: Communication & Fine Arts

MUP273 / Musical Theatre Production
1 Credit **/ 5.0 Periods for Laboratory**
Principles and techniques for musical theatre production performance. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: By audition.
Crosslisted: THP273
Division: Communication & Fine Arts

MUP298AA / Special Projects
1 Credit **/ 0.0 Periods for Laboratory**
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.
Division: Communication & Fine Arts

Music: Theory/Composition (MTC)

MTC101 / Introduction to Music Theory
3 Credits **/ 3.0 Periods for Lecture**
Designed to develop written and aural skills necessary for advanced study of music theory and skills. Recommended for music majors. Prerequisites: None.
Division: Communication & Fine Arts

MTC105 / Music Theory I
3 Credits **/ 3.0 Periods for Lecture**
The chronological study of music theory including: harmony, melody, texture, structure and timbre through analysis, original compositions and basic exercises to demonstrate musical concepts. Prerequisites: A grade of C or better in MTC101 or permission of instructor. Corequisites: MTC106.
Division: Communication & Fine Arts

MTC106 / Aural Perception I
1 Credit **/ 2.0 Periods for Lecture & Lab**
The development of listening and performing skills through dictation, sight-singing and keyboard harmony. Prerequisites: None. Corequisites: MTC105.
Division: Communication & Fine Arts

MTC155 / Music Theory II
3 Credits **/ 3.0 Periods for Lecture**
A continuation of Music Theory I with emphasis on harmony and part-writing procedures. Prerequisites: A grade of C or better in MTC105. Corequisites: MTC156.
Division: Communication & Fine Arts

MTC156 / Aural Perception II
1 Credit **/ 2.0 Periods for Lecture & Lab**
A continuation of Aural Perception I, including harmonic practices. Prerequisites: A grade of C or better in MTC106. Corequisites: MTC155.
Division: Communication & Fine Arts

MTC180 / Computer Literacy for Musicians
3 Credits **/ 4.0 Periods for Lecture & Lab**
Instruction in basic computer literacy, including generic applications and music-specific programs with hands-on experience. Ability to read music notation required. Prerequisites: A grade of C or better in MTC101, or MTC105, or Corequisites: MTC105, or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Communication & Fine Arts

MTC203 / Jazz Composition
3 Credits **/ 3.0 Periods for Lecture & Lab**
Composition and analysis of standard song forms as well as other standard compositional practices and forms idiomatic to jazz. Prerequisites: A grade of C or better in MTC155, or MUP165, or permission of Instructor.
Division: Communication & Fine Arts

MTC240 / Composition
3 Credits **/ 0.6 Periods for Lecture & Lab**
Introduction to the basics of music composition, stressing techniques and procedures for developing original ideas. Prerequisites: A grade of C or better in (MTC105 and MTC106 or equivalent) and permission of Instructor. Course Notes: MTC240 may be repeated for a total of twelve (12) credit hours.
Division: Communication & Fine Arts

MTC255 / Music Theory IV
3 Credits **/ 3.0 Periods for Lecture**
A continuation of Music Theory III, including 20th century theories and techniques. Prerequisites: A grade of C or better in MTC205. Corequisites: MTC256.
SUN SUN# MUS 2223
Division: Communication & Fine Arts

MTC256 / Aural Perception IV
1 Credit **/ 2.0 Periods for Lecture & Lab**
A continuation of Aural Perception III, including extended chords. Prerequisites: A grade of C or better in MTC206. Corequisites: MTC255.
SUN SUN# MUS 2223
Division: Communication & Fine Arts

Nursing Science: Basic (NUR)

NUR104AB / Structured Nursing Review
1 Credit **/ 1.0 Periods for Lecture**
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. Corequisites: Concurrent enrollment in the Nursing program or permission of Department Chair. Course Notes: Course offered as Credit (P) No credit (Z) basis. NUR104AB may be repeated for a total of eight (8) credits.
Division: Nursing and Health Sciences

NUR152 / Nursing Theory and Science I
9 Credits **/ 16.88 Periods for Laboratory, 4.0 Periods for Lecture**
Introduction of Nurse of the Future competencies as a foundational framework for development of the professional nurse. Basic care concepts, the nursing process, and clinical reasoning are utilized to meet the needs of adult and older adult patients. Prerequisites: Admission into the Nursing Program.
Division: Nursing and Health Sciences

NUR172 / Nursing Theory and Science II
9 Credits **/ 11.81 Periods for Laboratory, 5.5 Periods for Lecture**
Utilization of Nurse of the Future competencies and clinical judgment measures to develop knowledge, skills, and attitudes to provide safe, quality patient care across the wellness-illness continuum in selected medical-surgical and mental health patients. Prerequisites: A grade of C or better in (BIO202 and NUR152) or permission of Nursing Department Chair.
Division: Nursing and Health Sciences

NUR252 / Nursing Theory and Science III
9 Credits **/ 11.81 Periods for Laboratory, 5.5 Periods for Lecture**
Application of critical thinking strategies and clinical judgment measures related to holistic care of the newborn and childbearing patients. Integration of concepts related to holistic care of adults and older adult patients with selected acute and chronic alterations in health. Integration of professional nursing standards in role development. Utilization of previous knowledge of physical, biologic, psycho-social sciences, and the cultural, spiritual aspects of nursing care. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care. Prerequisites: A grade of C or better in [(CRE101 or appropriate district placement) and NUR172 and PSY101] or permission of Nursing Department Chair.
Division: Nursing and Health Sciences

NUR283 / Nursing Theory and Science IV
9 Credits **/ 11.81 Periods for Laboratory, 5.5 Periods for Lecture**
Applies Nurse of the Future competencies and clinical judgment measures to practice and manage care for the child/family unit and adults requiring complex care throughout the wellness/illness continuum, and prepare for transition from student to professional nurse. Prerequisites: A grade of C or better in (BIO205 and NUR252) or permission of Nursing Department Chair.
Division: Nursing and Health Sciences

Philosophy (PHI)

PHI101 / Introduction to Philosophy
3 Credits **/ 3.0 Periods for Lecture**
General consideration of human nature and the nature of the universe. Knowledge, perception, freedom and determinism, and the existence of God. Prerequisites: None.
SUN SUN# PHI 1101
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

PHI103 / Introduction to Logic
3 Credits **/ 3.0 Periods for Lecture**
Comprehensive introduction to logical reasoning. Exploration of informal logic, including common logical fallacies, delving into symbolic logic to analyze and construct valid arguments using formal methods such as truth tables, truth trees, or proofs. Emphasis on developing critical thinking skills essential for evaluating arguments in a variety of contexts. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
SUN SUN# PHI 1103
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Languages, Humanities & Information Studies

PHI104 / World Philosophy
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

PHI105 / Introduction to Ethics
3 Credits **/ 3.0 Periods for Lecture**
A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories. Prerequisites: None.
SUN SUN# PHI 1105
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

PHI216 / Environmental Ethics
3 Credits **/ 3.0 Periods for Lecture**
Philosophical consideration of diverse theories and perspectives on the environment, and application of these theories to global moral issues such as animal rights, preservation of wilderness and species, population, world hunger and poverty, and air and water pollution. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

PHI218 / Philosophy of Sexuality
3 Credits **/ 3.0 Periods for Lecture**
Philosophical examination of sexuality in human life. Historical and critical survey of philosophical and theological views from Greeks, Christianity, and Kant. Includes examinations of gender identity, sexual orientation, monogamy, polyamory, autoeroticism, (bondage and discipline, dominance and submission, sadism and masochism) (BDSM), and sex and technology. Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor. Course Notes: Course may contain adult content. All students under 18 years old are required to have a signed parental consent form on file, which is on the back of the "Students Under The Age of 18" Enrollment Form.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Languages, Humanities & Information Studies

Physical Education (PED)

PED101BB / Basketball
1 Credit **/ 2.0 Periods for Lecture & Lab**
Basic skills and game strategy of basketball. Class emphasis on competition and drills. Prerequisites: None. Course Notes: PED101BB may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101BS / Body Sculpting
1 Credit **/ 2.0 Periods for Lecture & Lab**
Stretch and strengthen. Emphasizes increasing fitness, muscle tone, and body flexibility. Great for reducing stress. Prerequisites: None. Course Notes: PED101BS may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101FL / Fitness For Life
1 Credit **/ 2.0 Periods for Lecture & Lab**
Learn the basics of designing and implementing a personalized fitness program to meet your needs in the areas of Cardiovascular Fitness, Weight Control, Muscular Strength and Flexibility. Prerequisites: None. Course Notes: PED101FL may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101HK / Hiking
1 Credit **/ 2.0 Periods for Lecture & Lab**
Develop safe and effective hiking skills. Essentials and requirements for safe hiking; proper hiking clothing and attire; impact of hiking on the environment. Prerequisites: None. Course Notes: PED101HK may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101SR / Stretch and Relaxation
1 Credit **/ 2.0 Periods for Lecture & Lab**
A mat-based stretching class with guided meditation. Stretching increases flexibility and relieves stress, promoting an overall sense of well being. Prerequisites: None. Course Notes: PED101SR may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101ST / Strength Training
1 Credit **/ 2.0 Periods for Lecture & Lab**
Introduction to techniques of basic weight training, concentrating on incorporating an exercise regimen for increased strength. Prerequisites: None. Course Notes: PED101ST may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101YO / Yoga
1 Credit **/ 2.0 Periods for Lecture & Lab**
Promotion of overall health by strengthening muscles and stimulating glands and organs. Basic postures, breathing and relaxation techniques. Prerequisites: None. Course Notes: PED101YO may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED101YR / Restorative Yoga
1 Credit **/ 2.0 Periods for Lecture & Lab**
Gentle form of Yoga poses utilizing props to create fully supported postures; focuses on relaxation and involves non-rigorous physical activity, providing rest and recovery and promoting the restoration of tranquility; suitable for all levels. Prerequisites: None. Course Notes: PED101YR may be repeated for credit.
Division: Health Science, Public Service, & Counseling

PED115 / Lifetime Fitness
2 Credits **/ 4.0 Periods for Lecture & Lab**
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 Notes: PED115 may be repeated for a total of eight (8) credit hours.
Division: Health Science, Public Service, & Counseling

Physical Geography (GPH)

GPH113 / Physical Geography: Atmosphere, Lithosphere, Water, and Hazards
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Earth's physical processes and impacts on human environments via the atmosphere, biosphere, lithosphere and hydrosphere. Topics and practical experiences include severe weather, climate change, biomes / ecosystems, landform processes; mountain building and erosion by rivers, glaciers, waves, wind, and using various topographic mapping data. Prerequisites: None.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

GPH210 / Society and Environment
3 Credits **/ 3.0 Periods for Lecture**
Principles of physical geography relating to environmental problems pertinent to contemporary society. Pollution, maladjusted land use, resource exploitation. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Physical Sciences and Engineering

GPH212 / Introduction to Meteorology I
3 Credits **/ 3.0 Periods for Lecture**
Atmospheric processes and elements. General and local circulation, heat exchange and atmospheric moisture. Prerequisites: None. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GPH214.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

GPH213 / Climate and Weather
3 Credits **/ 3.0 Periods for Lecture**
Study of atmospheric phenomena over periods of time measured in months, years or longer. Includes average weather conditions, infrequent and unusual types of weather, and the influence of weather on the cultural and human landscape. Prerequisites: None. Course Notes: General Education Designation: Natural Sciences (General) - [SG] in combination with: GPH215
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Physical Sciences and Engineering

GPH214 / Introduction to Meteorology Laboratory I
1 Credit **/ 3.0 Periods for Laboratory**
Explores meteorological operations, including temperatures, precipitation, weather systems, and weather forecasting. Prerequisites: None. Corequisites: GPH212. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GPH212.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

GPH215 / Climate and Weather Laboratory
1 Credit **/ 3.0 Periods for Laboratory**
A mathematical, statistical, and spatial analysis of climatological phenomena. Prerequisites: None. Corequisites: GPH213. Course Notes: General Education Designation: Natural Sciences (General) - [SG] in combination with: GPH213.
Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Physical Sciences and Engineering

Physics (PHY)

PHY101 / Introduction to Physics
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
A survey of physics emphasizing applications of physics to modern life. Prerequisites: A grade of C or better in MAT090, or higher level mathematics course, or eligibility for MAT120 or higher as indicated by appropriate placement. Course Notes: Students may receive credit for only one of the following: PHY101 or PHY101AA.
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY111 / General Physics I
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Includes motion, energy, and properties of matter. Prerequisites: A grade of C or better in MAT182 or MAT187 or MAT188 or MAT220 or MAT221 or eligibility for MAT220 as indicated by appropriate placement or one year high school Trigonometry with a grade of C or better or permission of Department or 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.
SUN SUN# PHY 1111
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY112 / General Physics II
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Includes electricity, electromagnetism, and modern physics. Prerequisites: A grade of C or better in PHY111.
SUN SUN# PHY 1112
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY121 / University Physics I: Mechanics
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Kinematics, Newton's laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound. Prerequisites: A grade of C or better in MAT220, or MAT221, or permission of Department or Division. One year of high school physics suggested but not required.
SUN SUN# PHY 1121
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY131 / University Physics II: Electricity and Magnetism
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department or Division and PHY121. Corequisites: MAT241 or permission of Department or Division.
SUN SUN# PHY 1131
Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo
Division: Physical Sciences and Engineering

PHY241 / University Physics III: Thermodynamics, Optics, and Wave Phenomena
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Heat, entropy, and laws of thermodynamics; wave propagation; geometrical and physical optics; introduction to special relativity. Prerequisites: A grade of C or better in PHY131 or permission of Instructor.
Division: Physical Sciences and Engineering

Political Science (POS)

POS110 / American National Government
3 Credits **/ 3.0 Periods for Lecture**
Study of the historical backgrounds, governing principles, and institutions of the national government of the United States. Prerequisites: None.
SUN SUN# POS 1110
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

POS120 / International Relations
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# POS 1120
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

POS140 / Comparative Government
3 Credits **/ 3.0 Periods for Lecture**
Overview and evaluation of the sub-field of comparative politics. Covers various national governments from around the world: their structure, system, method of governance. Examines methods of assessing these governments. Prerequisites: None.
SUN SUN# POS 2204
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

POS210 / Political Ideologies
3 Credits **/ 3.0 Periods for Lecture**
Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

POS221 / Arizona Constitution
1 Credit **/ 1.0 Periods for Lecture**
Examination of the Constitution of the State of Arizona. Prerequisites: None. Course Notes: Course content is equivalent to partial competencies from POS220. Students may receive credit for only one of the following: POS220 OR (POS221 and POS222).
Division: Social & Behavioral Sciences

POS223 / Civil Rights and Liberties
3 Credits **/ 3.0 Periods for Lecture**
The historic background and current status of major civil rights and civil liberties issues in the United States. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Psychology (PSY)

PSY101 / Introduction to Psychology
3 Credits **/ 3.0 Periods for Lecture**
Overview of the methods, concepts, and applications of psychological science. Includes an introduction to key domains of psychology: Biological, Cognitive, Developmental, Social and Personality, and Mental and Physical Health. Prerequisites: None.
SUN SUN# PSY 1101
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY123 / Psychology of Parenting
3 Credits **/ 3.0 Periods for Lecture**
The study of major psychological theories that pertain to parenting. Includes current research findings to foster effective relationships within modern families. Explores evidence-based practices for parenting individuals from birth through emerging adulthood. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY132 / Psychology and Culture
3 Credits **/ 3.0 Periods for Lecture**
Presents current knowledge about human diversity in behavior and culture using examples from a variety of contexts within western and global societies. Highlights topics in cross-cultural psychology, such as intergroup relations, diverse cognitive styles, ethnocentrism, gender, personality, emotion, language, communication, work and health. The role of enculturation throughout the lifespan will be explored to increase awareness of how behavioral and cognitive principles affect interactions in a multicultural world. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY156 / Understanding Death and Dying
3 Credits **/ 3.0 Periods for Lecture**
Designed to give the student an understanding of the research and theories of death, dying, bereavement process, and aspects of end-of-life care and decision-making. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY230 / Introduction to Statistics
3 Credits **/ 3.0 Periods for Lecture**
An introduction to basic concepts in descriptive and inferential statistics, with emphasis upon application to psychology. Consideration given to the methods of data collection, sampling techniques, graphing of data, and the statistical evaluation of data collected through experimentation. Required of psychology majors. Prerequisites: A grade of C or better in (PSY101 and eligibility for MAT14+ or higher as indicated by appropriate district mathematics placement) or permission of Instructor. Course Notes: Students may receive credit for only one (1) of the following courses: PSY230 or PSY230WL.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Social & Behavioral Sciences

PSY235 / Psychology of Gender
3 Credits **/ 3.0 Periods for Lecture**
To assess historical and psychological perspectives on women and men and to evaluate contemporary viewpoints regarding the psychology of women and men. Prerequisites: A grade of C or better in PSY101, or permission of Instructor.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY240 / Developmental Psychology
3 Credits **/ 3.0 Periods for Lecture**
Human development from conception through death. Includes biological, physical, cognitive, emotional, and sociocultural development across various ages. Prerequisites: A grade of C or better in PSY101, or permission of Instructor. Course Notes: Recommended for students majoring in nursing, education, behavioral, pre-med, and psychology.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY250 / Social Psychology
3 Credits **/ 3.0 Periods for Lecture**
The scientific study of how people's thoughts, feelings, and behaviors are influenced by other people and situations. Includes how we think about ourselves and others, persuasion and influence, sexual and romantic attraction, friendship and helping others, aggression and prejudice. Prerequisites: A grade of C or better in PSY101, or permission of Instructor.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY262 / Positive Psychology: The Science of Well-Being
3 Credits **/ 3.0 Periods for Lecture**
Overview and application of psychological principles based on strengths and resilience of human beings as opposed to dysfunction and symptoms of mental disorders. Topics include happiness, relationships, resilience, optimism, well-being, and brain research explaining positive emotions. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY266 / Psychological Disorders
3 Credits **/ 3.0 Periods for Lecture**
Distinguishes between healthy psychological functioning and psychological disorders. Includes topics in psychopathology such as problems with anxiety and depression, eating disorders, substance-use, schizophrenia, sexuality, and personality. Also covers causes and treatments of psychological disorders. Prerequisites: A grade of C or better in PSY101, or permission of Instructor.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

PSY290AB / Research Methods
4 Credits **/ 3.0 Periods for Laboratory, 3.0 Periods for Lecture**
Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Critical review of literature and methods in representative areas of psychological research. A grade of C or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 or PSY230WL or permission of Instructor.
SUN SUN# PSY 2290
Fulfills: Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]; Natural Sciences General [SG]; Natural Sciences General [SG]-in combo
Division: Social & Behavioral Sciences

Reading (RDG)

RDG100 / Successful College Reading
3 Credits **/ 3.0 Periods for Lecture**
Emphasis on reading study strategies for any introductory class in any subject area. Introduction to Learning Management System (LMS), how to successfully read course textbooks and assessments, how to navigate information technology and development of academic vocabulary. Prerequisites: A grade of C or better in ALT100, or ESL202, or appropriate reading placement, or permission of Instructor. Corequisites: Any 100-level course in another content area, or permission of Instructor. Course Notes: RDG100 satisfies RDG091 requirement. RDG100 may be repeated for a total of twelve (12) credit hours.
Division: Composition, Creative Writing, and Literature

RDG100LL / Disciplinary Literacy Lab
1 Credit **/ 3.0 Periods for Laboratory**
Supplemental instruction for college-level discipline courses. Focus on developing effective reading processes to address a range of literacy needs including reading, writing, digital, numerical, financial and informational literacies. Prerequisites: None. Corequisites: Any 100-level course in another content area or permission of Instructor.
Division: Composition, Creative Writing, and Literature

Recreation (REC)

REC120 / Leisure and the Quality of Life
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Health Science, Public Service, & Counseling

Religious Studies (REL)

REL100 / World Religions
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# REL 1101
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

REL270 / Introduction to Christianity
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

Small Business Management (SBS)

SBS200 / Small Business Operations
2 Credits **/ 2.0 Periods for Lecture**
In-depth analysis of and individual plan development for the "day-to-day" problems encountered in the operation of a small business. Includes the development of an individual business operations plan including finance, purchasing, production scheduling, maintenance, shipping/receiving,personnel management and insurance/risk management requirements. Investigation of daily problems related to inventory control and business expansion. Prerequisites: None.
Division: Business and Computing Studies

SBS213 / Hiring and Managing Employees
1 Credit **/ 1.0 Periods for Lecture**
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.
Division: Business and Computing Studies

SBS214 / Small Business Customer Relations
1 Credit **/ 1.0 Periods for Lecture**
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.
Division: Business and Computing Studies

SBS220 / Internet Marketing for Small Business
2 Credits **/ 2.0 Periods for Lecture**
Focuses on "e-Commerce"-doing business on the Internet and planning a web site. Topics include: how the Internet can help growth and success of business; examples of successful marketing on the Internet; availability of Internet services; necessary hardware and software for marketing on the Internet; determining products/services appropriate for Internet marketing; budget constraints and ongoing operations of the Internet site. Prerequisites: None.
Division: Business and Computing Studies

SBS230 / Financial and Tax Management for Small Business
2 Credits **/ 2.0 Periods for Lecture**
An overview of accounting and recordkeeping for the successful management of a small business. Develops an understanding of the accounting cycle and preparation of financial statements. Includes section on tax consequences and the choice of legal entity choice based on taxation. Prerequisites: None.
Division: Business and Computing Studies

Society and Business (SBU)

SBU200 / Society and Business
3 Credits **/ 3.0 Periods for Lecture**
The study and scientific inquiry of issues and demands placed on business enterprise by owners, customers, government, employees and society. Included are social, ethical and public issues and analysis of the social impact of business responses. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Business and Computing Studies

Sociology (SOC)

SOC101 / Introduction to Sociology
3 Credits **/ 3.0 Periods for Lecture**
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.
SUN SUN# SOC 1101
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC157 / Sociology of Families and Relationships
3 Credits **/ 3.0 Periods for Lecture**
Systemic analysis of socio-cultural and historical origins of modern families in the U.S. and their importance, major challenges and changing trends. Explores being single, dating and attraction, love, cohabitation and marriage, family planning and parenthood, conflict and crisis within the family, and divorce. Prerequisites: None.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC212 / Gender and Society
3 Credits **/ 3.0 Periods for Lecture**
A sociological exploration of the way culture shapes and defines gender in contemporary U.S. society. Major emphasis on gender roles, gender stereotypes, power and the relationship between gender and other intersecting social identities such as race, ethnicity, class, and sexual identity. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC241 / Race and Ethnic Relations
3 Credits **/ 3.0 Periods for Lecture**
Examines how the social construction of race shapes social interaction and social institutions. Explores the consequences of power, privilege and oppression among major ethnic and racial groups in the United States. Prerequisites: None.
SUN SUN# SOC 2215
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC251 / Social Problems
3 Credits **/ 3.0 Periods for Lecture**
An overview of the sociological study of social problems and inequalities confronting the United States. Emphasis is placed on what is known about social problems, recent trends, causes and consequences, individual and societal responses, and how social policies might solve social problems. Issues to be examined may include: health care, education, family, economy, environment, drug and alcohol abuse, crime and violence, among others. Prerequisites: None.
SUN SUN# SOC 2250
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

SOC266 / Sociology Through Film
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Social & Behavioral Sciences

Spanish (SPA)

SPA101 / Elementary Spanish I
4 Credits **/ 4.0 Periods for Lecture**
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.
SUN SUN# SPA 1101
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Languages, Humanities & Information Studies

SPA102 / Elementary Spanish II
4 Credits **/ 4.0 Periods for Lecture**
Continued study of grammar and vocabulary of the Spanish language and study of the Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills. Prerequisites: A grade of C or better in SPA101 or permission of Department or Division. Completion of prerequisites within the last three years is required.
SUN SUN# SPA 1102
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Languages, Humanities & Information Studies

SPA111 / Fundamentals of Spanish
4 Credits **/ 4.0 Periods for Lecture**
Accelerated study of elementary Spanish for students with previous Spanish coursework. Includes basic Spanish grammar, pronunciation, vocabulary and the study of the Spanish-speaking cultures. Emphasis on speaking, listening, reading, and writing skills. Prerequisites: A grade of C or better in SPA101, or SPA115, or two years of high school Spanish, or permission of Department or Division. Completion of prerequisites within the last three years is required.
Division: Languages, Humanities & Information Studies

SPA115 / Beginning Spanish Conversation I
3 Credits **/ 3.0 Periods for Lecture**
Basic pronunciation, vocabulary, sentence structures, and cultural awareness, necessary to develop speaking and listening skills in Spanish. Prerequisites: None.
Division: Languages, Humanities & Information Studies

SPA117 / Health Care Spanish I
3 Credits **/ 3.0 Periods for Lecture**
Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings. Prerequisites: None.
Division: Languages, Humanities & Information Studies

SPA201 / Intermediate Spanish I
4 Credits **/ 4.0 Periods for Lecture**
Continued study of essential Spanish grammar and Spanish-speaking cultures. Continued practice and development of reading, writing, and speaking skills in Spanish. Emphasis on fluency and accuracy in spoken Spanish. Prerequisites: A grade of C or better in SPA102, or SPA111, or permission of Department or Division. Completion of prerequisites within the last three years is required.
SUN SUN# SPA 2201
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Languages, Humanities & Information Studies

SPA202 / Intermediate Spanish II
4 Credits **/ 4.0 Periods for Lecture**
Review of grammar, continued development of Spanish language skills with continued study of the Spanish-speaking cultures. Prerequisites: A grade of "C" or better in SPA201, or permission of Department or Division. Completion of prerequisites within the last three years is required.
SUN SUN# SPA 2202
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Languages, Humanities & Information Studies

Spanish Humanities (SPH)

SPH245 / Hispanic Heritage in the Southwest
3 Credits **/ 3.0 Periods for Lecture**
A survey of Hispanic heritage in the Southwest. Cultural and social institutions and their contribution to the development of the region and its heritage. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

Storytelling (STO)

STO292 / The Art of Storytelling
3 Credits **/ 3.0 Periods for Lecture**
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None.
Crosslisted: HUM292, EDU292
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

Sustainability/Natural Sciences (SUS)

SUS100 / Introduction to Sustainability
3 Credits **/ 3.0 Periods for Lecture**
Introduction to the basic concepts of sustainability. Includes challenges of land, ocean, and resource management as well as the built environment. Also covers connections between global, local and personal sustainability challenges and responses at each level. Prerequisites: None.
Fulfills: Global Awareness [G]; Global Awareness [G]-in combo
Division: Biological Sciences

SUS110 / Sustainable World
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Biological Sciences

SUS231 / Careers in Sustainability
1 Credit **/ 1.0 Periods for Lecture**
Introduction to career pathways in sustainability. Exploration of career paths, development of interview skills, and resume creation covered in addition to articulation of personal interests and values related to careers in sustainability. Also includes an introduction to networking skills and job search assistance. Prerequisites: None.
Division: Biological Sciences

SUS232 / Professional Skills in Sustainability Practice
3 Credits **/ 3.0 Periods for Lecture**
Introduction to professional skills in sustainability through interpersonal competence. Emphasis on teamwork, project management, stakeholder engagement, communication, and continuous learning. Prerequisites: A grade of C or better in SUS110, SSH111, and (ENG101 or ENG107).
Division: Biological Sciences

Sustainability/Social Sciences and Humanities (SSH)

SSH111 / Sustainable Cities
3 Credits **/ 3.0 Periods for Lecture**
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.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Global Awareness [G]; Global Awareness [G]-in combo
Division: Biological Sciences

Theatre (THE)

THE111 / Introduction to Theatre
3 Credits **/ 3.0 Periods for Lecture**
A survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism. Prerequisites: None.
SUN SUN# THE 1100
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THE220 / Modern Drama
3 Credits **/ 3.0 Periods for Lecture**
Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright's structure and style. Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.
SUN SUN# THE 2220
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Literacy & Critical Inquiry [L]-in combo; Literacy and Critical Inquiry [L]
Division: Communication & Fine Arts

Theatre and Film (THF)

THF205 / Introduction to Cinema
3 Credits **/ 3.0 Periods for Lecture**
Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.
Crosslisted: HUM205
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THF206 / Introduction to Television Arts
3 Credits **/ 3.0 Periods for Lecture**
History and development of electronic media and its impact on popular arts. Prerequisites: None.
Crosslisted: HUM206
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THF209 / Acting for the Camera
3 Credits **/ 4.0 Periods for Lecture & Lab**
Special technical aspects of acting before a camera. Prerequisites: A grade of C or better in THP112 or permission of Instructor.
Division: Communication & Fine Arts

THF210 / Contemporary Cinema
3 Credits **/ 3.0 Periods for Lecture**
A study of contemporary films, directors and critics with emphasis on evaluating film as an art form. Prerequisites: None.
Crosslisted: HUM210
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THF219 / Advanced Acting for the Camera
3 Credits **/ 4.0 Periods for Lecture & Lab**
Focuses on special technical aspects of advanced acting before a camera. Prerequisites: A grade of C or better in THF209 or permission of Instructor.
Division: Communication & Fine Arts

Theatre Occupational (THO)

THO115 / Makeup for Stage and Screen
3 Credits **/ 4.0 Periods for Lecture & Lab**
Purposes, materials, and techniques of makeup for stage and screen. Prerequisites: None.
Division: Communication & Fine Arts

THO203 / Technical Theatre Production
3 Credits **/ 6.0 Periods for Laboratory**
Designed to give college credit to the technical production crews of college theatre productions. Prerequisites: None. Course Notes: THO203 may be repeated for up to a maximum of nine (9) credits.
Division: Communication & Fine Arts

THO215 / Advanced Makeup Techniques for Stage and Screen
3 Credits **/ 4.0 Periods for Lecture & Lab**
Advanced character analysis and makeup design for stage and screen. Technical application of makeup for stage and screen. Prerequisites: A grade of C or better in THO115.
Division: Communication & Fine Arts

Theatre Performance/Production (THP)

THP112 / Acting I
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization. Prerequisites: None.
Division: Communication & Fine Arts

THP131 / Stage Movement
3 Credits **/ 4.0 Periods for Lecture & Lab**
Movement skills for the actor to develop a flexible, expressive physical instrument. Includes pantomime, physical isolation, and awareness exercises. Prerequisites: None.
Division: Communication & Fine Arts

THP201AA / Theatre Production I
1 Credit **/ 2.0 Periods for Laboratory**
Designed to give college credit to the cast and technical production crews of college theatre productions. Prerequisites: None. Course Notes: THP201AA may be repeated for a total of four (4) credit hours.
Division: Communication & Fine Arts

THP201AB / Theatre Production II
2 Credits **/ 4.0 Periods for Laboratory**
Designed to give college credit to the cast and technical production crews of college theatre productions. Prerequisites: None. Course Notes: THP201AB may be repeated for a total of four (4) credit hours.
Division: Communication & Fine Arts

THP212 / Acting II
3 Credits **/ 4.0 Periods for Lecture & Lab**
Fundamental techniques of acting through script analysis, rehearsal, and performance. Prerequisites: A grade of C or better in THP112 or permission of Department or Division.
Division: Communication & Fine Arts

THP213 / Introduction to Technical Theatre
4 Credits **/ 2.0 Periods for Laboratory, 4.0 Periods for Lecture**
Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties. Prerequisites: None.
Division: Communication & Fine Arts

THP217 / Introduction to Design Scenography
3 Credits **/ 4.0 Periods for Lecture & Lab**
The role of the theatre designer in creating scenic, lighting, costume, sound, and multimedia effects for stage productions. Elements of the design process and communication of dramatic themes and visions to the audience. Prerequisites: None.
Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Communication & Fine Arts

THP273 / Musical Theatre Production
1 Credit **/ 5.0 Periods for Laboratory**
Principles and techniques for musical theatre production performance. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: By audition.
Crosslisted: MUP273
Division: Communication & Fine Arts

Unmanned Aircraft Systems (UAS)

UAS100 / sUAS Batteries and Electronics
5 Credits **/ 5.0 Periods for Lecture**
Small Unmanned Aircraft Systems (sUAS) basic electronics and circuits, communications, information display systems, transmitter and receiver fundamentals, flight controller installation and tuning, lithium polymer battery basics, radio telemetry, basic electrical troubleshooting and repair techniques. Prerequisites: Appropriate placement test score in Reading, Writing and Math, or [eligibility in ENG101, (RDG100 or RDG100LL), MAT120, MAT121, and MAT122].
Division: Aviation and Applied Technology

UAS107 / Uncrewed Aircraft Systems Operator Certification
3 Credits **/ 3.0 Periods for Laboratory, 1.0 Periods for Lecture**
This course offers in-depth preparation for students to take the Federal Aviation Administration (FAA) Remote Pilot Aeronautical Knowledge test. Topics include regulations, air space, charts, airport operations, weather, loading, flight performance, radio communications, aeronautical decision making, small Uncrewed Aircraft Systems (sUAS) flight operations, and maintenance. In the associated flight lab, students receive a sUAS and acquire practical skills and experience including maintenance and pre-flight inspections, flight skills, and emergency procedures while operating a sUAS through various uncrewed flight scenarios. Prerequisites: None. Course Notes: Students must complete the required sUAS flight lessons to satisfactorily complete the course.
Division: Aviation and Applied Technology

UAS206 / sUAS Instrument and Autopilot Flight Lab
2 Credits **/ 2.0 Periods for Laboratory**
Students will use their advanced skills to manipulate a ground control station in the practical operation of Small Unmanned Aircraft Systems (sUAS) in a controlled, but realistic environment. Prerequisites: A grade of C or better in UAS101 and UAS107. Corequisites: UAS205.
Division: Aviation and Applied Technology

UAS207 / sUAS Dynamics and Design
5 Credits **/ 5.0 Periods for Lecture**
Design, configuration, and concepts of Small Unmanned Aircraft Systems (sUAS). Platform types including multi-rotors, single rotor, and fixed wing aircraft. Prerequisites: A grade of C or better in UAS205 and UAS206. Corequisites: UAS208.
Division: Aviation and Applied Technology

Wellness Education

WED106 / Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)
0.5 Credits **/ 0.5 Periods for Lecture**
Basic overview of Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED). Covers choking procedures and the importance, guidelines, and techniques for performing CPR and utilizing an AED. Prerequisites: None.
Division: Health Science, Public Service, & Counseling

Women's Studies (WST)

WST100 / Introduction to Women's and Gender Studies
3 Credits **/ 3.0 Periods for Lecture**
Introduction to critical issues in women's studies. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo
Division: Languages, Humanities & Information Studies

WST105 / Women of Color in the Americas
3 Credits **/ 3.0 Periods for Lecture**
Interdisciplinary, multi-perspective, and comparative study of the experiences of Women of Color in the Americas and their impact on the arts, literature, social structures and political movements. Examines how the intersection of race, class, gender, and sexuality has shaped their lived experiences and legacy. Prerequisites: None.
Division: Languages, Humanities & Information Studies

WST120 / Gender, Class, and Race
3 Credits **/ 3.0 Periods for Lecture**
A feminist discussion of gender, class and race as basic and central social categories that determine how we see ourselves and others and how they circumscribe our opportunities and privileges in American society. Prerequisites: None.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]
Division: Languages, Humanities & Information Studies

WST160 / Women and the Early American Experience
3 Credits **/ 3.0 Periods for Lecture**
Introduction to American women's history, from the colonial period to suffrage in 1920, based on a feminist perspective. Prerequisites: None.
Fulfills: Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Languages, Humanities & Information Studies

WST200 / Essential Feminist Writing
3 Credits **/ 3.0 Periods for Lecture**
Literary tracing of feminism from 18th century to present. Explores major issues related to women in the 20th century. Prerequisites: A grade of C or better in ENG101 or permission of Instructor.
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Historical Awareness [H]; Historical Awareness [H]-in combo
Division: Languages, Humanities & Information Studies

WST209 / Women and Films
3 Credits **/ 3.0 Periods for Lecture**
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.
Crosslisted: HUM209
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

WST284 / 19th Century Women Writers
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: ENH284
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

WST285 / Contemporary Women Writers
3 Credits **/ 3.0 Periods for Lecture**
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.
Crosslisted: ENH285
Fulfills: Cultural Diversity in the US [C]-in combo; Cultural Diversity in the United States [C]; Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo
Division: Languages, Humanities & Information Studies

WST295 / Women's Studies Seminar
1 Credit **/ 1.0 Periods for Lecture**
Special topics in women, gender, and sexuality studies with an emphasis on current issues not covered in other Women's Studies (WST) courses. Prerequisites: None. Course Notes: WST295 may be repeated for a total of six (6) credit hours.
Division: Languages, Humanities & Information Studies

Writing Across Curriculum (WAC)

WAC101 / Writing Across the Curriculum
3 Credits **/ 3.0 Periods for Lecture**
Expressive, expository, and academic writing experiences to develop students' rhetoric and composition foundation. Experience planning and drafting multi-paragraph essays through a writing process with emphasis on essay and paragraph structure and the elements of sentence structure. Participation in writing workshop, group work, reading to support writing tasks, and writing from sources. A minimum of three multi-paragraph essays and a final reflection paper. Prerequisites: None.
Division: Composition, Creative Writing, and Literature

DISTRICT/COLLEGE ADMINISTRATION

Maricopa County Community College District Governing Board

Maricopa County Community College District,
District Support Services Center
2411 West 14th Street,
Tempe, Arizona 85281-6942
480-731-8889

Susan Bitter Smith
President, District 2

Marie Sullivan
Secretary, Member District 3

Jacqueline Smith, J.D.
Member District 1

Donna Davis
Member District 4

Tom Nerini, Ed. D.
District 5

Kelli Butler
Member At-Large

Linda Thor, Ed. D.
Member At-Large

Maricopa County Community College District Office

480-731-8000

Dr. Steven Gonzales
Chancellor

Dr. Lisa Armour
Executive Vice Chancellor and Provost of Academic and Student Affairs

Lee Ann Bohn
Chief Operating Officer

Dr. Jess Evans
Chief Information Officer

Janice Falkenberg, Esq.
General Counsel

Dr. Eddie Genna
Senior Vice Chancellor of External Affairs

Kimberly Brainard Granio
Vice Chancellor of Business Services

Dr. Cathleen Hernandez
Chief of Staff

Dr. Georgetta Kelly
Vice Chancellor and Chief Human Resources Officer

Deanna Villanueva-Saucedo
Associate Vice Chancellor of the Center for Excellence in Inclusive Democracy

Chandler-Gilbert Community College Administration

2626 E. Pecos Road
Chandler, Arizona 85225
480-732-7000

CJ Wurster
President

- B.S., Rochester Institute of Technology
- M.A., Northern Arizona University
- Ed.D., Northern Arizona University

Bettina Celis
Vice President, Student Affairs

- B.S., University of Arizona
- M.S., University of Phoenix

Heather Weber
Vice President, Administration & Operations

- A.A., Okaloosa Walton Community College
- B.A., University of West Florida
- M.B.A., University of Phoenix
- Ed.D., Northern Arizona University

Gabriela Rosu
Senior Associate Vice President (Interim)
Academic Affairs
Dean of Instruction

- B.S., Robert Morris University
- M.S., Duquesne University

Chris Schnick
Senior Associate Vice President (Interim)
Academic Affairs
Dean of Arts and Sciences

- B.S., M.A., University of Maryland College Park

Bernadette La Mazza
Associate Vice President, Business Operations

- B.A., George Mason University
- M.A., University of Phoenix
- MAOM., University of Phoenix
- Ed.D., Grand Canyon University

Jenna Kahl
Associate Vice President, Community Relations

- B.A. , Arizona State University
- M.Ed., Arizona State University

Felicia Ramirez-Perez
Dean of Enrollment Services

- B.S., Western New Mexico University
- M.Ed., Ed.D., Northern Arizona University

Ryan Cain
Dean of Student Success & Retention

- B.S., Arizona State University
- M.Ed., Northcentral University

Thomas Pearson
Dean of Workforce & Innovation

- A.A.S., Community College of the Air Force
- B.S., Hawaii Pacific University
- M.S., University of Phoenix

Administration

President

Hesse, Maria L. (1984-2009)

- B.S., M.B.A., Arizona State University
- M.Ed., Ed.D., Northern Arizona University

Ward, Arnette S. (1971-2002)

- A.A., Edward Waters Junior College
- B.S., Florida Agricultural and Mechanical University
- M.A., Arizona State University

Vice President

Bartholomew, Lois (1980-2008)
Vice President, Student Affairs

- A.A., Phoenix College
- B.S., Arizona State University
- M.A., Northern Arizona University

Schroeder, John R. (1990-2013)
Provost, Williams Campus

- A.T.A., A.A.S., Everett Community College
- B.A.Ed., Central Washington University
- M.A., Azusa Pacific University

Faculty

Art

Wolter, William (Ted) (1988-2018)

- B.A., Western Illinois University;
- M.F.A., University of Illinois at Urbana-Champaign

Biology

Munro, Regina (Regi) (1997 – 2020)

- B.A., University of Wisconsin-Eau Claire
- M.S., Ph.D., Arizona State University; ACSM-HFI, CSCS

Business

Foster, Tom (1980-2018)

- A.A., Mesa Community College
- Certificate, Institutional Research
- B.A.Ed., M.Ed., Ed.D., Arizona State University

Communication

Travers, Diane (1985-2016)

- A.G.S, Mesa Community College
- B.S., Northern Arizona University
- M.A., West Virginia University

Economics

Short, Nancy (1994-2016)

- B.S., M.A., Arizona State University

Education

Fagan, Sharon (1995-2017)

- B.A., M.A., Arizona State University
- M.Ed., Northern Arizona University

Larson-Birney, Brenda J. (1987-2013)
Education, Business, and Computer Information Systems

- B.S., Bowling Green State University
- M.A., Arizona State University
- M.S., Nova University
- Ed.D., Northern Arizona University

English

Conkright, Alice (1981-2003)

- B.A., M.A., Syracuse University
- M.L.S., Ph.D., Northern Illinois University

Davenport, Pamela G. (1987-2012)

- B.A., M.A., Arizona State University

Terrell-Bamiro, Caryl (1989-2018)

- B.S., M.A., Arizona State University

Journalism

Johnson, Patti N. (1981-2009)

- A.A., Yavapai College
- B.A., M.A., Indiana State University

Library

Dichtenberg, Carol L. (1998-2020)

- B.A., State University College at Buffalo
- M.L.S., University at Buffalo

Mathematics

Bedal, Charles D. (1969-1998)

- A.A., Phoenix College
- B.S., M.S., Northern Arizona University

Canham, Jeanne (1995-2019)

- B.S., Taylor University
- M.Ed., Arizona State University

Rudibaugh, Melinda (1981-2017)

- B.S., Indiana University of Pennsylvania
- M.N.S., Arizona State University

Music

Denton, Marc (1991-2018)

- B.A., Arizona State University
- M.M., Brigham Young University

Wright, Randall (2000-2018)

- B.M.E., M.M., Northern Arizona University

Physics

Weaver, David (1982-2014)

- B.S., M.S., East Texas State University
- CNA, CCNA

Psychology

Stuebner, Sandra (1986-2016)

- B.A., Chapman College
- M.C., Arizona State University

Spanish

Bingham, Cynthia (1991-2019)

- B.A., Brigham Young University
- Certificate, Latin American Studies
- M.A., Arizona State University

Jarvis, Ana C. (1987-2014)

- B.A., California State College
- M.A., Ph.D., University of California, Riverside

GLOSSARY OF COLLEGE TERMINOLOGY

Academic Load
The total number of credit hours taken in a term. Twelve credit hours is considered a full-time load.

Academic Advisor
A designated staff member who has received training to provide students with academic information that will direct them to the appropriate classes to achieve their educational goals and enhance their academic success.

Admission
Acceptance into a college after the student has filed a completed Student Information Form with the Admissions, Records and Registration Office and has been admitted according to admissions criteria. Students who have been admitted are eligible to register for courses.

AGEC
The Arizona General Education Curriculum (AGEC) is a general education certificate that fulfills lower-division general education requirements for students planning to transfer to any Arizona public community college or university. Generally, the MCCCD AGEC transfers as a block without loss of credit. The AGEC-A and AGEC-B require a minimum of 35 credit hours, and the AGEC-S requires a minimum of 36 credit hours.

Alumnus/Alumna
A graduate of a college or university. (Plural: alumni/alumnae)

Associate Degree
Degree awarded by community colleges after a student completes a specified number of course requirements and credit hours, generally a minimum of 60 semester credits. May be an Associate in Arts (AA), Associate in Business (ABUS), or Associate in Science (AS) designed primarily for transfer to complete a baccalaureate degree; an Associate in Applied Science (AAS), designed primarily to enhance workplace skills and knowledge; or an Associate in General Studies (AGS), designed to fulfill students' goals of higher education.

Audit
An option for class registration in which the student pays to attend class but does not want to receive credit. Students sometimes choose to audit courses in which they do not wish to complete required assignments.

Bachelor's Degree
A degree awarded by a four-year college or university. Generally requires completion of 120 semester credits. Also referred to as a baccalaureate degree (e.g., BA or BS).

Class Number
A unique, five-digit code used to identify each class section of each course offered. Class Numbers are listed in the Class Schedule.

Class Period
Time spent in class and/or lab each week. One period is equivalent to 50 minutes per week.

Class Schedule
An online college publication that lists all courses offered during a semester, including dates and times of class meetings, names of instructors, buildings and rooms, credit hours, and other important registration information.

Co-curricular Activities
Out of the classroom activities that are structured to support learning through connection to the curriculum.

Commencement
A ceremony that celebrates graduating students who are completing degrees and certificates. It is also known as a graduation ceremony.

Continued Probation
A student on academic probation is placed on continued probation if they do not raise their cumulative grade point average (GPA) to the required minimum standard. Enrollment is limited to six (6) credit hours for a period of one semester.

Continuous Enrollment
The process of registering for and completing courses during consecutive semesters, excluding summer sessions. Determines catalog year for graduation.

Corequisite
Specified conditions, requirements, or courses that must be completed during the same semester as another course.

Counselor
A person professionally trained in counseling who helps students with educational, career, or personal concerns as well as goal setting and decision making.

Course
A specific subject studied within a limited period of time, such as a semester, and taught by a faculty member. Also called course offering or class.

Course Fee
A charge for services, supplies, and/or materials for a course, in addition to tuition and fees.

Course Number
A three-digit code that identifies a specific course and indicates its level and sequence (e.g., 101 in ENG101 First-Year Composition).

Course Prefix
A three-letter code that identifies the subject area of a course (e.g., ENG in ENG101 First-Year Composition indicating a course in English).

Course Title
The name of a specific course that indicates subject and content (e.g., First-Year Composition, title for English 101).

Credit Hour
The numerical unit of college credits earned for the satisfactory completion of a specific course. Also referred to as semester hours or units (e.g., 3 credit hours). It is expected that students will spend 2 to 3 hours, minimally, outside of the classroom/laboratory performing course related work such as readings, research, homework assignments, practica, studio work, and other academic work for every hour of instruction spent in the classroom/laboratory.

Curriculum
A planned sequence of courses for an academic or occupational goal. Also referred to as a program of study.

Division

A group of faculty who teach classes in related subjects, such as accounting, management, and marketing in the Business and Computing Studies Division.

Drop/Add Period
A specified period of time at the beginning of a term when schedule changes (i.e., adding or dropping one or more classes) are allowed without a refund penalty. Courses dropped during the Drop/Add Period do not appear on students' transcripts.

Electives
Non-required courses that students may select to complete their program of study.

Faculty
Instructors, teachers. Counselors and librarians are also faculty.

Final Exams
Tests or exercises given at the end of a term that are often comprehensive; that is, they may include all material covered during the semester. The schedule of final exam dates and times for each term can be found by searching for final exam schedule at cgc.edu (https://www.google.com/url?q=http://cgc.edu&sa=D&source=editors&ust=1662785143372893&usg=AOvVaw2c_CSBRIbydhxEjvH2T).

Financial Aid
Financial assistance in the form of grants, scholarships, work study, and loans to assist students in paying for college. Sources are varied with funds coming from federal and state governments, colleges, private donors, and local agencies and organizations.

Student Financial Services
Also known as the Cashier's Office where students may pay tuition and fees, course fees, and other fees owed the college.

Grade Point
The numerical value of a grade multiplied by the credit hours for a course (A=4 points; B=3 points; C=2 points; D=1 point). If, for example, a student earns an A in English 101 (3 credit hours), then the student earns 12 points: A=4 points x 3 (credit hours) = 12 points.

Grade Point Average
Generally called GPA, grade point average is determined by dividing the total number of grade points earned by the total number of credit hours attempted. For example, 45 grade points divided by 15 credit hours earned = 3.0 GPA.

Graduation
Graduation means a student has completed the requirements to earn a degree or diploma. Requirements include earning the required number of credits, completing all necessary coursework, and completing any other requirements like internships or service hours.

Learning Communities
Learning communities are two or more classes connected through content, ideas, and activities. Using a variety of learning methods, learning communities can be comprised of linked activities between courses, linked and clustered courses, and completely integrated single- or team-taught courses.

Lower Division
Normally freshman- and sophomore-level (100 and 200) courses offered by a college. Community colleges offer ONLY lower division courses. Four-year institutions also offer upper division courses, which are junior-level and senior-level (300 and 400) courses.

Major
An area of concentrated study often for a specific degree or occupation, such as journalism, nursing, or aircraft maintenance.

New Student Orientation
A session during which new students are introduced to academic programs, facilities, and student support services provided by a college.

Official Absence
Absence from class approved by the Vice President of Student Affairs for students who are participants in an official college activity. Approved absence documentation must be presented by students to their instructors before the official absence. Students make arrangements to complete the work they will miss.

Pass/Fail
An option for class registration in which students choose to receive a grade of Pass or Fail in lieu of a letter grade (A, B, C, D, F). Students can earn credits towards graduation by passing these courses but the grades will not count in their GPAs. It is best to check with an advisor to make sure Pass/Fail grades will transfer to another college or university.

Prerequisite
Specified conditions, requirements, or classes that must be completed before enrolling in a class. For example, ENG102 First-Year Composition has a prerequisite of ENG101 First-Year Composition.

Probation
A warning that a student is not in good academic standing. May be accompanied by restricted credit hour enrollment.

Recess
Holidays and the periods of time between academic semesters when classes are not in session.

Registration
Actual enrollment of a student into specific courses after the student has been admitted to the college.

Required Course
A course that a student must complete to meet certain goals or to complete a certain curriculum.

Scholastic Suspension
Students on suspension from any accredited institution of higher education may appeal to the Admissions and Standards Committee or campus designee for permission to register. The student will be limited to twelve (12) credit hours unless approved by the Admissions and Standards Committee.

Semester
Traditionally half an academic year, about 16 weeks in length. Fall semester begins in August and spring semester begins in January.

Service-Learning
Service-Learning combines community service with academic instruction focusing on critical-thinking and problem-solving, values clarification, social and personal development, and civic responsibility. This meaningful service at community agencies to learn experientially may occur during one-day events, class projects, or individual placements.

Syllabus
One or more pages of course requirements that instructors give to students on the first day of class. The syllabus includes detailed information about a course, such as grading standards and practices, attendance requirements, and a list of required texts, materials and technologies.

Transcript
An official record of a student's college coursework that is maintained by the college registrar. Courses taken, grades, GPA, and graduation information are included on a transcript.

Transfer Credit
Course credit that is accepted from or by another college or university.

Tuition and Fees
The cost per semester credit unit that students must pay for their college courses. Tuition and fees are determined by the Maricopa County Community College Governing Board.

Tutoring
Additional learning assistance provided by tutors to students in individual or group sessions. Tutoring is centralized in the Learning Center.

Withdrawal
Officially dropping any or all courses during a semester.

PROGRAMS A-Z

A

- Accounting, Associate in Applied Science (p. 117)
- Accounting, Certificate of Completion (p. 118)
- Administration of Justice Studies, Associate in Applied Science (p. 209)
- Administration of Justice, Certificate of Completion (p. 211)
- Adobe Foundations: Animation and Graphics Production, Certificate of Completion (p. 119)
- Aircraft Maintenance Technology - Airframe, Associate in Applied Science (p. 94)
- Aircraft Maintenance Technology - Airframe, Certificate of Completion (p. 95)
- Aircraft Maintenance Technology - Powerplant, Associate in Applied Science (p. 96)
- Aircraft Maintenance Technology - Powerplant, Certificate of Completion (p. 97)
- Aircraft Maintenance Technology, Associate in Applied Science (p. 91)
- Aircraft Maintenance Technology, Certificate of Completion (p. 93)
- Airway Science Technology - Flight Emphasis, Associate in Applied Science (p. 98)
- Amazon Web Services Cloud Associate, Certificate of Completion (p. 119)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 120)
- Amazon Web Services Cloud Specialist, Certificate of Completion (p. 120)
- Artificial Intelligence and Machine Learning, Associate in Applied Science (p. 252)
- Artificial Intelligence and Machine Learning, Bachelor of Science (p. 254)
- Artificial Intelligence and Machine Learning, Certificate of Completion (p. 259)
- Associate in Arts, Elementary Education Degree (AAEE) (p. 38)
- Associate in Arts, Fine Arts (AAFA) (p. 42)
- Associate in Business, General Requirements (ABUS-GR) Degree (p. 49)
- Associate in Business, Special Requirements (ABUS-SR) Degree (p. 52)

C

- Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion (p. 100)
- Chicana and Chicano Studies, Academic Certificate (p. 232)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-certified-network-professional-enterprise-core-ccl/)
- Cisco Certified Network Professional: Enterprise, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-certified-network-professional-enterprise-ccl/)
- Cisco Network Administration and Security, Certificate of Completion (p. 121)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 122)
- Cisco Network Administration: CCNP, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-network-administration-ccnp-ccl/)
- Computer System Configuration and Support, Certificate of Completion (p. 122)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Security, Certificate of Completion (p. 124)
- Corrections, Certificate of Completion (p. 212)
- Crime Scene Investigation, Certificate of Completion (p. 212)
- Cyber Engineering, Certificate of Completion (p. 125)
- Cyber Operations, Certificate of Completion (p. 126)
- Cybersecurity Fundamentals, Certificate of Completion (p. 127)
- Cybersecurity, Associate in Applied Science (p. 127)

D

- Data Analytics, Associate in Applied Science (p. 130)
- Data Analytics, Certificate of Completion (p. 131)
- Desktop Support, Certificate of Completion (p. 132)

E

- Early Childhood Education, Associate in Applied Science (p. 269)
- Early Childhood Education, Certificate of Completion (p. 271)
- Emergency Medical Technology Comprehensive, Certificate of Completion (p. 214)
- Emergency Medical Technology, Certificate of Completion (p. 213)
- Engineering Technology, Associate of Applied Science (p. 260)
- Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science (p. 214)

F

- Financial Services: Pre-licensure, Certificate of Completion (p. 133)
- Fingerprint Identification and Photography, Certificate of Completion (p. 217)
- Forensic Science, Associate in Applied Science (p. 217)
- Foundations of Early Childhood Education, Certificate of Completion (p. 273)

G

- General Business, Associate in Applied Science (p. 133)
- General Business, Certificate of Completion (p. 134)

H

- Homeland Security, Certificate of Completion (p. 219)

I

- Illustration and Sequential Art, Associate in Applied Science (p. 192)
- Illustration, Certificate of Completion (p. 191)
- Industrial Technology for Semiconductor (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/industrial-technology-semiconductor/)
- Information Technology, Associate in Applied Science (p. 135)

L

- Language Studies, Academic Certificate (p. 233)
- Law Enforcement Training, Associate in Applied Science (p. 220)
- Law Enforcement, Certificate of Completion (p. 219)
- Legal Studies, Certificate of Completion (p. 221)
- Linux Associate, Certificate of Completion (p. 145)

M

- Management, Associate in Applied Science (p. 146)
- Microsoft Office Professional, Certificate of Completion (p. 147)
- Microsoft Office Specialist, Certificate of Completion (p. 148)
- Mortuary Science, Associate in Applied Science (p. 222)

N

- Network and Systems Administration, Associate in Applied Science (p. 149)

O

- Organizational Leadership, Certificate of Completion (p. 152)
- Organizational Management, Associate in Applied Science (p. 153)

P

- Personal Training, Certificate of Completion (p. 223)
- Personal Training: Advanced, Certificate of Completion (p. 224)
- Photography, Associate in Applied Science (p. 193)
- Programming and Systems Analysis Level I, Certificate of Completion (p. 154)
- Programming and Systems Analysis Level II, Certificate of Completion (p. 155)
- Programming and Systems Analysis, Associate in Applied Science (p. 156)
- Python Applications, Certificate of Completion (p. 158)

R

- Registered Nurse Pathway, Associate in Applied Science (p. 242)

S

- Sequential Art, Certificate of Completion (p. 196)
- Small Business Management Level I, Certificate of Completion (p. 159)
- Social Media Marketing, Certificate of Completion (p. 159)
- Spanish Language and Culture, Academic Certificate (p. 234)
- Sustainability, Academic Certificate (p. 103)

U

- Unmanned Aircraft Systems, Associate in Applied Science (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/unmanned-aircraft-systems-aas/)
- Unmanned Aircraft Systems, Certificate of Completion (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/unmanned-aircraft-systems-ccl/)

V

- Victimology, Certificate of Completion (p. 225)

W

- Web App Development, Certificate of Completion (p. 160)
- Web Design, Certificate of Completion (p. 160)
- Web Design/Development, Associate in Applied Science (p. 161)
- Web Development, Certificate of Completion (p. 163)
- Web Foundations, Certificate of Completion (p. 164)
- Women and Gender Studies, Academic Certificate (p. 235)

Associate in Applied Science

- Accounting, Associate in Applied Science (p. 117)
- Administration of Justice Studies, Associate in Applied Science (p. 209)
- Aircraft Maintenance Technology - Airframe, Associate in Applied Science (p. 94)
- Aircraft Maintenance Technology - Powerplant, Associate in Applied Science (p. 96)
- Aircraft Maintenance Technology, Associate in Applied Science (p. 91)
- Airway Science Technology - Flight Emphasis, Associate in Applied Science (p. 98)
- Artificial Intelligence and Machine Learning, Associate in Applied Science (p. 252)
- Associate in Arts, Elementary Education Degree (AAEE) (p. 38)
- Associate in Arts, Fine Arts (AAFA) (p. 42)
- Associate in Business, General Requirements (ABUS-GR) Degree (p. 49)
- Associate in Business, Special Requirements (ABUS-SR) Degree (p. 52)
- Cybersecurity, Associate in Applied Science (p. 127)
- Data Analytics, Associate in Applied Science (p. 130)
- Early Childhood Education, Associate in Applied Science (p. 269)
- Engineering Technology, Associate of Applied Science (p. 260)
- Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science (p. 214)
- Forensic Science, Associate in Applied Science (p. 217)
- General Business, Associate in Applied Science (p. 133)
- Illustration and Sequential Art, Associate in Applied Science (p. 192)
- Information Technology, Associate in Applied Science (p. 135)
- Law Enforcement Training, Associate in Applied Science (p. 220)
- Management, Associate in Applied Science (p. 146)
- Mortuary Science, Associate in Applied Science (p. 222)
- Network and Systems Administration, Associate in Applied Science (p. 149)

- Organizational Management, Associate in Applied Science (p. 153)
- Photography, Associate in Applied Science (p. 193)
- Programming and Systems Analysis, Associate in Applied Science (p. 156)
- Registered Nurse Pathway, Associate in Applied Science (p. 242)
- Unmanned Aircraft Systems, Associate in Applied Science (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/unmanned-aircraft-systems-aas/)
- Web Design/Development, Associate in Applied Science (p. 161)

Academic Certificate

- Chicana and Chicano Studies, Academic Certificate (p. 232)
- Language Studies, Academic Certificate (p. 233)
- Spanish Language and Culture, Academic Certificate (p. 234)
- Sustainability, Academic Certificate (p. 103)
- Women and Gender Studies, Academic Certificate (p. 235)

Certificate of Completion

- Accounting, Certificate of Completion (p. 118)
- Administration of Justice, Certificate of Completion (p. 211)
- Adobe Foundations: Animation and Graphics Production, Certificate of Completion (p. 119)
- Aircraft Maintenance Technology - Airframe, Certificate of Completion (p. 95)
- Aircraft Maintenance Technology - Powerplant, Certificate of Completion (p. 97)
- Aircraft Maintenance Technology, Certificate of Completion (p. 93)
- Amazon Web Services Cloud Associate, Certificate of Completion (p. 119)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 120)
- Amazon Web Services Cloud Specialist, Certificate of Completion (p. 120)
- Artificial Intelligence and Machine Learning, Certificate of Completion (p. 259)
- Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion (p. 100)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-certified-network-professional-enterprise-core-ccl/)
- Cisco Certified Network Professional: Enterprise, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-certified-network-professional-enterprise-ccl/)
- Cisco Network Administration and Security, Certificate of Completion (p. 121)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 122)
- Cisco Network Administration: CCNP, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-network-administration-ccnp-ccl/)
- Computer System Configuration and Support, Certificate of Completion (p. 122)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Security, Certificate of Completion (p. 124)
- Corrections, Certificate of Completion (p. 212)
- Crime Scene Investigation, Certificate of Completion (p. 212)
- Cyber Engineering, Certificate of Completion (p. 125)
- Cyber Operations, Certificate of Completion (p. 126)
- Cybersecurity Fundamentals, Certificate of Completion (p. 127)
- Data Analytics, Certificate of Completion (p. 131)
- Desktop Support, Certificate of Completion (p. 132)
- Early Childhood Education, Certificate of Completion (p. 271)
- Emergency Medical Technology Comprehensive, Certificate of Completion (p. 214)
- Emergency Medical Technology, Certificate of Completion (p. 213)
- Enrolled Agent, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/enrolled-agent-ccl/)
- Esports Business Operations, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/esports-ccl/)
- Financial Services: Pre-licensure, Certificate of Completion (p. 133)
- Fingerprint Identification and Photography, Certificate of Completion (p. 217)
- Foundations of Early Childhood Education, Certificate of Completion (p. 273)
- General Business, Certificate of Completion (p. 134)
- Homeland Security, Certificate of Completion (p. 219)
- Illustration, Certificate of Completion (p. 191)
- Industrial Technology for Semiconductor (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/industrial-technology-semiconductor/)
- Kubernetes Administration, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/kubernetes-administration-ccl/)
- Kubernetes Application Development, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/kubernetes-application-development-ccl/)
- Kubernetes Security, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/kubernetes-security-ccl/)
- Law Enforcement, Certificate of Completion (p. 219)
- Leadership in Public Safety Organizations, Certificate of Completion (https://catalog.cgc.edu/educational-programs/health-science-public-service/leadership-public-safety-organizations-ccl/)
- Legal Studies, Certificate of Completion (p. 221)
- Linux Associate, Certificate of Completion (p. 145)
- Linux System Administration, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/linux-system-administration-ccl/)
- Microsoft Office Professional, Certificate of Completion (p. 147)
- Microsoft Office Specialist, Certificate of Completion (p. 148)

- Oracle Database Operations, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/oracle-database-operations-ccl/)
- Organizational Leadership, Certificate of Completion (p. 152)
- Personal Training, Certificate of Completion (p. 223)
- Personal Training: Advanced, Certificate of Completion (p. 224)
- Programming and Systems Analysis Level I, Certificate of Completion (p. 154)
- Programming and Systems Analysis Level II, Certificate of Completion (p. 155)
- Python Applications, Certificate of Completion (p. 158)
- Red Hat Linux Administrator, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/red-hat-linux-administrator-ccl/)
- Red Hat Linux Engineer, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/red-hat-linux-engineer-ccl/)
- Sequential Art, Certificate of Completion (p. 196)
- Small Business Management Level I, Certificate of Completion (p. 159)
- Small Business Management Level II, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/small-business-management-level-two-ccl/)
- Social Media Marketing, Certificate of Completion (p. 159)
- Unmanned Aircraft Systems, Certificate of Completion (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/unmanned-aircraft-systems-ccl/)
- Victimology, Certificate of Completion (p. 225)
- Web App Development, Certificate of Completion (p. 160)
- Web Design, Certificate of Completion (p. 160)
- Web Development, Certificate of Completion (p. 163)
- Web Foundations, Certificate of Completion (p. 164)

Microcert

- Administration of Justice, Certificate of Completion (p. 211)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 120)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-certified-network-professional-enterprise-core-ccl/)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 122)
- Computer System Configuration and Support, Certificate of Completion (p. 122)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 123)
- Corrections, Certificate of Completion (p. 212)
- Emergency Medical Technology, Certificate of Completion (p. 213)
- Fingerprint Identification and Photography, Certificate of Completion (p. 217)
- Foundations of Early Childhood Education, Certificate of Completion (p. 273)
- Homeland Security, Certificate of Completion (p. 219)
- Industrial Technology for Semiconductor (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/industrial-technology-semiconductor/)
- Law Enforcement, Certificate of Completion (p. 219)
- Legal Studies, Certificate of Completion (p. 221)
- Linux Associate, Certificate of Completion (p. 145)
- Personal Training, Certificate of Completion (p. 223)
- Red Hat Linux Administrator, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/red-hat-linux-administrator-ccl/)
- Red Hat Linux Engineer, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/red-hat-linux-engineer-ccl/)
- Victimology, Certificate of Completion (p. 225)
- Web App Development, Certificate of Completion (p. 160)

Bachelor of Science

- Artificial Intelligence and Machine Learning, Bachelor of Science (p. 254)

Applied Technology

- Aircraft Maintenance Technology - Airframe, Associate in Applied Science (p. 94)
- Aircraft Maintenance Technology - Airframe, Certificate of Completion (p. 95)
- Aircraft Maintenance Technology - Powerplant, Associate in Applied Science (p. 96)
- Aircraft Maintenance Technology - Powerplant, Certificate of Completion (p. 97)
- Aircraft Maintenance Technology, Associate in Applied Science (p. 91)
- Aircraft Maintenance Technology, Certificate of Completion (p. 93)
- Airway Science Technology - Flight Emphasis, Associate in Applied Science (p. 98)
- Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion (p. 100)
- Industrial Technology for Semiconductor (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/industrial-technology-semiconductor/)
- Unmanned Aircraft Systems, Associate in Applied Science (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/unmanned-aircraft-systems-aas/)
- Unmanned Aircraft Systems, Certificate of Completion (https://catalog.cgc.edu/educational-programs/aviation-applied-technology/unmanned-aircraft-systems-ccl/)

Behavioral Science and Human Services

- Administration of Justice Studies, Associate in Applied Science (p. 209)
- Administration of Justice, Certificate of Completion (p. 211)
- Corrections, Certificate of Completion (p. 212)
- Crime Scene Investigation, Certificate of Completion (p. 212)
- Fingerprint Identification and Photography, Certificate of Completion (p. 217)
- Forensic Science, Associate in Applied Science (p. 217)

- Homeland Security, Certificate of Completion (p. 219)
- Law Enforcement Training, Associate in Applied Science (p. 220)
- Law Enforcement, Certificate of Completion (p. 219)
- Leadership in Public Safety Organizations, Certificate of Completion (https://catalog.cgc.edu/educational-programs/health-science-public-service/leadership-public-safety-organizations-ccl/)
- Legal Studies, Certificate of Completion (p. 221)
- Victimology, Certificate of Completion (p. 225)

Business Entrepreneurialism, and Management

- Accounting, Associate in Applied Science (p. 117)
- Accounting, Certificate of Completion (p. 118)
- Associate in Business, General Requirements (ABUS-GR) Degree (p. 49)
- Associate in Business, Special Requirements (ABUS-SR) Degree (p. 52)
- Enrolled Agent, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/enrolled-agent-ccl/)
- Esports Business Operations, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/esports-ccl/)
- Financial Services: Pre-licensure, Certificate of Completion (p. 133)
- General Business, Associate in Applied Science (p. 133)
- General Business, Certificate of Completion (p. 134)
- Management, Associate in Applied Science (p. 146)
- Organizational Leadership, Certificate of Completion (p. 152)
- Organizational Management, Associate in Applied Science (p. 153)
- Small Business Management Level I, Certificate of Completion (p. 159)
- Small Business Management Level II, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/small-business-management-level-two-ccl/)
- Social Media Marketing, Certificate of Completion (p. 159)

Computer Information Technology

- Adobe Foundations: Animation and Graphics Production, Certificate of Completion (p. 119)
- Amazon Web Services Cloud Associate, Certificate of Completion (p. 119)
- Amazon Web Services Cloud Practitioner, Certificate of Completion (p. 120)
- Amazon Web Services Cloud Specialist, Certificate of Completion (p. 120)
- Cisco Certified Network Professional: Enterprise Core, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-certified-network-professional-enterprise-core-ccl/)
- Cisco Certified Network Professional: Enterprise, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-certified-network-professional-enterprise-ccl/)
- Cisco Network Administration and Security, Certificate of Completion (p. 121)
- Cisco Network Administration: CCNA, Certificate of Completion (p. 122)
- Cisco Network Administration: CCNP, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/cisco-network-administration-ccnp-ccl/)
- Computer System Configuration and Support, Certificate of Completion (p. 122)
- Computer System Configuration and Support, Linux, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Network, Certificate of Completion (p. 123)
- Computer System Configuration and Support, Security, Certificate of Completion (p. 124)
- Cyber Engineering, Certificate of Completion (p. 125)
- Cyber Operations, Certificate of Completion (p. 126)
- Cybersecurity Fundamentals, Certificate of Completion (p. 127)
- Cybersecurity, Associate in Applied Science (p. 127)
- Data Analytics, Associate in Applied Science (p. 130)
- Data Analytics, Certificate of Completion (p. 131)
- Desktop Support, Certificate of Completion (p. 132)
- Information Technology, Associate in Applied Science (p. 135)
- Kubernetes Administration, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/kubernetes-administration-ccl/)
- Kubernetes Application Development, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/kubernetes-application-development-ccl/)
- Kubernetes Security, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/kubernetes-security-ccl/)
- Linux Associate, Certificate of Completion (p. 145)
- Linux System Administration, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/linux-system-administration-ccl/)
- Microsoft Office Professional, Certificate of Completion (p. 147)
- Microsoft Office Specialist, Certificate of Completion (p. 148)
- Network and Systems Administration, Associate in Applied Science (p. 149)
- Oracle Database Operations, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/oracle-database-operations-ccl/)
- Programming and Systems Analysis Level I, Certificate of Completion (p. 154)
- Programming and Systems Analysis Level II, Certificate of Completion (p. 155)
- Programming and Systems Analysis, Associate in Applied Science (p. 156)
- Python Applications, Certificate of Completion (p. 158)
- Red Hat Linux Administrator, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/red-hat-linux-administrator-ccl/)
- Red Hat Linux Engineer, Certificate of Completion (https://catalog.cgc.edu/educational-programs/business-computing-studies/red-hat-linux-engineer-ccl/)
- Web App Development, Certificate of Completion (p. 160)
- Web Design, Certificate of Completion (p. 160)

- Web Design/Development, Associate in Applied Science (p. 161)
- Web Development, Certificate of Completion (p. 163)
- Web Foundations, Certificate of Completion (p. 164)

Culture and Society

- Chicana and Chicano Studies, Academic Certificate (p. 232)
- Language Studies, Academic Certificate (p. 233)
- Spanish Language and Culture, Academic Certificate (p. 234)
- Women and Gender Studies, Academic Certificate (p. 235)

Education

- Associate in Arts, Elementary Education Degree (AAEE) (p. 38)
- Early Childhood Education, Associate in Applied Science (p. 269)
- Early Childhood Education, Certificate of Completion (p. 271)
- Foundations of Early Childhood Education, Certificate of Completion (p. 273)

Health Sciences

- Emergency Medical Technology Comprehensive, Certificate of Completion (p. 214)
- Emergency Medical Technology, Certificate of Completion (p. 213)
- Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science (p. 214)
- Personal Training, Certificate of Completion (p. 223)
- Personal Training: Advanced, Certificate of Completion (p. 224)
- Registered Nurse Pathway, Associate in Applied Science (p. 242)

Science, Technology, Engineering and Mathematics

- Artificial Intelligence and Machine Learning, Associate in Applied Science (p. 252)
- Artificial Intelligence and Machine Learning, Bachelor of Science (p. 254)
- Artificial Intelligence and Machine Learning, Certificate of Completion (p. 259)
- Mortuary Science, Associate in Applied Science (p. 222)
- Sustainability, Academic Certificate (p. 103)

Visual and Performing Arts

- Associate in Arts, Fine Arts (AAFA) (p. 42)
- Illustration and Sequential Art, Associate in Applied Science (p. 192)
- Illustration, Certificate of Completion (p. 191)
- Photography, Associate in Applied Science (p. 193)
- Sequential Art, Certificate of Completion (p. 196)

SEARCH COURSES

Welcome to Course Search

Use the search panel on the left to find and narrow down courses of interest.

INDEX

A

Academic Advisement 14
Academic Calendar 6
Academic Certificate (AC) 84
Accounting (ACC) 278
Accounting, Associate in Applied Science 117
Accounting, Certificate of Completion 118
Administration of Justice, Certificate of Completion 211
Administration of Justice Studies (AJS) 278
Administration of Justice Studies, Associate in Applied Science 209
Admissions, Records, and Registration 14
Adobe Foundations: Animation and Graphics Production, Certificate of Completion 119
Aeronautics (AET) 280
Affiliations & Associations 11
African American Studies (AFR) 282
Aircraft Maintenance Technology - Airframe, Associate in Applied Science 94
Aircraft Maintenance Technology - Airframe, Certificate of Completion .. 95
Aircraft Maintenance Technology - Powerplant, Associate in Applied Science 96
Aircraft Maintenance Technology - Powerplant, Certificate of Completion 97
Aircraft Maintenance Technology, Associate in Applied Science 91
Aircraft Maintenance Technology, Certificate of Completion 93
Aircraft/Maintenance Technology (AMT) 282
Airway Science Technology - Flight Emphasis, Associate in Applied Science 98
Amazon Web Services Cloud Associate, Certificate of Completion 119
Amazon Web Services Cloud Practitioner, Certificate of Completion ... 120
Amazon Web Services Cloud Specialist, Certificate of Completion 120
American Indian Studies (AIS) 284
American Sign Language (ASL) 284
Anthropology (Science/Math) (ASM) 285
Anthropology (Soc/Behv. Science) (ASB) 285
Arizona General Education Curriculum (AGEC) – A, B, S 29
Art and Visual Communication (AVC) 288
Art (ART) 286
Art Humanities (ARH) 287
Artificial Intelligence and Machine Learning (AIM) 289
Artificial Intelligence and Machine Learning, Associate in Applied Science 252
Artificial Intelligence and Machine Learning, Bachelor of Science 254
Artificial Intelligence and Machine Learning, Certificate of Completion . 259
Associate in Applied Science (AAS) Degree and General Education Requirements 75
Associate in Arts (AA) Degree 35
Associate in Arts, Elementary Education Degree (AAEE) 38
Associate in Arts, Fine Arts (AAFA) 42
Associate in Business, General Requirements (ABUS-GR) Degree 49
Associate in Business, Special Requirements (ABUS-SR) Degree 52
Associate in General Studies (AGS) Degree and General Education Requirements 54
Associate in Science, (AS) Degree 45
Astronomy (AST) 290
Athletics 14
Automated Industrial Technology (AIT) 290
Aviation & Applied Technology 87

B

Baccalaureate Artificial Intelligence Machine Learning (BAM) 291
Biological Sciences 101
Biology (BIO) 291
Bookstore 15
Business & Computing Studies 104
Business-Personal Computers (BPC) 292

C

Career and Technical Education 15
Career Services 15
Certified Flight Instructor Instrument Airplane Rating, Certificate of Completion 100
Chemistry (CHM) 293
Chicana and Chicano Studies, Academic Certificate 232
Chicana and Chicano Studies (CCS) 295
Child/Family Studies (CFS) 295
Cisco Network Administration and Security, Certificate of Completion . 121
Cisco Network Administration: CCNA, Certificate of Completion 122
Cisco Network Technology (CNT) 295
Cloud Computing (CLD) 296
College Police Regulations 15
College Services & Regulations 14
Communication & Fine Arts 165
Communication (COM) 296
Communiversity at Queen Creek 11
Composition, Creative Writing & Literature 196
Computer Information Systems (CIS) 296

Computer Labs/Testing Services 16
Computer Science (CSC) 302
Computer System Configuration and Support, Certificate of Completion 122
Computer System Configuration and Support, Linux, Certificate of Completion 123
Computer System Configuration and Support, Network, Certificate of Completion 123
Computer System Configuration and Support, Security, Certificate of Completion 124
Corrections, Certificate of Completion 212
Counseling 16
Counseling and Applied Psychology (CAP) 304
Counseling and Personal Development (CPD) 304
Course Descriptions 276
Course Placement 17
Creative Writing (CRW) 304
Crime Scene Investigation, Certificate of Completion 212
Critical Reading (CRE) 305
Cyber Engineering, Certificate of Completion 125
Cyber Operations, Certificate of Completion 126
Cybersecurity, Associate in Applied Science 127
Cybersecurity Fundamentals, Certificate of Completion 127

D

Dance (DAN) 305
Dance Humanities (DAH) 308
Data Analytics, Associate in Applied Science 130
Data Analytics, Certificate of Completion 131
Degree Requirements 27
Desktop Support, Certificate of Completion 132
Disclaimers 8
District/College Administration 356
Dual Enrollment 17

E

Early Childhood Education, Associate in Applied Science 269
Early Childhood Education, Certificate of Completion 271
Early College 17
Early Education (EED) 308
Economics (ECN) 309
Education (EDU) 309
Educational Programs 86
Electrical Engineering (EEE) 310
Electronic Resources 17
Emergency Medical Technology, Certificate of Completion 213
Emergency Medical Technology Comprehensive, Certificate of Completion 214
Emergency Medical Technology (EMT) 310
Engineering Science (ECE) 311
Engineering Technology, Associate of Applied Science 260
English (ENG) 312
English Humanities (ENH) 313
Enhancement Programs 274
Enrichment Programs 274
Enrollment Services 17
Environmental Sciences (ENV) 314
Exercise Science (EXS) 314
Exercise Science: Health, Fitness and Sports Performance, Associate in Applied Science 214

F

Facilities Services 18
Financial Aid and Scholarships 18
Financial Services: Pre-licensure, Certificate of Completion 133
Fingerprint Identification and Photography, Certificate of Completion 217
First Year Experience (FYE) 316
Food and Nutrition (FON) 316
Food Services 18
Forensic Science, Associate in Applied Science 217
Foundations of Early Childhood Education, Certificate of Completion 273

G

Game Studies (GST) 316
General Academic Policies for Associate Degrees Designed for University Transfer 27
General Business, Associate in Applied Science 133
General Business, Certificate of Completion 134
General Business (GBS) 316
General Education Student Learning Outcomes and Indicators 9
General Information 9
Geology (GLG) 317
Glossary of College Terminology 359

H

Health Care Related (HCR) 318
Health Core Curriculum (HCC) 318
Health Science (HES) 318
Health Sciences, Public Service, & Counseling 202
History (HIS) 319
Home 5

Homeland Security, Certificate of Completion ... 219
Honors (HON) ... 320
Humanities (HUM) ... 320

I

Illustration and Sequential Art, Associate in Applied Science ... 192
Illustration, Certificate of Completion ... 191
Information Studies (IFS) ... 321
Information Technology, Associate in Applied Science ... 135
Information Technology (IT) ... 18
Information Technology Security (ITS) ... 321
Institutional Research ... 19
International Business (IBS) ... 322
International Education Program ... 19

J

Journalism (JRN) ... 322

L

Language Studies, Academic Certificate ... 233
Languages, Humanities, & Information Studies ... 226
Law Enforcement, Certificate of Completion ... 219
Law Enforcement Training Academy, Certificate of Completion ... 221
Law Enforcement Training, Associate in Applied Science ... 220
Law Enforcement Training (LET) ... 322
Learning Center (Tutoring) ... 19
Legal Studies, Certificate of Completion ... 221
Library ... 19
Linux Associate, Certificate of Completion ... 145

M

Management, Associate in Applied Science ... 146
Management (MGT) ... 322
Maricopa Community College Police Department ... 19
Maricopa County Community College District Common Policies ... 26
Marketing (MKT) ... 323
Mass Communications (MCO) ... 323
Mathematics ... 235
Mathematics and Science Tutoring ... 20
Mathematics (MAT) ... 324
Microsoft Office Professional, Certificate of Completion ... 147
Microsoft Office Specialist, Certificate of Completion ... 148
Microsoft Technology (MST) ... 326
Mortuary Science, Associate in Applied Science ... 222
Mortuary Science Program (MSP) ... 327
Music: Commercial/Business (MUC) ... 328
Music: History/Literature (MHL) ... 328
Music: Performance (MUP) ... 329
Music: Theory/Composition (MTC) ... 345

N

Network and Systems Administration, Associate in Applied Science ... 149
New Student Orientation ... 20
Nursing ... 239
Nursing Science: Basic (NUR) ... 345

O

Office of Student Recruitment ... 20
Online and Hybrid Courses ... 20
Organizational Leadership, Certificate of Completion ... 152
Organizational Management, Associate in Applied Science ... 153

P

Parking ... 20
Partnerships ... 10
Pecos Campus ... 11
Personal Training, Certificate of Completion ... 223
Personal Training: Advanced, Certificate of Completion ... 224
Philosophy (PHI) ... 346
Photography, Associate in Applied Science ... 193
Physical Education (PED) ... 346
Physical Geography (GPH) ... 347
Physical Sciences & Engineering ... 244
Physics (PHY) ... 347
Political Science (POS) ... 348
Practical Instruction ... 21
Programming and Systems Analysis, Associate in Applied Science ... 156
Programming and Systems Analysis Level I, Certificate of Completion ... 154
Programming and Systems Analysis Level II, Certificate of Completion 155
Programs A-Z ... 362
Psychology (PSY) ... 349
Python Applications, Certificate of Completion ... 158

R

Reading (RDG) ... 350
Recreation (REC) ... 350
Registered Nurse Pathway, Associate in Applied Science ... 242
Religious Studies (REL) ... 350

S

Search Courses ... 368

Sequential Art, Certificate of Completion 196
Small Business Management Level I, Certificate of Completion 159
Small Business Management (SBS) 350
Social & Behavioral Sciences 262
Social Media Marketing, Certificate of Completion 159
Society and Business (SBU) 351
Sociology (SOC) 351
Spanish Humanities (SPH) 352
Spanish Language and Culture, Academic Certificate 234
Spanish (SPA) 351
Special Programs 274
Storytelling (STO) 352
Student Business Services 21
Student Development Philosophy 13
Student Dress Code 21
Student Housing 21
Student ID/Library Cards 21
Student Identification Cards 21
Student Immunization 21
Student Life and Leadership 21
Student Support and Disability Resources & Services 23
Student Tools 23
Sun Lakes Center 11
Sustainability, Academic Certificate 103
Sustainability/Natural Sciences (SUS) 352
Sustainability/Social Sciences and Humanities (SSH) 353

T

Theatre and Film (THF) 353
Theatre Occupational (THO) 353
Theatre Performance/Production (THP) 353
Theatre (THE) 353
Travel by Students 23
Travel Reduction Program 23

U

Unmanned Aircraft Systems (UAS) 354

V

Veterans Services 23
Victimology, Certificate of Completion 225

W

Web App Development, Certificate of Completion 160
Web Design, Certificate of Completion 160
Web Design/Development, Associate in Applied Science 161
Web Development, Certificate of Completion 163
Web Foundations, Certificate of Completion 164
Wellness Education (WED) 354
Williams Campus 11
Women and Gender Studies, Academic Certificate 235
Women's Studies (WST) 355
Writing Across Curriculum (WAC) 355
Writing Center 25