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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.

**Summer Semester 2020**
- **Tuesday, May 26**: Summer Semester Begins
- **Thursday, July 2**: Observance of Independence Day
- **Thursday, July 30**: Summer Semester Ends

**Fall Semester 2020**
- **Sat, Aug 22**: Classes Begin
- **Mon, Sep 7**: Observance of Labor Day
- **Mon, Sep 21**: Find a Class Opens for Spring
- **Mon, Oct 5**: Spring 2021 Priority Registration for Currently Enrolled Students
- **Sat, Oct 10**: + Last Day for Withdrawal without Instructor’s Signature
- **Mon, Oct 12**: ++ Student Withdrawal with Instructor’s Signature Begins
- **Wed, Nov 11**: Observance of Veterans Day
- **Sat, Nov 26-29**: Thanksgiving Holiday (Campus Closed)
- **Sun, Dec 13**: Last Day of Classes
- **Mon-Thur, Dec 14-17**: ** Final Exams
- **Fri, Dec 18**: Mid-Year Recess Begins for Students
- **Fri, Dec 18**: Fall Semester Ends

**Spring Semester 2021**
- **Fri, Jan 1**: Observance of New Year’s Day
- **Sat, Jan 16**: Classes Begin
- **Mon, Jan 18**: Observance of Martin Luther King, Jr. Holiday
- **Mon, Feb 15**: Observance of Presidents’ Day
- **Tue, Feb 16**: Find a Class Opens for Summer/Fall 2021
- **Mon, Mar 1**: Summer/Fall 2021 Priority Registration for Currently Enrolled Students
- **Sat, Mar 6**: + Last Day for Withdrawal without Instructor’s Signature
- **Mon, Mar 8**: ++ Student Withdrawal with Instructor’s Signature Begins
- **Mon-Sun, Mar 15-21**: Spring Break
- **Mon, Mar 15**: Summer/Fall 2021 Open Registration Begins
- **Sun, May 9**: Last Day of Classes
- **Mon-Thur, May 10-13**: ** Final Exams
- **Thur-Fri, May 13 or 14**: Commencement
- **Fri, May 14**: Spring Semester Ends
- **Mon, May 31**: Observance of Memorial Day

* 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, student may initiate an official withdrawal from course(s) without instructor signature (see Appendix 5-7 in Catalog Common Pages).

++ After the 7th week, student must initiate an official withdrawal request from instructor and obtain their signature (see Appendix 5-7 in Catalog Common Pages).
President’s Message
Greg Peterson, President

Congratulations on your decision to pursue your education at Chandler-Gilbert Community College! Whether you plan on earning a degree or a certificate, you are preparing to transfer to a four-year university, or you are looking to further develop in your career or personal life, CGCC can provide the path for you to reach your goals. With 68 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.

Since its founding in 1985, Chandler-Gilbert Community College has served thousands of students in the East Valley at its Pecos and Williams campuses, Sun Lakes Center, and Communiversity at Queen Creek. We pride ourselves on the excellence of our innovative faculty and staff, on our state-of-the-art facilities, on our broad array of campus life and events, and on our commitment to inclusion and diversity. At CGCC, you belong, and we are here to help you succeed!

The Catalog and Student Handbook is an important resource for you and contains the information you need as you begin your college experience. I recommend that you check out the 2020-2021 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!

Greg Peterson, Ed.D.

Greg Peterson
President
**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 CGCCC will support and contribute to the implementation of this student development philosophy.
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 maricopa.edu/transfer for more details.

Affiliations & Associations

Accreditation Commission for Education in Nursing
The Nursing Program at Chandler-Gilbert Community College 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.

American Board of Funeral Service Education (ABFSE)

Federal Aviation Administration
The Aircraft Maintenance Technology Programs, designed to prepare students for licensure as certified airframe and powerplant (A&P) mechanics, are certified by the Federal Aviation Administration (FAA), Part 147.

The Aircraft Flight Technology Programs, designed to prepare students to apply technical knowledge and skills to prepare them for Commercial Pilot Certificate with Single Engine Airplane Land Rating and Instrument Rating, and the Multiengine Rating are certified by the FAA, Part 141, through a partnership with the UND Aerospace Foundation. All aviation programs are housed in the Aviation and Technology Center at the Williams Campus, 7360 East Tahoe Avenue, Mesa, AZ 85212-0908.

Delta Leasing, Inc.
dba Quantum Helicopters
CGCC and Quantum Helicopters in Chandler, Arizona have partnered to establish a joint flight training program at the Williams Campus and the Chandler Municipal Airport. The program supports the helicopter flight track of the Associate in Applied Science degree in Airways Flight Science and provides expanded opportunities for students in aviation.
UND Aerospace Foundation
CGCC and the University of North Dakota Aerospace Foundation have partnered to establish a joint flight training program at the Williams Campus. The University of North Dakota program is an internationally recognized leader in aviation education. CGCC’s partnership with UND Aerospace presents a tremendous opportunity for students desiring a career in aviation flight.

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

The Pecos Campus of CGCC is located on Pecos Road between Cooper and Gilbert Roads in Chandler. CGCC’s original campus opened in 1987 and is home to numerous associate degrees, university transfer, general studies, occupational, and special interest courses and programs.

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

The Williams Campus of CGCC is near the Phoenix-Mesa Gateway Airport on Sossaman between Ray and Williams Field roads. Opened in 1995 on the former Williams Air Force Base, the Williams Campus is a comprehensive campus offering associate degrees, certificates and a wide array of general studies and university transfer courses. The campus neighbors ASU Polytechnic for the benefit of students interested in completing their four-year degree in one location. Housing is available.
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 Map**
7360 East Tahoe Avenue
Mesa, AZ 85212-0908
(480) 988-8000

**Directions:** The Williams Campus is located 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

The Sun Lakes Center of CGCC is located at the northeast corner of Alma School and Riggs in Sun Lakes. The Center focuses on the lifelong learning needs of the mature adult population in the Southeast Valley.

**Communiversity at Queen Creek**

21740 South Ellsworth Road  
Queen Creek, AZ 85142  
480-726-4182

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.
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 my.maricopa.edu 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
- Hears Admissions and Standards appeals, including refund issues (requests must be in writing)

For additional information, visit admissions or call 480-732-7320 at the Pecos Campus and 480-988-8000 at the Williams Campus.

Academic Advisement

Identify, develop, and plan your path to success and completion with an Academic Advisor! Academic Advising Services at CGCC provide students guidance and support to navigate college resources, program and degree requirements, and university transfer options.

All first-time college students attend Coyote Kickoff which provides initial advisement and new student orientation in one experience.

Continuing students are encouraged to meet individually with an academic advisor in subsequent semesters, to develop a collaborative relationship and shared responsibility for academic goal setting and achievement.

Academic Advising Services are available in the Coyote Center on the Pecos Campus, in Bluford Hall on the Williams Campus, and limited services are available at the Communiversity in Queen Creek and online at CGC.edu/Advisement.

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 or call:
- Women’s Volleyball 480-732-7365
- Men’s Baseball 480-732-7364
- Men’s & Women’s Golf 480-732-7073
- Men’s & Women’s Soccer 480-732-7363
- Women’s Basketball 480-732-7357
- Men’s Basketball 480-732-7366
- Softball 480-732-7168
- Athletic Trainer 480-732-7003
- Athletic Director 480-732-7177
- Academic Advisement for Athletes 480-732-7364

Bookstore

Students are able to purchase books and supplies in-person through bookstores at the Pecos and Williams Campuses. The Pecos Campus bookstore building is located northwest of the Student Center (Building SC). The Williams Campus bookstore is located inside Bridget Hall.

Students may also purchase textbooks online and have them shipped directly to their homes at chandler.bkstr.com.

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

The Bookstore allows students to pay with cash, check, or major credit card. Complete payment and refund policies are posted at the Pecos and Williams Campus Bookstores.

Call 480-732-7352 for more information about the Pecos Campus Bookstore. Call 480-988-8106 for more information about the Williams Campus Bookstore.
Career Services
Discover your career path with Career Services. Take online career exploration assessments to understand how potential careers connect to your skills, interests, and values. Identify academic majors that relate to your intended career pathway. Develop techniques to confidently present yourself to employers and other industry professionals. Make sure to attend CGCC’s career readiness workshops and campus career fairs. Come see us on the second floor of the Coyote Center Building, at the Pecos Campus and in Bluford Hall, at the Williams Campus or visit www.cgc.edu/careers

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 contact CTE or to find more information on how this area can assist you, please call 480-732-7361.

Computer Labs
Currently enrolled students who require computer resources to complete class assignments have access to open Computer Labs located on the Pecos Campus in Bradshaw Hall, room BRD123, and on the Williams Campus in Bridget Hall inside the library. Open Computer Labs feature self-paced learning environments in which students study course materials, complete assignments, and research information. Computer Lab learning associates and student assistants are available for general questions. 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. Hours of operation may vary each semester, with greatest usage occurring during early morning hours. Students should call 480-732-7221 or visit 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 the Bradshaw Hall, room BRD101. At Williams, we are located in Bluford Hall, room BLUF141. Find us online at www.cgc.edu/counseling for information about hours, maps, and current program offerings.

CPD Courses
One way in which we support students is through offering a range of Counseling & Personal Development (CPD) courses. The most popular of these courses is CPD150: Strategies for College Success, which provides students with a range of skills and knowledge to assist them in improving their academic performance, making progress with their career exploration and development process, and increasing awareness of campus resources here to support them through graduation or university transfer. Other courses we offer include: Educational and Career Planning (CPD150AC), Career Exploration (CPD102AB), Career & Personal Development (CPD104), Creating College Success (CPD115), and Introduction to Multiculturalism (CPD160).

CLASI Workshops
In addition to teaching CPD courses, our Counseling Faculty also offer a variety of CLASI (Classroom Academic Skill Integration) workshops each semester. These interactive workshops, which can be attended in person or taken as a series of online modules, offer
students the opportunity to learn about common academic challenges and techniques to overcome them. Topics offered include: Motivation & Procrastination, Time Management, Listening & Note-taking, Transition to College, and Test Anxiety.

**Individual Student Support**
Outside the classroom, students sometimes need additional support to manage specific concerns or issues that are hindering their best efforts to be successful. Our Counseling faculty provide free, appointments and consultations for enrolled students.

**Academic Counseling**
- Balancing life, work, and school demands
- Study strategies and time management
- Test anxiety

**Career Counseling**
- Interpretation of career assessments
- Exploring interests, values, and skills related to the world of work
- Exploring majors and career options
- Goal setting and decision-making

**Personal Support**
- Solution-focused problem solving
- Successful college adjustment
- Stress management and coping skills

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

**Referrals**
- Provide referral information for students seeking 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 www.cgc.edu/counseling under the Resources tab. 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, or call 480-732-7158 during normal business hours.

**Disability Resources & Services**
Please see Student Support and Disability Resources & Services.

**Distance Learning**
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 students who are self-motivated and are able to learn independently using online tutorials and assignments. Communication among students, and between students and instructors, is mediated by Canvas, the Learning Management System (LMS) used for online and hybrid courses. Each student is assigned a Maricopa email address, which is the official means of electronic communication between the College and students.

**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 toward an 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 K-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 from the program while attending high school. Students may apply directly through this office at myaceadvisor@cgc.edu or through the ACE contact at their high school.

**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 with CGCC or through their local high school counselor. For more information, please email the Early College Program at myaceadvisor@cgc.edu

**Special Events**
The Office of Early Outreach works with a variety of K-12 and community partners to create college-bound events for K-12 students. An example of our successful partnerships with the Chandler Unified School District is a program called Destination College. Destination College is a summer school program for 3rd, 4th, and 5th graders. Students learn about the importance of reaching their educational goals while they are still in elementary school. For more information, please call 480-732-7205.

**Enrollment Services**
Enrollment services, located on the Pecos Campus in the Coyote Center, and Bluford Hall at our Williams location, includes Academic Advisement; Admissions, Records, and Registration; Financial Aid; the Testing Center; New Student Orientation; and Recruitment Services. These departments help ensure student success by facilitating the advisement, registration and retention of students. See also: Admissions, Records and Registration on page 13 and Financial Aid page 17 and Veterans Services on page 26.

**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

**Placement Testing**
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](https://www.maricopa.edu/future-students/assessment-placement)
Facilities Services

The Facilities Services office is responsible for creating and maintaining a physical environment conducive to effective teaching and learning. To report issues with buildings or college grounds, call 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 855-622-2332 (toll free) and available 24 hours/7 days a week. See also: Enrollment Services on page 16.

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 www.fafsa.gov 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 Answer Center for specific details: 855-622-2332 or visit the Financial Aid website at www.cgc.edu/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 www.cgc.edu/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 www.cgc.edu/aid/workstudy for more information.

Food Services

CGCC has two full-service dining options: The Coyote Cafe is located in Bradshaw Hall, Room BRD133, at the Pecos Campus and the Roadrunner Cafe is located in Bridget Hall, BRID138, at the Williams Campus. Grounds for Thought, a coffee shop, is located near the Ironwood Courtyard at the Pecos Campus. Food service for the CGCC community is provided Monday-Friday, but hours of operation may vary. Food Services also provides catering for special events, banquets, and meetings. The manager is glad to hear students’ comments and assist with catering arrangements by calling 480-732-7362.
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
- Photo and Videography
- Project Management

IT provides technical support at the Pecos Campus, Williams Campus, Sun Lakes Center, and the 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.

Institutional Research

The Institutional Research office, located on the Pecos Campus in Mesquite Hall (MSQ), provides assistance to 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 Institutional Effectiveness Plan, providing administrative support to the Student Learning Outcomes Assessment Committee, and providing appropriate research support to faculty and staff to improve the delivery of products and services. Call 480-857-5118 or visit https://sites.google.com/cgc.edu/par/home.

International Education Program

Program Contact 480-726-4236
iep@cgc.edu or www.cgc.edu/ss/intl

The International Education Program (IEP) aims to promote an environment that encourages global understanding, appreciation and citizenship by providing support services and programs that enhance academic, cultural and social international efforts of Chandler-Gilbert Community College and the community. IEP is committed to providing services and support for students, faculty, and staff who are interested in an international dimension to their learning, research or teaching. Student support services and activities include immigration counseling, admissions, orientation, ESL advisement, intercultural adjustment, and workshops. IEP also provides support for the Intercultural Exchange Club and organizes cultural activities to enhance cross-cultural understanding among domestic and international students on campus. IEP is located on the 2nd floor of the Coyote Center at the Pecos Campus.

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 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 or call 480-732-7231.
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
- Trained tutors, including math and science faculty
- Computers with mathematics and science software
- Calculators and current textbooks
- Reference materials, handouts, science models and microscopes
- Interactive workshops focusing on a variety of mathematics and science topics

my.maricopa.edu

my.maricopa.edu 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
- View financial aid
- Check student grades
- Update address/phone
- Check course availability

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)
- 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

Library

Pecos

Monday-Thursday, 7:30am -9:00pm
Friday, 7:30am-2:00pm
Saturday, 8:00am-2:00pm
Sunday, closed
Circulation: 480-857-5102; Reference: 480-857-5100

Williams (Bridget Hall)

Monday-Thursday, 8:00am-8:00pm
Friday, 8:00am-2:00pm
Saturday & Sunday, closed
Circulation: 480-988-6611, Reference: 480-988-8275

Visit www.cgc.edu/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.

Electronic Resources

Students, faculty, and staff will use their MEID to access the Library’s electronic resources.

Student ID/Library Cards

See Student Identification Cards on page 23.

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 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.

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.

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.

Student Identification Cards
Student identification (ID) cards are obtained from the
Enrollment Services Office, located in the Coyote
Center at the Pecos Campus or in Bluford Hall at the
Williams Campus. The first card is free and can be
obtained after payment of tuition and fees.

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.

Student Dress Code
Students are expected to dress appropriately and in good taste at all times while on campus, in the classroom, or in the Student Center. Students are required to wear some type of shirt in addition to other normal apparel. State Health Department laws and college policy require that all students wear shoes. If, in the opinion of the faculty or staff member, any student’s dress, manner, appearance, or conduct distracts, disrupts or interferes in any way 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 Vice President of Student Affairs.

**Student Financial Services**

The Student Financial Services office manages financial operations for the college, including tuition and fee collections, and provides financial accountability to funding agencies and individuals. Trained and qualified staff members also provide student assistance during both day and evening hours in the Coyote Center at the Pecos Campus and in Bluford Hall at the Williams Campus. Students and parents who have questions about their accounts, outside of financial aid issues, should call 480-732-7312 or e-mail at askcashiers@cgc.edu. Students can also visit www.cgc.edu/fiscal for additional information.

**Student Helpline**

Support for student concerns, complaints and college wide issues in and out of the classroom.

Chandler-Gilbert Community College is committed to the development of our students. Students may need support to review and resolve complaints, concerns and issues that they face here at the college in and out of the classroom.

The following steps are recommended to any student who has a problem and need some guidance as to next steps. This support relates to any college issues related to classes, faculty, other students, college services, college staff and events and activities. We will also help direct students to personal and academic support. Our role is not to judge your complaint or concern but to help you resolve it in an appropriate manner.

If you need someone to help you figure out where to start with you complaint or concern, please follow the steps listed below.

1. Call 480-732-7322 for support. We will listen to your concern and help direct you through the appropriate process. We offer non-judgmental support to all CGCC students. This office serves as an advocate for any student issues at CGCC.

2. You can leave a recorded message on this line 24 hours a day. Please leave your name, your concern and a student advocate will return your call and help you with your issue, complaint or concerns.

3. Email student-helpline@cgc.edu directly. Please explain what is happening, your name and the best way to contact you. Emails are responded to on a daily basis.

The VFSA’s Office provides information on all student services and the following MCCCD policies:

- Student Rights and Responsibilities
- Student Conduct and Grievances
- ADA Accommodations
- Sexual Harassment Issues
- 504 and Title IX

**Student Housing**

Student residential living is available at the Williams Campus for those students who meet eligibility and criteria. Two-, three-, four-, and five bedroom houses and residential hall rooms and suites are available for rent. Housing at the Williams Campus is open to any student enrolled in the minimum number of credit hours at one of the Maricopa Community Colleges.

Verification of Continuing Students and Good Standing:
Student status and eligibility to remain in residential living will be verified each term. To remain in good standing and continue residing on the Williams Campus, students need to be enrolled throughout the term(s) and meet all requirements of the housing agreement. Contact the Williams Campus Housing Office at 480-727-1700 for specific information, or visit housing.asu.edu

**Student Identification Cards**

Student identification (ID) cards are obtained from the Enrollment Services Office, located in the Coyote Center at the Pecos Campus, or in Bluford Hall at the Williams Campus. The first card is free and can be obtained after enrolling in courses. 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. Replacement cards can be purchased for $5 at Student Financial Services, located in the Coyote Center, at the Pecos Campus, or Bluford Hall at the Williams Campus.

**Student Immunization**

Students who were born after January, 1957, and who were not immunized after 1968 are urged to seek immunization for measles/rubella to safeguard their health and to prevent illness that could interrupt their educational plans. Students transferring to one of the three state universities must have up-to-date immunization records. All Arizona state universities require immunization for admittance.

**Student Insurance**

More information is available here. Or please visit or contact the Office of the Vice President of Student Affairs in the Pecos Campus; 480-732-7322.

**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 Pavilion at the Pecos Campus and Bridget Hall at the Williams Campus. There are many opportunities to enhance classroom experience with co-curricular activities. These include leadership development, community service programs, cultural events, and an opportunity to participate in one of the many student organizations. For additional information visit: [www.cgc.edu/student/life](http://www.cgc.edu/student/life). To participate in campus, community service programs, or Service-Learning call the Office of Student Life and Leadership at 480-732-7104.

**Leadership Development**

Getting Involved - Leadership Retreats and Leadership Activities Leadership retreats are organized to increase students’ leadership skills during the fall and spring semesters. Interested students are encouraged to call the Office of Student Life and Leadership.

**Community Service and Volunteer Opportunities**

Students are encouraged to serve and volunteer on campus and in the community in a variety of ways. Some of the activities that students participate in include:

**Coyote Cupboard**

The Coyote Cupboard is a food pantry non-perishable and household items available to any CGCC student or employee. CGCC is in partnership with Matthew’s Crossing Food Bank. See a staff member of Student Life for hours of operation during the week day. The pantry is available at the Pecos and Williams Campus.

**Service-Learning**

This is an exciting program designed to integrate community service into the classroom. This program benefits everyone involved: students, faculty members, and the community. Students interested in participating in Service-Learning events or wanting further information are encouraged to stop by or call the Office of Student Life and Leadership at the Pecos Campus at 480-732-7069.

**Into the Streets**

Each semester students are encouraged to participate in the Into the Streets program, which is designed to give students hands-on experience serving in some of CGCC’s many community service agencies, such as the Boys and Girls Clubs, nursing homes, and homeless shelters.

**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.

**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 visit or contact the Student Life office.

- APIC – Asian Pacific Islander Club
- Business Professionals
- Educators Rising
- Engineering Club
- HELP – Hands Enriching Life Program
- HSO – Hispanic Student Organization
- IEC – Inter-cultural Exchange Club
- Kairos – Christian Club
- MEN – Male Empowerment Network
- One Voice
- Pre-Health Professionals Club
- Psychology Club
- PTK – Phi Theta Kappa
- Student Veterans Organization
- Women Rising

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.

Co-Curricular and Multicultural Programs
Co-curricular programs are fairly new programs that refer to activities, programs, events, and learning experiences that compliment 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 stop by or call the Office of Student Life and Leadership.

College and Student Activities Budgets
CGCC allocates funds to a variety of college and students 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 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 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 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.

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 and information regarding student rights and advocacy and academic adjustments that support student learning.

Travel by Students
Official college trips should be made in vehicles provided by the college or by commercial vehicles. College vehicles may be used for official college business only. See MCCCD policy on Operation and Insurance Coverage of District Owned and/or Leased Vehicles and Privately Owned Vehicular Usage for District Purposes. The college
president may require an advisor(s) for college-sponsored student trips that involve out-of-county travel. No approved college organization, association or club that is financed out of the appropriate revenue fund budget shall travel out of state more than three (3) times during one (1) school year. Exceptions may be made for student officers who hold offices in national or regional organizations and tournaments. For travel out of the country, Governing Board approval is required. 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.

**Trip Reduction Program**

Full-time students are encouraged to participate in Maricopa County's Trip 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 Trip Reduction Coordinator for details. Complete information about the program is available at [www.cgc.edu/trip](http://www.cgc.edu/trip).

**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 – Vocational Rehabilitation (separately served through local VA Vocational Rehabilitation offices)
- 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 (Track I and III)

Approved Funding for VA Flight Training for 2020-2021
Flight Standards District Office (FSDO)
Approved Minimum Times Per Part 141 Training Course Outlines

Costs are calculated according to the following hourly rates:

<table>
<thead>
<tr>
<th>Aircraft Rate</th>
<th>Solo Rate</th>
<th>Dual Rate</th>
<th>Aircraft Training Device (ATD)</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cessna 172/P Archer</td>
<td>$144.00</td>
<td>$210.00</td>
<td>Single Engine ATD (Dual Only)</td>
<td>$151.00</td>
</tr>
<tr>
<td>Seminole</td>
<td>NA</td>
<td>$350.00</td>
<td>Mentor ATD (Dual Only)</td>
<td>$166.00</td>
</tr>
</tbody>
</table>

Instructor Rate: $66.00

"Dual" includes Instructor cost
Commercial Instrument Pilot Airplane Single and Multi-Engine Land (SMEL) Course (Part 141)

This course is made up of three individual flight courses. The total flight time requirement is 155 hours of the combined courses. It is imperative that you meet each course requirement to satisfy the total time requirement.

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET210 - Instrument Commercial Flight I</td>
<td>59.5</td>
</tr>
<tr>
<td>AET220 - Instrument Commercial Flight II</td>
<td>70.5</td>
</tr>
<tr>
<td>AET240 - Multi-Engine Airplane Pilot Flight</td>
<td>25.0</td>
</tr>
<tr>
<td></td>
<td>155.0</td>
</tr>
</tbody>
</table>

The above estimates represent minimum flight hours to meet Federal Aviation Administration requirements. Students may need additional flight hours to demonstrate competency.

The following rates and flight hours have been approved for VA funding at the UND Aerospace FTC located at Mesa, AZ. VA will only fund these minimum training requirements and students are required to cover additional costs. VA will only cover costs listed for each specific time requirement.

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Hours</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET210 - Instrument Commercial Flight I (Lessons 1-36)</td>
<td></td>
<td>$9,991.40</td>
</tr>
<tr>
<td>Dual Cessna 172</td>
<td>25.5</td>
<td>$5,355.00</td>
</tr>
<tr>
<td>Solo Cessna 172</td>
<td>10</td>
<td>$1,440.00</td>
</tr>
<tr>
<td>Dual ATD</td>
<td>14</td>
<td>$2,114.00</td>
</tr>
<tr>
<td>Ground</td>
<td>6.5</td>
<td>$429.00</td>
</tr>
<tr>
<td>Pre/Post</td>
<td>9.9</td>
<td>$653.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$9,991.40</td>
</tr>
<tr>
<td>AET220 - Instrument Commercial Flight II (Lessons 37-68)</td>
<td></td>
<td>$13,263.40</td>
</tr>
<tr>
<td>Dual Cessna 172</td>
<td>43.7</td>
<td>$9,177.00</td>
</tr>
<tr>
<td>Solo Cessna 172</td>
<td>10</td>
<td>$1,440.00</td>
</tr>
<tr>
<td>Dual ATD</td>
<td>5.2</td>
<td>$785.20</td>
</tr>
<tr>
<td>Ground</td>
<td>16</td>
<td>$1,056.00</td>
</tr>
<tr>
<td>Pre/Post</td>
<td>12.2</td>
<td>$805.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$13,263.40</td>
</tr>
<tr>
<td>AET240 - Multi-Engine Systems &amp; Procedures (Lessons 69-94)</td>
<td></td>
<td>$7,718.50</td>
</tr>
<tr>
<td>Dual Seminole</td>
<td>15</td>
<td>$5,250.00</td>
</tr>
<tr>
<td>Dual ATD</td>
<td>10</td>
<td>$1,660.00</td>
</tr>
<tr>
<td>Ground</td>
<td>6</td>
<td>$396.00</td>
</tr>
<tr>
<td>Pre/Post</td>
<td>6.25</td>
<td>$412.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$7,718.50</td>
</tr>
<tr>
<td>AET230 - Certified Flight Instructor</td>
<td></td>
<td>$7,616.50</td>
</tr>
<tr>
<td>Dual Cessna 172</td>
<td>24</td>
<td>$5,040.00</td>
</tr>
<tr>
<td>Dual Single Engine ATD</td>
<td>1</td>
<td>$151.00</td>
</tr>
<tr>
<td>Ground</td>
<td>30.5</td>
<td>$2,013.00</td>
</tr>
<tr>
<td>Pre/Post</td>
<td>6.25</td>
<td>$412.50</td>
</tr>
</tbody>
</table>

FSDO-approved minimum times per part 141 training course outlines.

Total: $38,589.80
**2020-2021 Projected Individual Flight Training Costs**

These are the projected costs for flight courses for the 2020-2021 school 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. 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**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET110 - Private Pilot Certification</td>
<td>$13,381.00</td>
</tr>
<tr>
<td>Instructor Time</td>
<td>83 hrs</td>
</tr>
<tr>
<td>S.E. Simulator</td>
<td>3 hrs</td>
</tr>
<tr>
<td>Piper Archer</td>
<td>52 hrs</td>
</tr>
<tr>
<td>FAA Written**</td>
<td>(1) hr</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET112 - Private Pilot Test Course</td>
<td>$2,892.00</td>
</tr>
<tr>
<td>Instructor Time</td>
<td>22 hrs</td>
</tr>
<tr>
<td>Piper Archer</td>
<td>10 hrs</td>
</tr>
</tbody>
</table>

AET112 - Requires Private Pilot certificate prior to initiating training with CGCC

**Instrument, Commercial and Multi-Engine**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET210 - Instrument Commercial Flight I (Lessons 1-36)</td>
<td>$12,231.00</td>
</tr>
<tr>
<td>Instructor Time</td>
<td>70 hrs</td>
</tr>
<tr>
<td>S.E. Simulator</td>
<td>15 hrs</td>
</tr>
<tr>
<td>Piper Archer</td>
<td>44 hrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET220 - Instrument Commercial Flight II (Lessons 37-68)</td>
<td>$14,476.00</td>
</tr>
<tr>
<td>Instructor Time</td>
<td>82 hrs</td>
</tr>
<tr>
<td>S.E. Simulator</td>
<td>8 hrs</td>
</tr>
<tr>
<td>Piper Archer</td>
<td>56 hrs</td>
</tr>
<tr>
<td>FAA Written**</td>
<td>(2) hrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET240 - Multi-Engine Systems &amp; Procedures (Lessons 69-94)</td>
<td>$12,390.00</td>
</tr>
<tr>
<td>Instructor Time</td>
<td>65 hrs</td>
</tr>
<tr>
<td>M.E. Simulator</td>
<td>10 hrs</td>
</tr>
<tr>
<td>Seminole</td>
<td>25 hrs</td>
</tr>
</tbody>
</table>

**Flight Instructor**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET230 - Certified Flight Instructor Certification</td>
<td>$8,151.00</td>
</tr>
<tr>
<td>Instructor Time</td>
<td>65 hrs</td>
</tr>
<tr>
<td>Piper Archer</td>
<td>24 hrs</td>
</tr>
<tr>
<td>S.E. Simulator</td>
<td>1 hr</td>
</tr>
<tr>
<td>FAA Written**</td>
<td>(2) hrs</td>
</tr>
</tbody>
</table>

**Associate Degree program total flight cost: $60,629.00.**

*Does not include AET270 CFII **FAA written price of $160.00 included in the budgeted total for each applicable course. ***Students using veterans’ educational benefits will only be certified for the actual cost and required flight hours of the program as identified on page 28.****AET110 - Private Pilot Certification is a prerequisite.
Pending Governing Board Approval, 8/25/20. For the most current information regarding common policies, log on to https://district.maricopa.edu/stewardship/maricopa-governance/common-pages/student-regulations.
Maricopa County Community College District
Common Policies

The Catalog Common Pages are MCCCD Administrative Regulations and Appendix items specifically relevant to students.

The Catalog Common Pages are reviewed and updated annually by the Common Pages Committee and coordinated by the Center for Curriculum and Transfer Articulation and the Associate Vice Chancellor for 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:

Bettina Celis — Associate Vice Chancellor for Academic Affairs
(480) 731-8016 | bettina.celis@domail.maricopa.edu

Felicia Ganther, JD — Associate Vice Chancellor for Student Affairs
(480) 731-8824 | felicia.ganther@domail.maricopa.edu
Maricopa Community Colleges (MCCCD) 2020-2021
Graduation/General Education Policies

All students are required to complete the degree and/or certificate requirements as approved by the MCCCD Governing Board. The college reserves the right to make necessary course and program changes in order to meet current educational standards. In addition, students must:

1. Be credited in the Admissions and Records Office/Office of Student Enrollment with no fewer than:
   60 semester credit units in courses numbered 100 or above for the Associate in Arts, Associate in Science, Associate in Arts, Elementary Education, and Associate in General Studies degrees, and 62 semester credits for the Associate in Business-General Requirements and Associate in Business-Special Requirements degrees. Minimum semester credits for completion of Associate in Arts, Associate in Science, and Associate in Arts, Fine Arts degrees with emphasis areas vary by emphasis, with none requiring fewer than 60 credits. Refer to the Program (Degree) Search at curriculum.maricopa.edu for credit minimums by emphasis. Minimum semester credits for completion of Associate in Applied Science degrees vary by specific career program, with none requiring fewer than 60 credits. For specific certificate programs, be credited with no fewer than the minimum total of credit units required for the certificate program.

   Students not continuously enrolled, as outlined in the Catalog under Which a Student Graduates Policy, must satisfy current graduation requirements.

2. Have earned a minimum of 12 semester credit units toward the degree or certificate at the district college granting the degree or certificate. The 12 hours in the AAS degree curricula must be in the Required Courses area and/or Restricted Electives courses. Courses from the General Education Core and Distribution area are excluded. In cases where the certificate requires fewer than 12 credit units, a minimum of six credit units must be completed at the college awarding the certificate. The minimum of six credit hours in the certificate or degree curricula must be in the Required Courses area and/or the Restricted Electives. Courses from the General Education Core and Distribution areas are excluded.

   Shared Programs are programs offered at multiple colleges but not available at all colleges. The requirements are identical at all the colleges offering the program.

   A shared program requires a minimum of six credit hours from the total program requirements to be completed with a grade of “C” or better at the college awarding the certificate or degree. The minimum of six credit hours in the certificate or degree curricula may be in the Required Courses area and/or the Restricted Electives. (The exception is the Nursing program; Nursing students must apply for graduation from the college where they have successfully completed Block 4 of the Associate in Applied Science in Nursing.) Courses from the General Education Core and Distribution areas are excluded. For those shared programs with less than six credit hours, the total hours for the program must be completed at the college awarding the certificate.

3. Have filed an application for the degree or certificate with the Admissions and Records Office/Office of Student Enrollment Services on the date determined by the college/center.

4. Have a minimum cumulative grade point average of 2.000 at the college granting the degree.

5. Have a minimum cumulative grade point average of 2.000 in all courses used to fulfill degree requirements
   Some specific programs have higher grade requirements. It is the student’s responsibility to be aware of these program requirements.

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies.
6. Have removed, thirty (30) days after the anticipated graduation date, all deficiencies on the record to use those courses toward program completion.

7. Have removed any indebtedness to any MCCCD college/center.

8. Have paid graduation ceremony fee, if participating in ceremony. See fee schedule for charges. See Graduation with Honors for information on honors designation.

Certificates/Degrees

The Maricopa Community Colleges offer Certificates of Completion as well as Associate Degrees, which are conferred on students who have completed a program of study. These certificates and degrees are as follows:


All candidates for a degree and/or certificate must complete the General Graduation Requirements as approved by the MCCCD Governing Board.

All students are urged to meet with a faculty advisor, program advisor or counselor as soon as possible to determine which program meets their needs and to plan their course of study.

Licensure Disclaimer

Maricopa Community Colleges courses and programs prepare students for entry into a variety of professions. Many of these professions require that a person hold an occupational license or certificate in order to work in a particular field. Typically, a person must meet certain legal requirements before obtaining such a license or certificate. These requirements are established by county, state or federal agencies, and often are based on a person’s character, or whether the person has been convicted of a criminal offense. It is possible for a student who has obtained a degree or certificate from a community college to be denied the right to work in a particular profession after completing the degree or certificate because of concerns over the student’s character or criminal background. Any student preparing to enter a field for which a professional license or certificate is required is strongly advised to consult with the appropriate government agency that issues such credentials. That agency can provide the student complete information about any requirements the law imposes for working in a particular occupation.

MCCCD General Education Statement

The general education core of the program of study for an associate degree or a certificate helps students develop a greater understanding of themselves, of their relationship with others, and of the richly diverse world in which they live. The general education experience provides students with opportunities to explore broad areas of commonly held knowledge and prepares them to contribute to society through personal, social, and professional interactions with others. General education fosters students’ personal development by opening them to new directions, perspectives, and processes.

Through its general education requirements, the Maricopa County Community College District is committed to helping students develop qualities and skills that will serve them throughout their lives. General education opportunities encourage students to:

- Build self-awareness, self-respect, and self-confidence
• Recognize and respect the beliefs, traditions, abilities, and customs of all people and all cultures
• Consider the local, global, and environmental impacts of personal, professional, and social decisions and actions
• Access, evaluate, analyze, synthesize, and use information wisely
• Communicate effectively personally, socially, and professionally
• Think critically, make informed decisions, solve problems, and implement decisions
• Consider the ethical implications of their choices
• Value the learning process throughout their lives
• Integrate and connect ideas and events in a historical perspective, and see relationships among the past, the present, and the future
• Develop a personal sense of aesthetics
• Use technological resources appropriately and productively
• Work cooperatively and respectfully with others to serve their communities

The general education experience at MCCCD is composed of specific elements across the curriculum designed to provide the learner with essential knowledge and skills:

• Communication
• Arts and Humanities
• Numeracy
• Scientific Inquiry in the Natural and Social Sciences
• Information Literacy
• Problem-Solving and Critical Thinking
• Cultural Diversity

General Education Designations (example: (FYC), [SB], [HU], etc.)

Effective Fall 2000 the course evaluation and/or general education designation, as listed in the Arizona Course Equivalency Guide (CEG) within AZ Transfer, is valid for the term in which the student is awarded credit on the transcript. A course evaluation and/or general education designation may be subject to change. Given that curriculum is dynamic at both MCCCD and the institutions to which MCCCD students transfer, students have the option to petition for general education evaluations and/or general education designations.

The college reserves the right to make necessary course and program changes in order to meet current educational standards.

Maricopa Community Colleges (MCCCD) 2020-2021
General Academic Policies for Associate Degrees Designed for University Transfer

Description

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).

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies
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 (administrative regulation 2.3.9).
- Minimum semester credits for completion vary slightly by degree and specific emphasis (when applicable). Refer to the Program (Degree) Search at https://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\* 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 https://curriculum.maricopa.edu/

General Education Requirements

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

**Core**
- 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], and
- Natural Sciences (Science Quantitative [SQ], Science General [SG])

**Awareness Areas**
- Cultural Diversity in the U.S. [C]
- 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 a Core Area, one or more Awareness Areas, MCCCD Additional Requirements and, for some degree types, other lower division courses used to meet the degree requirements. For example, CRE101 may be used to satisfy both the MCCCD Reading Requirement and the Literacy and Critical Inquiry area [L] of the AGEC core. 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 Associate in Science (AS) degree, a single course cannot be used to satisfy more than one AGEC Core Area.

- The AGEC-A and AGEC-B require a minimum of 35 credits\* and the AGEC-S requires a minimum of 36 credits\*, 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.

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 checksheets 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 and Associate in Science degrees. Refer to the Program (Degree) Search at 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.

- General Electives may need to be selected to meet the minimum total credits required for the degree. All courses numbered 100-or-higher may be applied as General Electives. Students are encouraged to select courses that align with their goals.

- 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.

- 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, 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.

- External courses evaluated either as equivalent to an MCCCD course or as elective credit may be applied toward the minimum credits for degree completion.

- 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 (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.

- Credit awarded at a Maricopa Community College for prior learning 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.

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies.
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 A2ZTransfer Major Guides at aztransfer.com and/or university transfer guides can also provide some guidance. For appropriate course selection, students should consult with an academic advisor.

Maricopa Community Colleges (MCCCD) 2020-2021 Catalog Under Which A Student Graduates

Description

Students maintaining continuous enrollment at any public Arizona community college or university may graduate according to the requirements of the catalog in effect at the time of initial enrollment or according to the requirements of any single catalog in effect during subsequent terms of continuous enrollment. Students may maintain continuous enrollment whether attending a single public community college or university in Arizona or transferring among public institutions in Arizona while pursuing their degrees.

1. A semester in which a student earns course credit will be counted toward continuous enrollment. Non-credit courses, audited courses, failed courses, or courses from which the student withdraws do not count toward the determination of continuous enrollment for catalog purposes.

| EXAMPLE A: |
| Admitted & Earned Course Credit at a Public Community College or University | Fall '18 | (Active) |
| Continued at a Public Community College | Spring '19, Fall '19 | (Active) |
| Transferred to a University | Spring '20 | (2018 or Any Subsequent Catalog) |

| EXAMPLE B: |
| Admitted & Earned Course Credit at a Public Community College or University | Fall '18 | (Active) |
| Enrolled But Earned All Ws, Zs, or Fs | Spring '19 | (Inactive) |
| Enrolled in Audit Courses Only | Fall '19 | (Inactive) |
| Nonattendance | Spring '20 | (Inactive) |
| Transferred to a University | Fall '20 | (2020 or Any Subsequent Catalog) |

2. Students who do not meet the minimum enrollment standard stipulated in No. 1 during three consecutive semesters (fall/spring/fall or spring/fall/spring) and the intervening summer term* at any public Arizona community college or university are no longer considered continuously enrolled, and must meet requirements of the public Arizona community...
college or university catalog in effect at the time they are readmitted or of any single catalog in effect during subsequent terms of continuous enrollment after readmission.

**EXAMPLE A:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admitted &amp; Earned Course Credit at a Public Community College or University</td>
<td>Fall '18 (Active)</td>
</tr>
<tr>
<td>Nonattendance</td>
<td>Spring '19, Fall '19, Spring '20 (Inactive)</td>
</tr>
<tr>
<td>Readmitted &amp; Earned Course Credit at a Public Community College</td>
<td>Fall '20 (Active)</td>
</tr>
<tr>
<td>Transferred to a University</td>
<td>Spring '21 (2020 or Any Subsequent Catalog)</td>
</tr>
</tbody>
</table>

**EXAMPLE B:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admitted &amp; Earned Course Credit at a Public Community College or University</td>
<td>Fall '18 (Active)</td>
</tr>
<tr>
<td>Nonattendance</td>
<td>Spring '19 (Inactive)</td>
</tr>
<tr>
<td>Readmitted &amp; Earned Course Credit at a Public Community College</td>
<td>Summer '19 (Active)</td>
</tr>
<tr>
<td>Nonattendance</td>
<td>Fall '19, Spring '20 (Inactive)</td>
</tr>
<tr>
<td>Transferred to a University</td>
<td>Fall '20 (2018 or Any Subsequent Catalog)</td>
</tr>
</tbody>
</table>

*Students are not obligated to enroll and earn course credit during summer terms, but summer enrollment may be used to maintain continuous enrollment status.

3. Students admitted or readmitted to a public Arizona community college or university during a summer term must follow the requirements of the catalog in effect the following fall semester or of any single catalog in effect during subsequent terms of continuous enrollment.

**EXAMPLE**

<table>
<thead>
<tr>
<th>Event</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admitted &amp; Earned Course Credit at a Public Community College or University</td>
<td>Summer '18 (Active)</td>
</tr>
<tr>
<td>Continued at a Public Community College</td>
<td>Fall '18, Spring '19 (Active)</td>
</tr>
<tr>
<td>Nonattendance</td>
<td>Fall '19 (Inactive)</td>
</tr>
<tr>
<td>Readmitted &amp; Earned Course Credit at a Public Community College</td>
<td>Spring '20 (Active)</td>
</tr>
<tr>
<td>Transferred to a University</td>
<td>Summer '20 (2018 or Any Subsequent Catalog)</td>
</tr>
</tbody>
</table>

4. Students transferring among Arizona public higher education institutions must meet the admission requirements, residency requirements, and all curricular and academic requirements of the degree-granting institution.

**NOTE:** Time Limit for Transfer Coursework

Students should be aware that the receiving institution may have age and credit limits on certain coursework to be used in transfer. Students should be knowledgeable about the policies on time limits for transfer coursework for the institution to which they plan to transfer.
Maricopa Community Colleges (MCCCD) 2020-2021
Arizona General Education Curriculum (AGEC) – A, B, S

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. The AGEC-A and AGEC-B require a minimum of 35* credit hours, and the AGEC-S requires a minimum of 36* credit hours.

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.

There are three types of AGECs in MCCCD: AGEC-A, AGEC-B, and AGEC-S. As described below, these AGECs are also 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 Core courses in First Year Composition [FYC], Literacy and Critical Inquiry [L], Mathematical Studies [MA/CS] (Exception: The AGEC-S does not require CS.), Social-Behavioral Sciences [SB], Humanities, Design and Fine Arts [HU], and Natural Science [SQ/SG]. Students must satisfy two Awareness areas: Cultural Diversity in U.S. and either Global Awareness or Historical Awareness.

Purpose of the AGECs
AGECs were designed to articulate with different academic majors, 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; 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: www.aztransfer.com

1. The AGEC-A is designed to satisfy 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. 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 credits of either university chemistry, university physics or general biology for majors to satisfy the Natural Sciences [SQ/SG] requirement. In addition, students must select six to ten additional credits 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* (AGEC-A, AGEC-B) and 36 credit hours* (AGEC-S) in courses numbered 100 and above and that a minimum of 12 of those credits be taken 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.*

- All courses applied to the AGEC must be completed with a grade of “C” or better.

- A single course can simultaneously count toward a Core Area and one or more Awareness Areas. For example, a course in world geography can 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 Core Area.

- The AGEC-A and AGEC-B require a minimum of 35* credits and the AGEC-S requires a minimum of 36* credits, however, the AGEC credit count within the total credits for a degree may be lower than 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.

Transfer Credit from Institutions Outside of MCCCD

- Credits transferred from outside of MCCCD must be a grade of “C” (2.0 on a 4.0 scale) 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.

- 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 (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.

- Credit awarded at a Maricopa Community College for prior learning in non-traditional setting is transferable to the other colleges in the MCCC 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.

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.

- 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 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 General Education Core and Awareness Areas within each AGEC: [AGEC matrix](https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies). Courses available for both Areas during a current or upcoming semester can also be found using the “Find a Class” tool on maricopa.edu and on each MCCCD college’s website.

*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 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

The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)*, however, the AGEC credit count within the total credits for a degree may be lower if courses are also applied toward Required Courses or Restricted Electives and the credits are counted in those areas. Credits count once toward the total for the degree. Therefore, the AGEC-A may be met with fewer than 35 credits (fewer than 32 if FYC is met by single transfer course)* within an associate degree provided that all requirements listed below are completed.

##### A. Core Areas

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 their respective Core Area, Required Course(s) or Restricted Elective(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://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies) for each course’s value(s) in the semester it is taken.

1. **First-Year Composition (FYC)**
   - ENG101 or ENG107
   - AND ENG102 or ENG108
   - 6*

2. **Literacy and Critical Inquiry [L]**
   - 3

3. **Mathematical Applications [MA]**
   - Requires a course in college mathematics (MAT140, MAT141, MAT142, MAT145, MAT146) or college algebra (MAT150, MAT151, MAT152, MAT155, MAT156) or pre calculus (MAT187) or higher [MA]-approved general education course.
   - 3-6

4. **Computer/Statistics/Quantitative Applications [CS]**
   - 3

5. **Humanities, Arts and Design [HU]**
   - Students are encouraged to choose course work from more than one discipline.
   - 6

6. **Social-Behavioral Sciences [SB]**
   - Students are encouraged to choose course work from more than one discipline.
   - 6

7. **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

##### B. Awareness Areas:

Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s).
Arizona General Education Curriculum-Business (AGEC-B) Requirements

The AGEC-B requires a minimum of 35 credits (32 if FYC is met by single transfer course)*, however, the AGEC credit count within the total credits for a degree may be lower if courses are also applied toward Required Courses or Restricted Electives and the credits are counted in those areas. Credits count once toward the total for the degree. Therefore, the AGEC-B may be met with fewer than 35 credits (fewer than 32 if FYC is met by single transfer course)* within an associate degree provided that all requirements listed below are completed.

A. Core Areas

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 their respective Core Area, Required Course(s) or Restricted Elective(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 for each course's value(s) in the semester it is taken.

1. First-Year Composition (FYC) ................................................................. 6*
   ENGI01 or ENGI07 AND ................................................................. -3*
   ENGI02 OR ENGI08 ................................................................. -3)*
2. Literacy and Critical Inquiry [L] .............................................................. 3
3. Mathematical Applications [MA] ........................................................... (3-5)
   MAT212 Brief Calculus OR (3)
   MAT213 Brief Calculus OR (4)
   Higher [MA] designated course (3-5)
   CISI05 Survey of Computer Information Systems
5. Humanities, Arts and Design [HU] ......................................................... 6
   Students are encouraged to choose course work from more than one discipline.
   ECN211 Macroeconomics AND ECN212 Microeconomics
7. Natural Sciences [SQ/SG] ..................................................................... 8
   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.

B. Awareness Areas .............................................................................. 0-6

Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s).
(See AGEC matrix for current course values.)

a. Cultural Diversity in the United States [C] ... (0-3)
b. Global Awareness [G] OR Historical Awareness [H] ... (0-3)

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

The AGEC-S requires a minimum of 36 credits (33 if FYC is met by single transfer course)*, however, the AGEC credit count within the total credits for a degree may be lower if courses are also applied toward Required Courses or Restricted Electives and the credits are counted in those areas. Credits count once toward the total for the degree. Therefore, the AGEC-S may be met with fewer than 36 credits (fewer than 33 if FYC is met by single transfer course)* within an associate degree provided that all requirements listed below are completed.

A. Core Areas

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 their respective Core Area, Required Course(s) or Restricted Elective(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 for each course's value(s) in the semester it is taken.

1. First-Year Composition (FYC) ................................................................. 6*
   ENGI01 or ENGI07 AND ................................................................. -3*
   ENGI02 OR ENGI08 ................................................................. -3)*
2. Literacy and Critical Inquiry [L] .............................................................. 3
3. Mathematical Applications [MA] ........................................................... (3-5)
   MAT212 Brief Calculus OR (3)
   MAT213 Brief Calculus OR (4)
   Higher [MA] designated course (3-5)
   CISI05 Survey of Computer Information Systems
5. Humanities, Arts and Design [HU] ......................................................... 6
   Students are encouraged to choose course work from more than one discipline.
   ECN211 Macroeconomics AND ECN212 Microeconomics
7. Natural Sciences [SQ/SG] ..................................................................... 8
   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.
Restricted Electives and the credits are counted in those areas. Credits count once toward the total for the degree. Therefore, the AGEC-S may be met with fewer than 36 credits (fewer than 33 if FYC is met by single transfer course)* within an associate degree provided that all requirements listed below are completed.

A. Core Areas

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 their respective Core Area, Required Course(s) or Restricted Elective(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 for each course's value(s) in the semester it is taken.

1. First-Year Composition (FYC) 6
   ENG101 or ENG107 AND ENG102 OR ENG108 . (3*)

2. Literacy and Critical Inquiry [L] (0-3) (0 only if shared with [HU] or [SB])
   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]). (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

3. Mathematical Applications [MA] 4-5
   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 pre-requisite.

4. Humanities, Arts and Design [HU] 6
   For the AGEC-S, a single course with both [HU] and [L] designations may satisfy both Areas. Note that 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 their respective Core Area(s). (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

5. Social-Behavioral Sciences [SB] 6
   For the AGEC-S, a single course with both [SB] and [L] designations may satisfy both Areas. Note that 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 their respective Core Area(s). (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

6. Natural Sciences [SQ/SG] 8
   Students must complete eight (8) credits of General Chemistry, University Physics or General Biology for Majors. Consult specific requirements of university transfer major for guidance.
   • [CHM150 or CHM151I & CHM151LL] OR
   • [CHM150AA or CHM151AA General Chemistry I AND
   • [CHM152 & CHM152LL] or CHM152AA General Chemistry II OR
   • PHY115 or PHY121 University Physics I AND
   • PHY116 or PHY131 University Physics II OR
   • BIO181 OR BIO181XT General Biology (Majors) I & BIO182 or BIO182XT General Biology (Majors) II

7. Subject Options -Math/Science 6-10
   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 selected major.
   • Select Mathematics course(s) [MAT] above Calculus I and/or
   • Computer Science course(s) [CSC] and/or
Science courses from the following disciplines: Astronomy, Biology, Botany, Chemistry, Engineering, Environmental Science, Geology, Physical Geography, Physics, Zoology (MCCCD prefixes AST, BIO (except BIO174), CHM, ECE, EEE, ENV, GLG, GPH, and/or PHY)

B. Awareness Areas: 0-6

Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s).

1. Cultural Diversity in the United States [C] (0-3)
2. Global Awareness [G] OR Historical Awareness [H] (0-3)

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 Studies [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]
The Social-Behavioral Sciences Core area provides 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.

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies
Natural Sciences [SQ/SG]
In addition to an understanding of basic scientific principles and concepts, courses in the Natural Sciences Core area 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 U.S. and either Global Awareness or Historical Awareness. Courses can satisfy a Core area and one or two Awareness areas simultaneously. Therefore, no additional semester credits are required to satisfy the two Awareness areas.

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.

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**Maricopa Community Colleges (MCCCD) 2020-2021 Associate in Arts (AA) Degree**

**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 the Program (Degree) Search at curriculum.maricopa.edu for credit minimums for individual degree programs by emphasis. A minimum grade point average of 2.0 and grades of “C” or higher are required to earn the degree. The AA degree is governed by the MCCCD General Academic Policies for Transfer Degrees.

The Associate in Arts degree includes the following components:

I. Program Prerequisites (if applicable, for versions with an emphasis only)
II. Required Courses (for versions with an emphasis only)
III. Restricted Electives (for versions with an emphasis only)
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: www.aztransfer.com

**Degree Requirements**

The requirements for the Associate in Arts (AA) follow. No versions of the Associate in Arts require fewer than a minimum of 60 credits; however, minimum credits for the AA vary by specific emphasis. Refer to the Program (Degree) Search at curriculum.maricopa.edu for credit minimums by emphasis. The following websites identify the courses that
apply to the different General Education Core and Awareness Areas: AGEC-A and the AGEC matrix. Courses available for both Areas during a current or upcoming semester can also be found using the “Find a Class” tool on maricopa.edu and on each MCCCD college’s website.

**Degree Requirements**

<table>
<thead>
<tr>
<th>Credits</th>
<th>I. Program Prerequisites</th>
<th>Number Varies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program prerequisites for the Associate in Arts degree vary by specific emphasis, and are not required for the version of the degree without a specific emphasis. Refer to the Program (Degree) Search at curriculum.maricopa.edu for specific courses and credit minimums by emphasis.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits</th>
<th>II. Required Courses</th>
<th>Number Varies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required (major-specific) courses for the Associate in Arts degree vary by specific emphasis, and are not required for the version of the degree without a specific emphasis. Refer to the Program (Degree) Search at curriculum.maricopa.edu for specific courses and credit minimums by emphasis.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits</th>
<th>III. Restricted Electives</th>
<th>Number Varies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted electives for the Associate in Arts degree vary by specific emphasis, and are not required for version of the degree without a specific emphasis. Refer to the Program (Degree) Search at curriculum.maricopa.edu for specific courses and credit minimums by emphasis.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits</th>
<th>IV. Arizona General Education Curriculum-Arts (AGEC-A)</th>
<th>up to 44</th>
</tr>
</thead>
<tbody>
<tr>
<td>The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)<em>, however, prerequisite/required/restricted elective courses may also meet AGEC-A requirements and credits count once toward the total for the degree. Therefore, the AGEC-A may be met with fewer than 35 credits (fewer than 32 if FYC is met by single transfer course)</em> as long as all requirements listed in this section (IV) are completed.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits</th>
<th>A. Core Areas</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>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 their respective Core Area, Required Course(s) or Restricted Elective(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 for each course's value(s) in the semester it is taken.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. First-Year Composition (FYC)  | 6* |
| ENG101 OR ENG107 AND  | .(3)* |
| ENG102 OR ENGI08  | .(3)* |

2. Literacy and Critical Inquiry [L] | 3 |

3. Mathematical Applications [MA] | 3-6 |
| Requires a course in college mathematics (MAT140, MAT141, MAT142, MAT145, MAT146) or college algebra (MAT150, MAT151, MAT152, MAT155, MAT156) or pre calculus (MAT187) or higher [MA]-approved general education course. |


5. Humanities, Arts and Design [HU] | 6 |
| Students are encouraged to choose course work from more than one discipline |

| Students are encouraged to choose course work from more than one discipline |

7. Natural Sciences [SQ/SQ] | 8 |
| 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... |
For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies

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Separate credit. At least four credits must be designated as SQ-Science Quantitative. Eight credits of SG-Science General will not satisfy this requirement.

B. Awareness Areas  

Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s).  
(See AGEC matrix for current course values.)

- Cultural Diversity in the United States [C]  
- Global Awareness [G] OR Historical Awareness [H]

V. MCCCD Additional Requirements  

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

A. Oral Communication

- COM100 [SB] Introduction to Human Communication OR
- COM110 [SB] Interpersonal Communication OR
- COM225 [L] Public Speaking OR
- COM230 [SB] Small Group Communication (3 credits) OR
- COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
- COM110AA & COM110AB & COM110AC [SB] (3 credits)

B. Critical Reading

- Students may demonstrate proficiency through assessment. CRE101 [L] Critical Reading OR equivalent as indicated by assessment

VI. General Electives

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, maricopa.edu/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*

*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.
Maricopa Community Colleges (MCCCD) 2020-2021 Associate in Arts, Elementary Education Degree (AAEE)

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 and grades of "C" or higher are required to earn the degree. The AAEE degree is governed by the MCCCD General Academic Policies for Transfer Degrees.

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.

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-A and the AGEC matrix. Courses available for both Areas during a current or upcoming semester can also be found using the “Find a Class” tool on maricopa.edu and on each MCCCD college's website.

<table>
<thead>
<tr>
<th>Degree Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Required Courses</td>
<td>17</td>
</tr>
<tr>
<td>EDU2221 Introduction to Education</td>
<td>(3)</td>
</tr>
<tr>
<td>EDU222 Introduction to the Exceptional Learner</td>
<td>(3)</td>
</tr>
<tr>
<td>EDU230 Cultural Diversity in Education</td>
<td>(3)</td>
</tr>
<tr>
<td>MAT256 Investigating Quantity: Number, Operations, and Numeration Systems</td>
<td>(4)</td>
</tr>
<tr>
<td>MAT257 Investigating Geometry, Probability, and Statistics</td>
<td>(4)</td>
</tr>
</tbody>
</table>

II. Restricted Electives                      | 8       |
A total of 8 semester credits is required to satisfy the Electives for Arizona Professional Teacher Standards: 3 credits in an additional Education course and 5 credits in Content Area Electives, as outlined below.

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 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.

Select one additional EDU course (other than EDU221, EDU222, EDU230 or EDU250). (3)

Recommended:
- EDU110 Education in Film
- EDU220 Introduction to Serving English Language Learners (ELL)

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies.
Choose any combination from the following list of courses and prefixes to total 5 credits of additional coursework. Course(s) selected must be different from those used to fulfill a requirement of the AGEC-A or to fulfill an Education Foundations requirement.

**Content Area Electives:** Select 5 credits from the following.

- AAA/CPD115 Creating College Success
- ARH+++ Any ARH Art Humanities course(s)
- ART+++ Any ART Art course(s)
- CFS/ECHI76 Child Development
- CIS205 Human Development
- CIS+++ Any CIS Computer Information Systems course(s)
- ECN+++ Any ECN Economics course(s)
- ENG+++ Any ENG English course(s)
- ENH+++ Any ENH English Humanities 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 (except MAT256 and MAT257)
- 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)
- Any Natural Science course(s)

### III. Arizona General Education Curriculum--Arts (AGEC-A)

The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)*, however, prerequisite/required/restricted elective courses may also meet AGEC-A requirements and credits count once toward the total for the degree. Therefore, the AGEC-A may be met with fewer than 35 credits (fewer than 32 if FYC is met by single transfer course)* as long as all requirements listed in this section (III) are completed.

#### A. Core Areas:

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 their respective Core Area, Required Course(s) or Restricted Elective(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://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies) for each course's value(s) in the semester it is taken.

1. **First-Year Composition (FYC)**
   - ENG101 OR ENG107 AND ENG102 OR ENG108

2. **Literacy and Critical Inquiry [L]-COM225 Public Speaking**

For the most current information regarding common policies degree requirements, log on to [https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies](https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies)
3. Mathematical Applications [MA] ................................................................. 3-6
   Requires a course in college mathematics (MAT140, MAT141, MAT142, MAT145, MAT146) or college algebra (MAT150, MAT151, MAT152, MAT155, MAT156) or pre calculus (MAT187) or any other [MA] designated course for which college algebra is a pre-requisite. (Note that MAT256, MAT257, MAT182, and MAT206 are excluded)

   BPC110 Computer Usage and Applications OR
   CIS105 Survey of Computer Information Systems

5. Humanities, Arts and Design [HU] ................................................................. 6
   *NOTE that some of these courses also have Awareness Areas designations (see section 2 below) and can be used to satisfy [G] and/or [H] requirement as well as [HU]. (AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.)

   1) Select one of the following ARH, DAH, MHL or THE courses (3)
      • ARH100 Introduction to Art OR
      • ARH101 Prehistoric through Gothic Art OR
      • ARH102 Renaissance through Contemporary Art OR
      • DAH100 Introduction to Dance OR
      • DAH201 World Dance Studies OR
      • DAH250 Dance in Popular Culture OR
      • MHL140 Survey of Music History OR
      • MHL145 American Jazz and Popular Music OR
      • MHL146 Survey of Broadway Musicals OR
      • MHL153 Rock Music and Culture OR
      • THE111 Introduction to Theatre OR
      • THE220 Modern Drama

   AND

   1) Select one of the following EDU, ENH or HUM courses (3)
      • EDU/ENH291 Children’s Literature (Recommended) OR
      • ENH110 Introduction to Literature OR
      • ENH241 American Literature Before 1860 OR
      • ENH242 American Literature After 1860 OR
      • HUM250 Ideas and Values in the Humanities OR
      • HUM251 Ideas and Values in the Humanities

   Note that some of these courses also have Awareness Areas designations (see section 2 below) and can be used to satisfy [G] and/or [H] requirement as well as [SB]. (AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.)

   1) Select one of the following US History/Government courses* (3)
      These courses satisfy the United States Constitution requirement for state teacher certification.
      • HIS103 United States History to 1865 OR
      • POS110 American National Government OR
      • GCU/POS113 United States and Arizona Social Studies

   2) Select one of the following CFS, ECH, GCU, ECN, HIS or PSY courses (3)
      • CFS205 Human Development OR
      • ECH/CFS176 Child Development OR
      • GCU121 World Geography I: Eastern Hemisphere OR
      • GCU122 World Geography II: Western Hemisphere OR

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies.
- ECN211 Macroeconomic Principles OR
- ECN212 Microeconomic Principles OR
- HIS104 United States History 1865 to Present OR
- PSY101 Introduction to Psychology

7. Natural Sciences [SQ, SG] ................................................................. 8

The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of 4 credits each. At least four (4) credits must be designated as SQ. Eight (8) credits of SG will not satisfy this requirement.

1) Life Sciences: Select four (4) credits of SQ in Biology (BIO) from the following courses. (4)
   - 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
   - BIO156 Introductory Biology for Allied Health
   - BIO156XT Introductory Biology for Allied Health
   - BIO181 General Biology (Majors) I
   - BIO241 Human Genetics AND

2) 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.

B. Awareness Areas ................................................................. 0-3
   a. Cultural Diversity in the United States [C] .................................................. (0)
      Met by EDU222 and EDU230 in Required Courses
   b. Global Awareness [G] OR Historical Awareness [H] .................................. (0-3)
      May be met by [HU] and/or [SB] course depending on specific courses selected. (AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.)

IV. MCCCD Additional Requirements .............................................. 0-3

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

A. Oral Communication ............................................................... (0)
   Met by COM225 in Required Courses.

B. Critical Reading ................................................................. (0-3)

   Students may demonstrate proficiency through assessment.

   CRE101 [L] Critical Reading OR equivalent as indicated by assessment

Total: 60-68*

*NOTE: State certification requirements include courses on the constitutions of US and Arizona. Taking GCU/POS113 for [SB] fulfills this requirement completely. Students who instead take HIS103 or POS110 for [SB] should consider taking POS221 as a Content Area Elective so they have completed study of both constitutions. POS220 meets state certification requirements for both constitutions but does not meet [SB].

**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.

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies
Maricopa Community Colleges (MCCCD) 2020-2021
Associate in Arts, Fine Arts (AAFA)-Art, Dance, Music, Theatre

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 (Art, Dance, Music, Musical Theatre, Theatre). Refer to the Program (Degree) Search at curriculum.maricopa.edu for credit minimums for individual degree programs by emphasis. A minimum grade point average of 2.0 and grades of “C” or higher are required to earn the degree. The AA-FA degree is governed by the MCCCD General Academic Policies for Transfer Degrees.

The Associate in Arts, Fine Arts degree includes the following components:
I. Program Prerequisites (if applicable)
II. Required Courses
III. Restricted Electives
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, which may require a portfolio or performance requirement.

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: www.aztransfer.com

Degree Requirements
The requirements for the Associate in Arts, Fine Arts (AAFA) follow. No versions of the AAFA require fewer than a minimum of 60 credits; however, minimum total credits for the AAFA vary by specific emphasis (Art, Dance, Music, Musical Theatre, Theatre). Refer to the Program (Degree) Search at curriculum.maricopa.edu for credit minimums by emphasis. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-A and the AGEC matrix. Courses available for both Areas during a current or upcoming semester can also be found using the “Find a Class” tool on maricopa.edu and on each MCCCD college’s website.

<table>
<thead>
<tr>
<th>Degree Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Program Prerequisites</td>
<td>Number Varies</td>
</tr>
<tr>
<td>II. Required Courses</td>
<td>Number Varies</td>
</tr>
</tbody>
</table>

Program prerequisites for the Associate in Arts, Fine Arts degree vary by specific emphasis (Art, Dance, Music, Musical Theatre, Theatre). Refer to the Program (Degree) Search at curriculum.maricopa.edu for specific courses and credit minimums by emphasis.

Required (major-specific) courses for the Associate in Arts, Fine Arts degree vary by specific emphasis (Art, Dance,
Music, Musical Theatre, Theatre). Refer to the Program (Degree) Search at curriculum.maricopa.edu for specific courses and credit minimums by emphasis.

III. Restricted Electives ........................................................ Number Varies

Restricted electives for the Associate in Arts, Fine Arts degree vary by specific emphasis (Art, Dance, Music, Musical Theatre, Theatre). Refer to the Program (Degree) Search at curriculum.maricopa.edu for specific courses and credit minimums by emphasis.

IV. Arizona General Education Curriculum-Arts (AGEC-A) .................................................. up to 44

The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)*, however, prerequisite/required/restricted elective courses may also meet AGEC-A requirements and credits count once toward the total for the degree. Therefore, the AGEC-A may be met with fewer than 35 credits (fewer than 32 if FYC is met by single transfer course)* as long as all requirements listed in this section (IV) are completed.

A. Core Areas: ................................................................................................................................. 6*

1. First-Year Composition [FYC] ............................................................................................................ 6*
   ENG101 OR ENG107 .............................................................................................................................. 3*
   AND ENG102 OR ENG108 .................................................................................................................. 3*

2. Literacy and Critical Inquiry [L] .......................................................................................................... 3

3. Mathematical Applications [MA] ...................................................................................................... 3-6

   Requires a course in college mathematics (MAT140, MAT141, MAT142, MAT145, MAT146) or college algebra (MAT150, MAT151, MAT152, MAT155, MAT156) or pre calculus (MAT187) or higher [MA]-approved general education course.


5. Humanities, Arts and Design [HU] .................................................................................................... 6

   Major specific pathways for the AAFA will specify courses to be taken to fulfill the Humanities, Arts and Design area. Students should refer to their specific pathway for courses to meet this requirement.


   Students are encouraged to choose course work from more than one discipline.

7. Natural Sciences [SQ/SG] ............................................................................................................... 8

   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.

B. Awareness Areas .......................................................................................................................... 0-6

Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s). (See AGEC matrix for current course values.)

1. Cultural Diversity in the United States [C] ......................................................................................... (0-3)

2. Global Awareness [G] OR Historical Awareness [H] ...................................................................... (0-3)

V. MCCCD Additional Requirements .................................................................................................. 0-6

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/degrees-certificates/associate-degrees/academic-policies
As noted below, courses in this area may also be applied towards AGEC-A Core Area requirements.

A. Oral Communication
   • Refer to emphasis area (Art, Dance, Music, Musical Theatre, Theatre) for specific COM course required from the following: COM100 [SB] Introduction to Human Communication OR
   • COM110 [SB] Interpersonal Communication OR
   • COM225 [L] Public Speaking OR
   • COM230 [SB] Small Group Communication (3 credits) OR
   • COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
   • COM110AA & COM110AB & COM110AC [SB] (3 credits)

B. Critical Reading
   Students may demonstrate proficiency through assessment.
   CRE101 [L] Critical Reading OR equivalent as indicated by assessment

VI. General Electives
   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, maricopa.edu/transfer/partners, as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.

MINIMUM TOTAL CREDITS REQUIRED*

AAFA, Emphasis in Art..........................................................60
AAFA, Emphasis in Dance....................................................62
AAFA, Emphasis in Music.....................................................64
AAFA, Emphasis in Musical Theatre.................................65
AAFA, Emphasis in Theatre................................................60

Total: 60-64*

*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.

Maricopa Community Colleges (MCCCD) 2020-2021 Associate in Science, (AS) Degree

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 the Program (Degree) Search at 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 Transfer Degrees.
The Associate in Arts degree includes the following components:

I. Program Prerequisites (if applicable, for versions with an emphasis only)
II. Required Courses (for versions with an emphasis only)
III. Restricted Electives (for versions with an emphasis only)
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.

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 tAS 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

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 his/her 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’s Core Area. 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 follow. All versions of the Associate in Science require at least 60 credits; for major-specific pathways within the degree, prescribed courses and minimum credits for categories within the degree, as well as the total, vary. Refer to the Program (Degree) Search at curriculum.maricopa.edu for credit minimums for major-specific pathways within the degree. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-S and the AGEC Matrix. Courses available for both Areas during a current or upcoming semester can also be found using the “Find a Class” tool on each MCCCD college’s website.

<table>
<thead>
<tr>
<th>Degree Requirements</th>
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<td>I. Program Prerequisites</td>
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<tr>
<td>II. Required Courses</td>
<td>Number varies</td>
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</tbody>
</table>

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies
required for the version of the degree without a specific emphasis. Refer to the Program (Degree) Search at curriculum.maricopa.edu for specific courses and credit minimums by emphasis.

III. Restricted Electives. ............................................ Number varies
Restricted electives for the Associate in Science degree vary by specific emphasis, and are not required for version of the degree without a specific emphasis. Refer to the Program (Degree) Search at curriculum.maricopa.edu for specific courses and credit minimums by emphasis.

IV. Arizona General Education Curriculum—Science (AGEC-S). ........................................ Up to 56
The AGEC-S requires a minimum of 36 credits (33 if FYC is met by single transfer course)*, however, prerequisite/required/restricted elective courses may also meet AGEC-S requirements and credits count once toward the total for the degree. Therefore, the AGEC-S may be met with fewer than 36 credits (33 if FYC is met by single transfer course)* as long as all requirements listed in this section (IV) are completed.

A. Core Areas:
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 their respective Core Area, Required Course(s) or Restricted Elective(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 for each course’s value(s) in the semester it is taken.

1. First-Year Composition [FYC] .......................................................... 6*
   ENG101 OR ENG107 ............................................................................ (3)*
   AND ENG102 OR ENG108 ................................................................. (3)*

2. Literacy and Critical Inquiry [L] ......................................................... 0-3 (0 only if shared with HU or SB)
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]). (AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.)

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. Humanities, Arts and Design [HU] ................................................... 6
For the AGEC-S, a single course with both [HU] and [L] designations may satisfy both Areas. Note that 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 their respective Core Area(s). (AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.)

5. Social-Behavioral Sciences [SB] ....................................................... 6
For the AGEC-S, a single course with both [SB] and [L] designations may satisfy both Areas. Note that 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 their respective Core Area(s). (AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.)

6. Natural Sciences [SQ/SG] ................................................................. 8
Students must complete eight (8) credits of General Chemistry, University Physics or General Biology for Majors. Consult specific requirements of university transfer major for guidance.
   ([CHM150 or CHM151) & CHM151LL] or
   CHM150AA or CHM151AA General Chemistry I AND
   [CHM152 & CHM152LL] or CHM152AA General Chemistry II OR

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies
PHY115 or PHY121 University Physics I AND
PHY116 or PHY121 University Physics I OR
BIO181 or BIO181XT General Biology (Majors) I AND
BIO182 or BIO182XT General Biology (Majors) II

7. Subject Options-Math/Science ................................. 6-10

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 selected major.

Select Mathematics course(s) [MAT] above Calculus I and/or
Computer Science course(s) [CSC] and/or
Science courses from the following disciplines: Astronomy, Biology, Botany, Chemistry, Engineering, Environmental Science, Geology, Physical Geography, Physics, Zoology (MCCCD prefixes AST, BIO (except BIO174), CHM, ECE, EEE, ENV, GLG, GPH, and/or PHY)

B. Awareness Areas .............................................. 0-6

Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s). (See AGEC matrix for current course values.)

1. Cultural Diversity in the United States [C] ........................ (0-3)
2. Global Awareness [G] OR Historical Awareness [H] .................. (0-3)

V. MCCCD Additional Requirements ............................... 0-6

As noted below, courses in this area may be used to satisfy both an MCCCD requirement and an AGEC-S Core Area requirement.

A. Oral Communication ........................................... (0-3)
   - COM100 [SB] Introduction to Human Communication OR
   - COM110 [SB] Interpersonal Communication OR
   - COM225 [L] Public Speaking OR
   - COM230 [SB] Small Group Communication (3 credits) OR
   - COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
   - COM110AA & COM110AB & COM110AC [SB] (3 credits)

B. Critical Reading ................................................. (0-3)

Students may demonstrate proficiency through assessment.
CRE101 [L] Critical Reading OR equivalent as indicated by assessment

VI. General Electives ................................................ 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:
For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies, as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.

Total: 60-64*
* 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.

Maricopa Community Colleges (MCCCD) 2020-2021 Associate in Business, General Requirements (ABUS-GR) Degree

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 and grades of “C” or higher are required 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 specialize in business. For a comprehensive list of bachelor’s degrees at Arizona’s public universities, refer to the AZTransfer Business Matrix. 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.

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.)
• A single course can be used to satisfy multiple areas within the degree simultaneously (AGEC-B Core Area and/or Awareness Area(s), Required Courses (Common Lower Division Requirements), and/or Restricted Electives (Business Electives)). Credits are counted once toward the total for the degree.
Degree Requirements

The 62-72 semester credits required for the Associate in Business General Requirements follow. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-B and the AGEC Matrix. Courses available for both Areas during a current or upcoming semester can also be found using the “Find A Class” tool on each MCCCD college’s website.

### Degree Requirements

#### I. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC111 Accounting Principles AND</td>
<td>(6-9)</td>
</tr>
<tr>
<td>ACC230 Uses of Accounting Information I AND</td>
<td></td>
</tr>
<tr>
<td>ACC240 Uses of Accounting Information II OR</td>
<td></td>
</tr>
<tr>
<td>ACC211 Financial Accounting AND</td>
<td></td>
</tr>
<tr>
<td>ACC212 Managerial Accounting OR</td>
<td></td>
</tr>
<tr>
<td>ACC111 Accounting Principles I AND</td>
<td></td>
</tr>
<tr>
<td>ACC112 Accounting Principles II AND</td>
<td></td>
</tr>
<tr>
<td>ACC212 Managerial Accounting</td>
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</tr>
</tbody>
</table>

Some of the following courses can be used to satisfy both this requirement and an AGEC-B Core Area. AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.

- ECN211 [SB] Macroeconomic Principles............................(3)
- ECN212 [SB] Microeconomic Principles............................(3)
- GBS205 Legal, Ethical, and Regulatory Issues in Business...........(3)
- GBS221 Business Statistics..................................................(3)
- Quantitative Methods............................................................(3-4)

Some of the following courses can be used to satisfy both this requirement and an AGEC-B Core Area. AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.

- GBS220 Quantitative Methods in Business OR
- MAT217 or MAT218 Mathematical Analysis for Business

**NOTE:** Students planning to attend ASU W. P. Carey School of Business will be required to take MAT217 or MAT218

#### II. Restricted Electives

Select two courses (6 credits) from the following options:

Some courses may be used to satisfy both Restricted Elective and Arizona General Education Curriculum (AGEC) requirements, as indicated in [brackets] below, but two courses must be completed. AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.

- GBS151   Introduction to Business (Recommended)...........................(3)
- CIS114DE   Excel Spreadsheet....................................................................(3)
- CIS133DA   Internet/Web Development Level I...........................................(3)
- CIS162AD   C#: Level I...............................................................................................(3)
- GBS110   Human Relations in Business and Industry OR
- GBS233 [L] Business Communication......................................................(3)
- GBS220   Quantitative Methods in Business (If course used to satisfy Required Courses, it can not be used to satisfy Restricted Electives.)
- IBS101 [G] Introduction to International Business.................................(3)
- MGT253   Owning and Operating a Small Business..............................(3)
- REA179   Real Estate Principles I.................................................................(3)
- REA180   Real Estate Principles II.................................................................(3)
- MKT271   Principles of Marketing.................................(3)
- PAD100  21st Century Public Policy and Service...................(3)
- SBU200 [SB,G] Society and Business..............................(3)

III. Arizona General Education Curriculum-Business (AGEC-B) .................................................. 29-37*

The AGEC-B requires a minimum of 35 credits (32 if FYC is met by single transfer course)*, however, Required and Restricted elective courses may also meet AGEC-B requirements and credits count once toward the total for the degree. Therefore, the AGEC-B may be met with fewer than 35 (fewer than 32 if FYC is met by single transfer course)* credits as long as all requirements listed in this section (III) are completed.

A. Core Areas:

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 their respective Core Area, Required Course(s) or Restricted Elective(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 for each course’s value(s) in the semester it is taken.

1. First-Year Composition (FYC) .................................................. 6*
   ENG101 OR ENG107 AND ..................................................... (3)*
   ENG102 OR ENG108 ............................................................ (3)*
2. Literacy and Critical Inquiry [L] .................................................. 3
   (Note: Students planning to attend ASU W.P. Carey will be required to take COM225.)

3. Mathematical Applications [MA] .................................................. (3-5)
   MAT212 Brief Calculus OR (3)
   MAT213 Brief Calculus OR (4)
   Higher [MA] designated course (3-5)
   CIS105 Survey of Computer Information Systems
5. Humanities, Arts and Design [HU] ........................................... 6
   Students are encouraged to choose course work from more than one discipline.
6. Social-Behavioral Sciences [SB] ............................................ 0
   Met by Required Courses ECN211 AND ECN212
7. Natural Sciences [SQ/SG] ......................................................... 8
   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.

B. Awareness Areas ................................................................. 0-6

Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s). (See AGEC matrix for current course values.)

1. Cultural Diversity in the United States [C] .......................... (0-3)
2. Global Awareness [G] OR Historical Awareness [H] ............ (0-3)

Note: Students transferring to ASU in Accountancy should take two of the following courses: Sociology with [SB] value, Psychology with [SB] value, and COM230 or COM225. If students do not take these prior to transfer, they may need to take additional hours to meet ASU requirements.
IV. General Electives ........................................... 0-12
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.

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, curriculum.maricopa.edu, as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.

Total: 62-72*
*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.

Maricopa Community Colleges (MCCCD) 2020-2021 Associate in Business, Special Requirements (ABUS-SR) Degree

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 and grades of “C” or higher are required to earn the degree. 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 is governed by the MCCCD General Academic Policies for Transfer Degrees.

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 Business' 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 degree transfers as a block without loss of credit to Arizona’s public universities and other institutions with district-wide articulation agreements.
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.)
- A single course can be used to satisfy multiple areas within the degree simultaneously (AGEC-B Core Area and/or Awareness Area(s), Required Courses [Common Lower Division Requirements], and/or Restricted Electives [Business Electives]). Credits are counted once toward the total for the degree.

Degree Requirements

The 62-71 semester credits 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 and the AGEC Matrix. Courses available for both Areas during a current or upcoming semester can also be found using the "Find A Class" tool on each MCCCD college’s website.

<table>
<thead>
<tr>
<th>Degree Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Required Courses</td>
<td>27-31</td>
</tr>
</tbody>
</table>

Accounting

- ACC111 Accounting Principles AND
- ACC230 Uses of Accounting Information I AND
- ACC240 Uses of Accounting Information II or
- ACC211 Financial Accounting AND
- ACC212 Managerial Accounting OR
- ACC111 Accounting Principles I AND
- ACC112 Accounting Principles II AND
- ACC212 Managerial Accounting

Some of the following courses can be used to satisfy both this requirement and an AGEC-B Core Area. AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.

- ECN211 [SB] Macroeconomic Principles ........................................................................ (3)
- ECN212 [SB] Microeconomic Principles ........................................................................ (3)
- GBS205 Legal, Ethical, and Regulatory Issues in Business ........................................... (3)
- GBS221 Business Statistics ............................................................................................ (3)
- CIS162AD C#: Level 1 ......................................................................................................... (3)
- CIS250 Management of Information Systems .................................................................. (3)
- Quantitative Methods........................................................................................................ (3-4)

Some of the following courses can be used to satisfy both this requirement and an AGEC-B Core Area. AGEC designations are subject to change. See AGEC matrix for each course’s value(s) in the semester it is taken.

- ECN211 [SB] Macroeconomic Principles ........................................................................ (3)
- ECN212 [SB] Microeconomic Principles ........................................................................ (3)
- GBS205 Legal, Ethical, and Regulatory Issues in Business ........................................... (3)
- GBS221 Business Statistics ............................................................................................ (3)
- CIS162AD C#: Level 1 ......................................................................................................... (3)
- CIS250 Management of Information Systems .................................................................. (3)
- Quantitative Methods........................................................................................................ (3-4)

- GBS220 Quantitative Methods in Business OR
- MAT217 or MAT218 Mathematical Analysis for Business

Note: Students planning to attend ASU W. P. Carey School of Business will be required to take MAT217 or MAT218

II. Arizona General Education Curriculum - Business (AGEC-B) ........................................... 29-37*

The AGEC-B requires a minimum of 35 credits (32 if FYC is met by single transfer course)*, however, Required and Restricted elective courses may also meet AGEC-B requirements and credits count once toward the total for the degree. Therefore, the AGEC-B may be met with fewer than 35 credits (fewer than 32 if FYC is met by single transfer course)* as long as all requirements listed in this section (II) are completed.
A. Core Areas

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 their respective Core Area, Required Course(s) or Restricted Elective(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 for each course’s value(s) in the semester it is taken.

1. First-Year Composition [FYC] ................................................................. 6*
   ENG101 OR ENG107 ........................................................................... (3)*
   AND ENG102 OR ENG108 ................................................................. (3)*

2. Literacy and Critical Inquiry [L] .............................................................. 3
   (Note: Students planning to attend ASU W.P. Carey will be required to take COM225.)

   MAT212 Brief Calculus OR
   MAT213 Brief Calculus OR
   Higher [MA] designated course

   CIS105 Survey of Computer Information Systems

5. Humanities, Arts and Design [HU] ........................................................ 6
   Students are encouraged to choose course work from more than one discipline.

6. Social-Behavioral Sciences [SB] ............................................................. 0
   Met by Required Courses ECN211 AND ECN212

7. Natural Sciences [SQ/SG] ..................................................................... 8
   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.

B. Awareness Areas ................................................................................... 0-6

Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s). (See AGEC matrix for current course values.)

a. Cultural Diversity in the United States [C] ........................................... (0-3)

b. Global Awareness [G] OR Historical Awareness [H] ........................... (0-3)

Note: Students transferring to ASU in Accountancy should take two of the following courses: Sociology with [SB] value, Psychology with [SB] value, and COM230 or COM225. If students do not take these prior to transfer, they may need to take additional hours to meet ASU requirements.

III. General Electives .................................................................................. 0-6

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.

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, curriculum.maricopa.edu, as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.

Total: 62-71*

*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.

Maricopa Community Colleges (MCCCD) 2020-2021
Associate in General Studies (AGS) Degree and General Education Requirements

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. General Education (minimum of 38 credits)
   Core curriculum (requires a grade of “C” or better)
   Distribution courses (requires a grade of “D” or better)

II. General Electives (enough additional courses numbered 100 or above, passed 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 AGS allows students to apply any course numbered 100 or above, including some that are not transferable to a state university, toward the credits required for the degree. Therefore, for students who intend to transfer to another college or university in the future to pursue a bachelor’s degree, this degree may be less appropriate than other Associate degrees offered (Associate in Arts, Associate in Business, Associate in Science, and all major-specific pathway map versions of these degrees) by the Maricopa Community Colleges.

Academic Policies that Govern the Associate in General Studies Degree:

• The graduation policies within the general catalog must be satisfied.

• A single course can simultaneously count towards a Core Area and a Distribution 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 may be used to satisfy both the Literacy and Critical Inquiry requirement [L] of 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.

• Completion of the AGS 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. 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 bachelors 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. **MCCCD General Education**  
   34-47*

   A. **Core Areas.**  
      12-18
      1. First-Year Composition (FYC).  
         ENG101 or ENG107 AND ENG102 OR ENG108  
      2. Mathematics  
         3-6
      3. Computer Usage  
         1
         3
         - COM100 Introduction to Human Communication OR 
         - COM110 Interpersonal Communication OR 
         - COM225 Public Speaking OR 
         - COM230 Small Group Communication (3 credits) OR 
         - COM100AA & COM100AB & COM100AC (3 credits) OR 
         - COM110AA & COM110AB & COM110AC (3 credits)
      5. Critical Reading  
         0-3
         Students may demonstrate proficiency through assessment. CRE101 Critical Reading OR equivalent as indicated by assessment.

   **Distribution Area**  
   22-29

   1. Humanities, Arts and Design  
      9
   Students are encouraged to choose course work from more than one discipline.

   2. Social-Behavioral Sciences  
      6-9
   Students are encouraged to choose course work from more than one discipline. Social-Behavioral Sciences requirements may be met with 6 credits only if COM100, COM110, or COM230 is shared between Core and Distribution (see Academic Policies section on prior page). The credits are only counted once, but may be applied to meet Oral Communication and Social-Behavioral Science requirements.

   3. Natural Sciences  
      7-8
   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.

   4. Literacy and Critical Inquiry  
      0-3
   Literacy requirement may be met with 0 credits only if CRE101 or COM225 is shared between Core and Distribution (see Academic Policies section on prior page). The credits are only counted once, but may be applied to meet [Oral Communication and Literacy] or [Critical Reading and Literacy and Critical Inquiry] requirements.

II. **General Electives**  
   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.

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies
Associate in General Studies Total Credits: 60-64

All courses listed meet AGS requirements as specified. Courses in *Purple Italic Underline* also meet Arizona General Education Curriculum AGEC requirements. Courses in **bold print and underscored** simultaneously count towards a Core Area and a Distribution requirement.

**Degree Requirements**

**GENERAL EDUCATION CORE** (16 credits - grade of “C” or better)*

- First-Year Composition (6 credits)*
  - ENG English [101, 107] & [102, 108]

**Oral Communication (3 credits)**

- COM Communication 100, 100AA & 100AB & 100AC, 110, 110AA & 110AB & 110AC, 225, 230

**Critical Reading (3 credits)**

- CRE Critical Reading 101 or Equivalent as indicated by assessment

**Mathematics (3 credits)**


**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.

- ACC Accounting 115
- ADA Advertising Arts 169, 175, 177, 183, 283, 283AA, 289
- AJS Administration of Justice Studies 205
- AMS Automated Manufacturing System 150
- ARC Architecture 243, 244, 245
- ART Art 100, 169, 170, 173, 175, 177, 179, any 180++ course, 183, 283, 289
- BIO Biology 283
- BPC Business-Personal Computers Any BPC Course(s), including 110
- CIS Computer Information Systems Any CIS Course(s), including 105, 162AB, 162AD, 163AA (and except 159, 162AC, 217AM, 259)
- CSC Computer Science Any CSC Course(s), including 100AA, 100AB, 110, 110AA, 110AB, 120, 150, 150AA, 180, 180AA, 180AB, 181, 181AA, 181AB, 182, 182AA, 205, 205AA, 205AB, 205AC, 205AD, 283 (and except 200, 200AA, 200AB, 210, 210AA, 210AB)
- CTR Court Reporting 101, 102
- DFT Drafting Technology 105AA**, 251, 254AA, 256AA **Must be taken with CSC100AA or AB to meet AGEC value
- ECH Early Childhood Education 238
- EEE Electrical Engineering 120

For the most current information regarding common policies degree requirements, log on to [https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies](https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies)
ELE  Electronic 131, 181, 241, 243, 245
ELT  Electronic Technology 131, 241, 243
ENG  English 100AE
FON  Food & Nutrition 100
GBS  General Business 221
GIS  Geographic Information Science 205, 211
GPH  Physical Geography 220
HRM  Hotel Restaurant Management 126
JRN  Journalism 133
LAS  Paralegal Studies 229
MAT  Mathematics 206
MET  Manufacturing Technology 264
MTC  Music Theory/Composition 180, 191
NET  Networking Technology 181
OAS  Office Automation Systems 111AA /111AB /113 /119 /130DK
PSY  Psychology 230
SBS  Small Business 211
SWU  Social Work 225
TVL  Travel Agent Technology 203
VPT  Video Production Technology 106

GENERAL EDUCATION DISTRIBUTION AREAS (28-29 credits)

Humanities, Arts and Design (9 credits)
Students are encouraged to choose courses from more than one discipline.
AHU  Arabic Humanities 245
AIS  American Indian Studies 213
AJS  Administration of Justice Studies 123
ARH  Art Humanities Any ARH Course(s), including 100, 101, 102, 109, 110, 112, 115, 118, 131, 145, 201, 203, 204, 217, 216, 240, 250
ASB  Anthropology 211, 214, 220, 222, 223, 253
CCS  Chicana and Chicano Studies 101
COM  Communication 241
CON  Construction 101 (formerly CNS101)
DAH  Dance Humanities 100, 101, 201, 250, 255

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies
EDU  Education  291, 292, 294
ENG  English  200, 213, 218
FRE  French  265
GST  Game Studies  202
HCR  Health Care Related  210
HIS  History  101, 102, 103, 108, 110, 111, 113, 114, 203, 212, 251, 241, 253, 254, 252, 275
HON  Honors  190
HUM  Humanities Any HUM course(s), including  100, 101, 107, 108, 190AA, 190AB, 190AC, 190AD, 190AE, 190AF, 190AG, 190AH, 190AI, 201, 202, 205, 206, 209, 210, 211AA, 211AE, 212, 213, 214, 215, 216, 220, 235, 245, 250, 251, 260, 261, 292, 295 (and except 120, 225)
INT  Interior Design  115, 120
LAT  Latin  201, 202
MHL  Music: History/Literature  140, 143, 145, 146, 153, 155, 194, 204, 241, 242, 295
PHI  Philosophy Any PHI Course(s), including  101, 102, 103, 104, 105, 106, 113, 201, 212, 213, 214, 215, 233AC, 216, 218, 224, 233AA, 233AB, 234AC, 244, 245, 250, 251, 282AA-AC
SLC  Studies in Language & Culture  201, 202
SPA  Spanish  241, 242, 265, 266
SPH  Spanish Humanities  241, 245
SSH  Sustainability/Social Sciences and Humanities  111
STO  Storytelling  292, 294
SWU  Social Work  183
TCM  Telecommunications  107
TEC  Textiles and Clothing  105
THE  Theater  111, 220
THF  Theatre and Film  205, 206, 210
THP  Theater/Performance/Production  241
WST  Women's Studies  209, 284, 285, 290

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies.
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, COM110, or COM230 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.

AFR  African American Studies 202, 203, 204
AIS  American Indian Studies 101, 140, 141, 160
AJS  Administration of Justice Studies 101, 119, 200, 225, 258, 259, 270
ASB  Anthropology 100, 102, 202, 211, 222, 223, 226, 230, 235, 252
ASM  Anthropology 104, 275
BHS  Behavioral Health Services Technology 150
CCS  Ethnic Relations 202
CFS  Child/Family Studies 112, 157, 159, 176, 205, 235, 259
COM  Communication 100, 100AA & 100AC & 100AC, 110, 110AA & 110AB & 110AC, 163, 230, 250, 263
ECH  Early Childhood Education 176
ECN  Economics 160, 211, 212, 213, 250
EDU  Education 221, 222
EED  Early Education 200, 205, 222
EMT  Emergency Medical Technology 258
ENG  English 213
FOR  Forensic Science 275
FSC  Fire Science Technology 258
GCU  Cultural Geography 102, 113, 121, 122, 141, 221
HES  Health Science 100
HIS  History any HIS Course(s), including 100, 101, 102, 103, 104, 105, 106, 108, 109, 113, 114, 140, 145, 173, 190, 201, 203, 204, 209, 240, 241, 242, 273, 275, 277, 282AA-AC (and except 111, 170, 251, 252, 253, 254)
HON  Honors 201
IBS  International Business 109
IFS  Research in Global Society 201, 210
MCO  Mass Communications 120
MGT  Management 229, 230
PAD  Public Administration 200
POS  Political Science Any POS course(s), including 100, 101, 110, 113, 114, 115, 120, 125, 130, 140, 180, 210, 212, 221, 222, 223, 230, 270, 281AB, 282AA-AC, 285
For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies

REC  Recreation 120
SBU  Society and Business 200
SLC  Studies in Language & Culture 201
SOC  Sociology Any SOC course(s), including 101, 110, 130, 141, 157, 180, 212, 220, 241 251, 266, 270 (and except 143, 245, 253, 265)
SSH  Sustainability/Social Sciences and Humanities 111
SUS  Sustainability/Natural Sciences 110
SWU  Social Work 102, 171, 182, 250, 258, 295
TEC  Textiles and Clothing 105
WED  Wellness Education 110
WST  Women's Studies 100, 161
YAQ  Yaqui Indian History and Culture 100

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.

AGS  Agricultural Science 164, 260
ASB  Anthropology 231
ASM  Anthropology 104, 265, 275
AST  Astronomy 101, 106, 111, 112
BIO  Biology 100, 101, 102, 105, 107, 108, 109, 111, 145, 149AF, 149AH, 149AK, 149AL, 149AM, 149AN, 156, 156XT, 160, 181, 181XT, 182, 182XT, 201, 201XT, 202, 205, 241, 245
CON  Construction 106 (formerly CNS106)
ENV  Environmental Sciences 101
FON  Food and Nutrition 241 & 241LL
FOR  Forensic Science 105, 106, 275
GPH  Physical Geography 111, 112 & 113, 211, 212 & 214, 213 & 215
PHS  Physical Science 110, 120
PSY  Psychology 275, 290AB, 290AC

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies
Literacy and Critical Inquiry (0-3 credits)

Literacy requirements may be met with 0 credits only if CRE101 or COM225 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.

AIS  American Indian Studies 203, 213
COM  Communication 222, 225, 241
CPD  Counseling and Personal Development 160
CRE  Critical Reading 101, 201
CUL  Culinary Arts 223
DAH  Dance Humanities 255
EDU  Education 282AC
ENG  English 111, 200, 215, 216, 217, 218
ENH  English Humanities 241, 254, 255
EXS  Exercise Science 290
GBS  General Business 233
GPH  Physical Geography 267
HUM  Humanities 225, 250, 251
IFS  Information Studies 201
JRN  Journalism 201, 215, 234
MCO  Mass Communications 220
MHL  Music: History/Literature 204
PHI  Philosophy 103, 106, 218, 224, 244
POS  Political Science 115
PSY  Psychology 290AB, 290AC
REL  Religious Studies 203, 205, 207, 244
SLC  Studies in Language & Culture 202
THE  Theatre 220
THP  Theatre Performance/Production 241

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.
Maricopa Community Colleges (MCCCD) 2020-2021
Associate in Applied Science (AAS) Degree and
General Education Requirements

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 on the web or in the college 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 or by field of interest. Requirements for each degree can be found on the linked webpages 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 (/) 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;
- Follows the graduation policies within the general catalog;
- Includes both courses and their modular equivalents, either the course or the modular equivalents will satisfy the Associate in Applied Science requirements.
- Requires at least 12 semester credit hours earned at the college awarding the AAS degree. The 12 hours in the AAS degree curricula may be in the Required Courses area and/or Restricted Electives courses. Courses from the General Education Core and Distribution area are excluded.
- Shared Programs are programs offered at multiple colleges but not available at all colleges. The requirements are identical at all the colleges offering the program.
- A shared program requires a minimum of six credit hours from the total program requirements to be completed with a grade of “C” or better at the college awarding the certificate or degree (The exception is the Nursing program. Students must apply for graduation from the college where they have successfully completed Block 4 of the Associate in Applied Science in Nursing).
- The minimum of six credit hours in the degree curricula may be in the Required Courses area and/or the Restricted Electives. Courses from the General Education Core and Distribution areas are excluded;
- 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;
- Accepts one of the courses that is cross-referenced with other courses.

GENERAL EDUCATION CORE
(12-15 credits)* Demonstrate college-level skills in the following areas:

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies.
**First-Year Composition (6 credits)**

ENG  English [101/107] & [102/108/111]

**Oral Communication (3 credits)**

COM  Communication 100/100AA & 100AB & 100AC/110/110AA & 110AB &110AC/225/230

**Critical Reading (3 credits)**

CRE  Critical Reading 101 or Equivalent as indicated by assessment

**Mathematics (3 credits)**


Satisfactory completion of a higher level mathematics course

**GENERAL EDUCATION DISTRIBUTION AREAS (9-10 credits)**

**Humanities, Arts and Design (2-3 credits)**

AIS  American Indian Studies 213

AJS  Administration of Justice Studies 123

ARH  Art Humanities Any ARH Course(s)

ART  Art 131

ASB  Anthropology 211/214/220/222/223/253

CCS  Chicana and Chicano Studies 101

COM  Communication 241

CON  Construction 101 (formerly CNS 101)

DAH  Dance Humanities 100/101/201/250/255

EDU  Education 291/292/294

ENG  English 200/213/218

ENH  English Humanities Any ENH Course(s) (except 250)

FRE  French 265

GST  Game Studies 202

HCR  Health Care Related 210

HIS  History 101/102/103/108/110/111/113/114/203/212/251/252/275

HON  Honors 190

HUM  Humanities Any HUM course(s) (except 120, 225)

INT  Interior Design 115/120

LAT  Latin 201/202

MHL  Music: History/Literature 140/143/145/146/153/155/194/204/241/242/295

PHI  Philosophy Any PHI Course(s)

REL  Religious Studies Any REL Course(s)

SLC  Studies in Language & Culture 201/202

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For the most current information regarding common policies degree requirements, log on to [https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies](https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies)
<table>
<thead>
<tr>
<th>Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA</td>
<td>Spanish 241/242/265/266</td>
</tr>
<tr>
<td>SPH</td>
<td>Spanish Humanities 241, 245</td>
</tr>
<tr>
<td>SSH</td>
<td>Sustainability/Social Sciences and Humanities 111</td>
</tr>
<tr>
<td>STO</td>
<td>Storytelling 292/294</td>
</tr>
<tr>
<td>SWU</td>
<td>Social Work 183</td>
</tr>
<tr>
<td>TCM</td>
<td>Telecommunications 107</td>
</tr>
<tr>
<td>TEC</td>
<td>Textiles and Clothing 105</td>
</tr>
<tr>
<td>THE</td>
<td>Theatre 111/220</td>
</tr>
<tr>
<td>THF</td>
<td>Theatre and Film 205/206/210</td>
</tr>
<tr>
<td>THP</td>
<td>Theatre Performance/Production 241</td>
</tr>
<tr>
<td>WST</td>
<td>Women's Studies 209/284/285/290</td>
</tr>
</tbody>
</table>

**Social-Behavioral Sciences (3 credits)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFR</td>
<td>African American Studies 202/203/204</td>
</tr>
<tr>
<td>AIS</td>
<td>American Indian Studies 101/140/141/160</td>
</tr>
<tr>
<td>AJS</td>
<td>Administration of Justice Studies 101/200/225/258/259/270</td>
</tr>
<tr>
<td>ASB</td>
<td>Anthropology 100/102/202/211/222/223/226/230/235/252</td>
</tr>
<tr>
<td>ASM</td>
<td>Anthropology 104/275</td>
</tr>
<tr>
<td>BHS</td>
<td>Behavioral Health Services Technology 150</td>
</tr>
<tr>
<td>CCS</td>
<td>Chicana and Chicano Studies 202</td>
</tr>
<tr>
<td>CFS</td>
<td>Child/Family Studies 112/157/159/176/205/235/259</td>
</tr>
<tr>
<td>COM</td>
<td>Communications 100/100AA&amp;100AB&amp;100AC/110/110AA&amp;110AB &amp; 110AC/163/230/250/263</td>
</tr>
<tr>
<td>ECH</td>
<td>Early Childhood Education 176</td>
</tr>
<tr>
<td>ECN</td>
<td>Economics Any ECN course(s)</td>
</tr>
<tr>
<td>EDU</td>
<td>Education 221/222</td>
</tr>
<tr>
<td>EED</td>
<td>Early Education 200/205/222</td>
</tr>
<tr>
<td>EMT</td>
<td>Emergency Medical Technology 258</td>
</tr>
<tr>
<td>ENG</td>
<td>English 213</td>
</tr>
<tr>
<td>FOR</td>
<td>Forensic Science 275</td>
</tr>
<tr>
<td>FSC</td>
<td>Fire Science 258</td>
</tr>
<tr>
<td>GCU</td>
<td>Cultural Geography 102/113/121/122/141/221</td>
</tr>
<tr>
<td>HES</td>
<td>Health Science 100</td>
</tr>
<tr>
<td>HIS</td>
<td>History Any HIS course(s) (except 111,170, 251, 252, 253, 254)</td>
</tr>
<tr>
<td>HON</td>
<td>Honors 201</td>
</tr>
<tr>
<td>IBS</td>
<td>International Business 109</td>
</tr>
</tbody>
</table>

For the most current information regarding common policies degree requirements, log on to [https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies](https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies)
IFS Information Studies 201, 210
MCO Mass Communications 120
MGT Management 229/230
PAD Public Administration 200
POS Political Science Any POS course(s)
REC Recreation 120
SBU Society and Business 200
SLC Studies in Language & Culture 201
SOC Sociology Any SOC course(s) (except 143, 245, 253, 265)
SSH Sustainability/Social Sciences and Humanities 111
SUS Sustainability/Natural Sciences 110
SWU Social Work 171/182/250/258/295
TEC Textiles and Clothing 105
WED Wellness Education 110
WST Women’s Studies 100/161
YAQ Yaqui Indian History and Culture 100

**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.

AGS Agricultural Science 164, 260
ASB Anthropology (Soc/Behv. Science) 231
ASM Anthropology (Science/Math) 104/265/275
AST Astronomy 101/106/111/112
CON Construction 106 (formerly CNS106)
ENV Environmental Sciences 101
FON Food and Nutrition 241&241LL
FOR Forensic Science 105/106/275
GLG Geology Any GLG course(s)
GPH Physical Geography 111&112/113/211/212&214/213&215
PHS Physical Science 110/120

For the most current information regarding common policies degree requirements, log on to [https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies](https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies)
Maricopa Community Colleges (MCCCD) 2020-2021 
Academic Certificate (AC)

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 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 studies designations such as Humanities, Arts and Design [HU], Social-Behavioral Sciences [SB], Literacy and Critical Inquiry [L], or Cultural Awareness [C]. (See AGEC matrix 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;
- Requires a cumulative GPA of 2.0 or better in required courses for completion;
- 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/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.

Maricopa Community Colleges (MCCCD) Allied Health or Nursing Program (S-13)

Allied Health or Nursing Assumption of Risk/Release of Liability
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 1 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 Catalog Common Pages 2020-2021 Updated 7/6/2010
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

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies
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

Fields of Interest Matrix
The Maricopa County Community College Field of Interest Matrix identifies all programs currently available for offering within the ten (10) community colleges and skill centers of the district. The programs are grouped under Field of Interest as requested by the colleges. For specific information regarding individual programs, contact the college(s) listed as participating institutions.

<table>
<thead>
<tr>
<th>College</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG:</td>
<td>Chandler Gilbert Community College</td>
</tr>
<tr>
<td>PC:</td>
<td>Phoenix College</td>
</tr>
<tr>
<td>EM:</td>
<td>Estrella Mountain Community College</td>
</tr>
<tr>
<td>PV:</td>
<td>Paradise Valley Community College</td>
</tr>
<tr>
<td>GC:</td>
<td>Glendale Community College</td>
</tr>
<tr>
<td>RS:</td>
<td>Rio Salado College</td>
</tr>
<tr>
<td>GW:</td>
<td>GateWay Community College</td>
</tr>
<tr>
<td>SC:</td>
<td>Scottsdale Community College</td>
</tr>
<tr>
<td>MC:</td>
<td>Mesa Community College</td>
</tr>
<tr>
<td>SM:</td>
<td>South Mountain Community College</td>
</tr>
</tbody>
</table>

Applied Technology
- Air Conditioning and Electrical Accessories................. GW
- Air Conditioning/Refrigeration/Facilities....................... GW
- Aircraft Maintenance Technology........................................ CG
- Airway Science Technology, Flight Emphasis..................... CG
- Applied Electrical Technologies......................................... RS
- Architectural and Civil CAD Technology............................. GC
- Architectural Technology...................................................... SC
- Automated Industrial Technology................................. EM, MC
- Automated Industrial Technology I............................... EM, MC
- Automated Industrial Technology II.............................. EM, MC
- Automotive Automatic
  - Transmission and Transaxle............................................ GC, GW, MC
  - Automotive Brake Systems.............................................. GC, GW, MC
  - Automotive Chassis......................................................... GC, GW, MC
  - Automotive Drive Train.................................................. GC, GW, MC
  - Automotive Electrical, Heating, Ventilation and Air Conditioning Systems......................................................... GC, GW, MC
  - Automotive Electronic/Electrical Systems..................... GC, GW, MC
  - Automotive Engine Performance........................................ GC, GW, MC
  - Automotive Engine Repair............................................. GC, GW, MC
  - Automotive Engine Repair and Performance.................. GC, GW, MC
  - Automotive Heating, Ventilation and Air Conditioning Systems......................................................... GC, GW, MC
  - Automotive Maintenance and Light Repair...................... GC, GW, MC
  - Automotive Manual Drive Train and Axles...................... GC, GW, MC
Automotive Service ................................................GC, GW, MC
Automotive Steering and Suspension .....................GC, GW, MC
Basic Automotive Maintenance............................RS, MC
Brakes, Alignment, Suspension and Steering............MC
Building Inspection..................................................MC
CAD Application...................................................GC
CAD Fundamentals..................................................GC
Caterpillar Technician Training................................MC
Certified Flight Instructor Instrument Airplane Rating...CG
CNC Machine Operator.............................................GW, MC
CNC Machine Operator (Day)..................................GW
CNC Machine Operator (Night).................................GW
CNC Machining I ......................................................GW, MC
CNC Machining I (Day).............................................GW
CNC Machining I (Night)...........................................GW
CNC Machining II ...................................................GW, MC
CNC Machinist (Day).................................................GW
CNC Machinist (Night)..............................................GW
Collision Repair Technician (Day)...........................GW
Collision Repair Technician (Night).........................GW
Computer Aided Drafting.........................................MC
Construction Building Codes...................................MC
Construction Management.....................................MC
Construction Safety OSHA 30.................................MC
Construction Technology..........................................MC, SM
Construction Trades - Mechanical Trades: Pipefitting...GW
Construction Trades - Mechanical Trades: Plumbing ....GW
Construction Trades - Mechanical Trades: Sheet Metal...GW
Construction Trades: Electrical.................................MC, SM
Construction Trades: Electrical (Day).......................GW
Construction Trades: Electrical (Night).......................GW
Construction Trades: Carpentry................................RS
Construction Trades: Carpentry, Commercial
and Residential....................................................MC, RS, SM
Construction Trades: Carpenter, Commercial and
Residential (Day)....................................................GW
Construction Trades: Construction Management........GW, MC
Construction Trades: Electrical, Commercial and Residential................................MC, RS, SM
Construction Trades: Electrical, Commercial and Residential (Day)...................................................GW
Construction Trades: Electrical, Commercial and Residential (Night)................................................GW
Construction Trades: Electricity................................GW
Construction Trades: Heat and Frost Insulation............GW
Construction Trades: Ironworking..............................GW
Construction Trades: Millwrighting..........................GW

Construction Trades: Painting and Drywalling..........GW
Construction Trades: Plumbing.................................GW
Construction Trades: Pre-Apprenticeship..................GW
Drafting and Design Technology.............................MC
Electric Utility Technology......................................CG
Electrical Installer (Day)............................................GW
Electrical Installer (Night)..........................................GW
Electrical Systems Technology................................GW
Electrical Technician (Day)........................................GW
Electrical Technician (Night)......................................GW
Electrical Technology..............................................GW
Electrical Technology - Commercial Wiring..............GW
Electrical Technology - Industrial Wiring..................GW
Electrical Technology - Residential Wiring..............GW
Energy and Industrial Technology...........................EM
Engine Performance and Diagnosis........................GW
Environmental Science and Water Resources
Technologies.........................................................GW
Environmental Science Technology........................GW
HVAC Residential Installation and Service Technician (Day).......................................................GW
HVAC Residential Installation and Service Technician (Night)......................................................GW
HVAC Technician (Day).............................................GW
HVAC Technician (Night)..........................................GW
Industrial Design Technology...................................GW
Industrial Design Technology: Design Specialist........GW
Industrial Robotics and Automation Technology........MC
Instrumentation Systems Technology........................EM
International Residential Code................................MC
Lineman Technology Level I......................................RS
Lineman Technology Level II.....................................RS
Lineman Technology Level III....................................RS
Lineman Technology Level IV.....................................RS
Maintenance Technician: Apartments........................GW
Manufacturing Production Technology.....................GW, MC
Mechanical Drafting................................................MC
Mechanical Systems Technology................................EM
Nuclear Power Technology......................................EM
Power Systems Technology......................................EM
Production Technology: Quality Assurance................GW
Residential and Light Commercial Air Conditioning.....GW
Salt River Project Relay Apprentice........................MC
Unmanned Aircraft Systems.....................................CG
Water and Wastewater Treatment............................GW

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/
degrees-certificates/associate-degrees/academic-policies.
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degrees-certificates/associate-degrees/academic-policies

Behavioral Science and Human Services

Addictions and Substance Use Disorders.........................RS
Addictions and Substance Use Disorders Level I.............RS
Addictions and Substance Use Disorders Level II..........RS
Administration of Justice .........................CG, EM, GC, MC, PC, PV, RS, SC, SM
Administration of Justice Studies.................CG, EM, GC, MC, PC, PV, RS, SC, SM

Adolescent Studies.................................PC
Advanced Behavioral Health Sciences...............GC, SM
Advanced Corrections and Detention......................RS
Advanced Juvenile Corrections............................RS
Associate in Arts, Emphasis in Counseling and Applied
Psychological Science ..........CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Family Life Education....CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Political Science .... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Psychology .............CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Social Work.........CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Basic Behavioral Health Sciences.........................GC, SM
Basic Corrections.........................................................RS
Basic Detention.........................................................RS
Behavioral Sciences..................................................GC, SM
Child and Family Organizations Management
and Administration..............................................GC, RS
Community Emergency Response Team (CERT): Level I PC
Corrections.........................................................CG, EM, GC, MC, PC, PV, RS, SC, SM
Corrections and Detention.................................RS
Crime Scene Investigation ..........CG, GC, MC, PC, PV, SC, SM
Deaf Studies..........................................................PC
Developmental Disabilities Specialist....................GC
Driver Operator.........................................................GC, MC, PC, PV
Emergency Communications............................RS
Emergency Communications and Deployment ..........PC
Emergency Management.................................GC, MC, PC, PV
Fingerprint Identification and Photography ....CG, GC, MC, PC, PV, SC, SM
Fire Science.........................................................GC, MC, PC, PV
Fire Service Management.................................GC, MC, PC, PV
Firefighter Operations........................................GC, MC, PC, PV
Forensic Science........................................CG, GC, MC, PC, PV, SC, SM
Hazardous Materials Response..............................PC
Homeland Security.................................CG, GC, GW, MC, PC, PV, RS, SM
Human Services - Specialist: Customer Service........RS
Human Services - Unemployment Insurance:
Customer Service..................................................RS
Human Services-Assistance: Public Assistance
Eligibility..............................................................RS
Interpreter Preparation.....................................PC
Juvenile Corrections.................................RS

Degree Requirements | CGCC Catalog & Student Handbook 2020-2021
Law Enforcement ................................ CG, EM, GC, MC, PC, PV, RS, SC, SM
Law Enforcement Field Training ............................................ RS
Law Enforcement Investigator .............................................. GC, RS
Law Enforcement Training ..................................................... CG, GC, MC, RS
Law Enforcement Training Academy ..................................... CG, GC, MC, RS
Leadership Development, Level I .......................................... PV
Leadership Development, Level II .......................................... PV
Leadership in Public Safety Organizations ................................ CG, GC, MC, PC
Legal Studies ........................................................................ CG, EM, GC, MC, PC, PV, RS, SM
Non-Sworn Fire Service Professional ..................................... GC, MC, PC, PV
Paralegal ................................................................................ RS
Paralegal Studies ..................................................................... PC
Professional Addictions Counseling ....................................... RS
Public Administration ............................................................ RS
Public Administration: Legal Services ..................................... RS
Public Safety Leadership ....................................................... RS
Public Safety Technology ...................................................... RS
Victimology .......................................................................... CG, GC, MC, PC, PV, RS, SM
Workforce Development and Community Re-Entry ................. RS
Workforce Development: in Addictions and Substance Use Disorders .................................................. RS

Business, Entrepreneurialism, and Management
Accounting ........................................ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Administrative Professional .................................................. CG, EM, GC, GW, MC, PC, PV, SM
Airline Operations ............................................................... RS
Airline Operations: Reservations and Ticketing Services .......... RS
Apprentice Meat Cutter ......................................................... RS
Associate in Business, General Requirements .......... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Business, Special Requirements .......... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Automobile Insurance Claims: Customer Service ................. RS
Automobile Insurance: Customer Service ................. RS
Automobile Insurance: Policy Services .................................. RS
Bank Account Management: Customer Service ................. RS
Banking and Finance ............................................................ GW, PC
Beauty and Wellness ............................................................. GW, MC
Broadband Telecommunications .......................................... RS
Broadband Telecommunications: Field Operations ............. RS
Business Administration Fastrack ......................................... CG, GC, MC, PC, SC
Business Technology Specialist .......................................... GW
Commercial Baking and Pastry .............................................. EM, PC, SC
Court Reporting: Judicial ..................................................... GW
Credit Counseling: Customer Service ................................. RS

Culinary Arts ................................................................. EM, SC
Culinary Arts I ................................................................. EM, SC
Culinary Arts II ................................................................. EM, SC
Culinary Fundamentals ....................................................... SC, SM
Debt Resolution: Customer Service ..................................... RS
Enrolled Agent ............................................................... CG, GC, GW, MC, PC, PV, RS, SC, SM
Entrepreneurial Studies Level I ........................................ SC, SM
Entrepreneurial Studies Level II ........................................ SC, SM
Fashion Merchandising ..................................................... MC, PC
General Business .............................................................. CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Health Care Insurance: Customer Service ......................... RS
Hospitality: Golf Management ........................................... SC
Hospitality: Hotel Management ........................................... SC
Hospitality: Meeting and Event Management .................... SC
Hospitality: Restaurant Management ............................... SC
Hospitality: Spa and Wellness Center Management .......... SC
Hospitality: Tourism Development and Management .... SC
Human Resources Management .......................................... CG, GC, GW, MC, PC, RS, SC, SM
Insurance: Customer Service ............................................. RS
Interior Design Kitchen and Bath ....................................... MC, PC
Interior Design Professional ................................................ MC, SC
Interior Design Technology ................................................ MC, PC, SC
Interior Design Upholstery and Soft Goods Production ........ PC
Interior Merchandising and Home Staging ......................... EM, MC, PC, SM
Licensed Residential Appraiser ........................................... MC
Marketing ................................................................. GC, GW, MC, PC, PV, RS, SC, SM
Marketing and Sales ......................................................... GC, GW, MC, PC, PV, SC, SM
Motor Vehicle: Customer Service ........................................ RS
Organizational Leadership .................................................. CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Organizational Management .............................................. CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Personal Loans: Customer Service .................................... RS
Project Management ......................................................... MC
Property Insurance: Customer Service ............................... RS
Public Relations ............................................................... MC
Quality Customer Service .................................................. RS
Real Estate: Prelicense ....................................................... GC, MC, PV, SC, SM
Residential Appraisal Trainee .............................................. MC
Retail Management ......................................................... SC, SM
Retail Pharmacy: Customer Service .................................. RS
Risk Management and Insurance ........................................ SC, SM

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies.
Small Business Management Level I ........CG, EM, GC, GW, MC, PC, RS, SM
Small Business Management Level II ...... CG, GC, GW, MC, PC, RS, SM
Small Business Start-Up .................................................. PV
Social Media Marketing ................................ CG, EM, GC, GW, MC, PC, PV, SC, SM
Utilities: Customer Service ........................................ RS
Water Services: Customer Service ................................ RS

Computer and Information Technology
Adobe Foundations: Animation and Graphics
  Production ......................................................... CG, GC, MC, PV, SM
Adobe Foundations: Audio and Video Production .. MC, SM
Amazon Web Services Practitioner ...... CG, EM, GC, GW, MC, PC, PV, SC, SM
Android App Development ...... CG, GW, MC, PC, PV, RS, SM
Associate in Science, Emphasis in Computer Science... CG, EM, GC, GW, MC, PC, PV, SC, SM
Cisco Certified Network Professional: Enterprise ..... CG, EM, GC, GW, MC, PC, PV, SC, SM
Cisco Certified Network Professional: Enterprise
  Core ......................................................... CG, EM, GC, GW, MC, PC, PV, SC, SM
Cisco Network Administration and Security .... CG, EM, GC, GW, MC, PC, PV, SC, SM
Cisco Network Administration: CCNA.CG, EM, GC, GW, MC, PC, PV, SC, SM
Cisco Network Administration: CCNP.. CG, EM, GC, GW, PV, RS, SC, SM
Cisco Network Administration: CCNP .. CG, EM, GC, GW, PV, RS, SC, SM
CompTIA A+ Certification Prep................................. GW
CompTIA Security+ Certification Prep......................... GW
Computer Support Specialist (Day) ...................... GW
Computer Support Specialist (Night) ..................... GW
Computer System Configuration and Support ...... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Computer System Configuration and Support,
  Linux ......................................................... CG, EM, GC, GW, MC, PC, PV, SC, SM
Computer System Configuration and Support,
  Network .................................................... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Computer System Configuration and Support,
  Security .................................................... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Cross-Platform App Development. GW, MC, PC, PV, RS, SM
Cyber Engineering....... CG, EM, GC, MC, PC, PV, RS, SC, SM
Cyber Operations........................................ CG, EM, GC, GW, MC, PV, SM
Cybersecurity................................ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Cybersecurity Fundamentals........ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Data Analytics .............................................. EM, MC, PV, SC
Database Development ........................................ EM, MC, SC
Desktop Support .... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Foundations of Mobile App Development .... MC, PC, PV, RS, SM
Information Security ........................................ GC
Information Security Technology .......................... GC
Information Technology .................................. CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
iOS App Development ........ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
IT and Power Systems Security ......................... EM
IT Security Associate ......................................... EM
Linux Associate ............................................ CG, EM, GC, GW, MC, PC, PV, SC, SM
Linux System Administration ......................... CG, EM, GC, GW, MC, PC, PV, SC, SM
Microsoft Desktop Associate ......................... CG, EM, GC, GW, MC, PC, PV, SC, SM
Microsoft Office Professional ......................... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Microsoft Office Specialist ......................... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Microsoft System Administration ........ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Mobile App Development ...... MC, PC, PV, RS, SC, SM
Native Mobile App Development .... GW, MC, PC, PV, RS, SC, SM
Oracle Database Operations ............................... CG
Power Systems Security .................................. EM, GC
Programming .............................................. EM, RS, SM
Programming and Systems Analysis .... CG, EM, GC, MC, PC, PV, RS, SC
Programming and Systems Analysis Level I ...... CG, EM, GC, MC, PC, PV, RS, SC
Programming and Systems Analysis Level II .... CG, EM, GC, MC, PC, PV, RS, SC
Red Hat Linux Administrator ........ CG, EM, GC, GW, MC, PC, PV, SC, SM

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/
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For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/
degrees-certificates/associate-degrees/academic-policies
K-12 eLearning Design.................................................................RS
K-12 Online Teaching...............................................................RS

Health Sciences
Aesthetician (20 Hours Per Week).................................GW
Aesthetician (24 Hours Per Week).................................GW
Aesthetics Instructor.................................................................GW
Associate in Arts, Emphasis in Exercise Science:
Pre-Physical Therapy................................................CG, EM, GC, GW, MC, PC, PV
Community Dental Health Coordination........................RS
Community Health Paramedicine...........................................GC, MC, PC, PV
Computed Tomography.........................................................GW
Cosmetologist (20 Hours Per Week).................................GW
Cosmetologist (32 Hours Per Week).................................GW
Cosmetologist (High School)................................................GW
Cosmetology Instructor..........................................................GW
Critical Care Paramedicine..................................................GC, MC, PC, PV
Dental Assisting.................................................................PC
Dental Hygiene .................................................................MC, PC, RS
Diagnostic Medical Sonography........................................GW
Diagnostic Medical Sonography: Vascular Technology ......GW
Dietetic Technology ............................................................PV
Electrocardiogram (ECG) Technician ................................GW
Electroneurodiagnostic (END) Technology.........................GW
Emergency Medical Services and Fire Preparatory
Academy.................................................................GW
Emergency Medical Technology........................................CG, GC, MC, PC, PV
Emergency Medical Technology (EMT).............................GW
Emergency Medical Technology Comprehensive..............CG, GC, MC, PC, PV
Exercise Science: Health, Fitness and Sports Performance
CG, GC, MC, PC, PV, SC, SM
Fast Track Practical Nursing.................................................GW
Foundations of Sports Medicine ............................................RS
Group Fitness Instructor.......................................................MC
Hair Stylist (20 Hours Per Week)..........................................GW
Hair Stylist (32 Hours Per Week)..........................................GW
Health Information Technology..........................................PC
Health Information: Long Term Care Settings....................PC
Health Services Management..............................................GW
Health Unit Coordinating/Patient Care Associate.................GW
Healthcare Regulatory Compliance.....................................GW
Healthcare Technology Systems........................................GC, PV
Histologic Technology.......................................................PC
Hospital Central Service Technology................................GW
Integrated Public Health......................................................PV
Integrated Public Health: Health Administration..............PV
Integrated Public Health: Health Education.......................PV
Integrated Public Health: Health Navigation......................PV
Integrated Public Health: Mobile Integrated Health..............PV
Laboratory Assisting...........................................................PC
Magnetic Resonance Imaging..............................................GW
Massage Therapy.............................................................PC
Massage Therapy (20 Hours Per Week)..............................GW
Massage Therapy (24 Hours Per Week)..............................GW
Medical Administrative Assisting.......................................PC
Medical Assisting.............................................................GW, PC
Medical Assisting (16 hours per week)...............................GW
Medical Assisting (20 hours per week)...............................GW
Medical Billing and Coding: Physician Based...................GW
Medical Billing and Coding: Physician-Based...................PC
Medical Coding: Hospital-Based.........................................PC
Medical Interpreter - Spanish (12 Hours Per Week)............GW
Medical Interpreter - Spanish (6 Hours Per Week)..............GW
Medical Laboratory Science.............................................PC
Musculoskeletal Sonography...............................................GW
Nail Technician.................................................................GW
Nuclear Medicine Technology.............................................GW
Nurse Assisting...............................................................EM, GC, GW, MC, PV
Nursing.................................................................CG, EM, GC, GW, MC, PC, PV, SC
Nursing Refresher...........................................................GW, MC
Nutrition for Personal Trainers and Coaches........................SC
Occupational Therapy Assistant........................................GW
Operating Room Nursing....................................................GW
Optometric Medical Assistant............................................GW
Paramedicine.................................................................GC, MC, PC, PV
Personal Trainer.............................................................CG, GC, MC, PC, PV, SC, SM
Pharmacy Technician..........................................................GW
Phlebotomy.................................................................PC
Phlebotomy (Day).............................................................GW
Phlebotomy (Night)............................................................GW
Physical Therapist Assisting...............................................GW
Polysomnographic Technology..........................................GW
Practical Nursing ............................................................CG, EM, GC, GW, MC, PC, PV, SC
Radiologic Technology......................................................GW
Recreation Management.....................................................SC
Respiratory Care...............................................................GW
Spanish Interpreting for Healthcare Professionals...............GW
Speech Language Pathology Assistant...............................EM

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Sports Management .........................................................PV
Surgical Technology .......................................................GW
Sustainable Food Systems .............................................. RS
Tactical Emergency Casualty Care ................................. GC, MC, PC, PV
Yoga Instruction ............................................................. SC
Yoga Therapy ................................................................. SC

Science, Technology, Engineering and Mathematics

Aircraft Maintenance Technology-Airframe ................. CG
Aircraft Maintenance Technology-Powerplant ............... CG
Associate in Arts, Emphasis in Food Science and Technology...... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Geography ........ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Mathematics........ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Sustainability and Environmental Studies .... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Astronomy ........ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Biochemistry........ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Biological Sciences .. CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Chemistry .... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Geology ........ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Geophysics ............... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Physics ........ CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Biomedical Equipment Technology .............................. GC, MC
Biotechnology and Molecular Biosciences ...................... GC
Electronics Engineering Technology ............................ MC
Electronics Technology ................................................. MC
Engineering Technology ................................................ EM, GC, PV, SM
Environmental and Natural Resource Conservation .... PC
Environmental and Natural Resource Stewardship ........ PC
Equine Science ............................................................. SC
Food Science and Technology I .................................... SM
Food Science and Technology II .................................... SM
Geospatial Technologies .............................................. MC
Landscape Aide ............................................................. MC
Landscape Horticulture ................................................. MC
Landscape Specialist ..................................................... MC
Mortuary Science .......................................................... CG
Nanotechnology ............................................................ RS
Occupational Safety and Health Technology .............. GW
Sustainability ............................................................... CG, GC, MC, PV, RS, SM
Sustainability and Ecological Literacy ....................... EM, RS, SM
Sustainable Agriculture .............................................. MC
Veterinary Assisting ...................................................... MC
Veterinary Technology ................................................... MC
Workforce Development: Introduction to Sustainable Food Systems ................................................. RS

Visual and Performing Arts

Alteration Specialist ....................................................... MC, PC
Animation ................................................................. GC, MC, PC
Animation and Time-Based Media ............................... GC, MC, PC
Apparel Construction ................................................... MC, PC
Associate in Arts, Fine Arts, Emphasis in Art .... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Fine Arts, Emphasis in Dance ...... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Fine Arts, Emphasis in Music ...... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Fine Arts, Emphasis in Musical Theatre .... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Fine Arts, Emphasis in Theatre .... CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Audio Production Technologies .......................... GC, MC, PC, PV, SC
Beginning Piano Pedagogy ......................................... MC
Ceramics ................................................................. MC
Commercial Photography ........................................ GC, PC
Costume Design and Production, Level I............... MC, PC
Costume Design and Production, Level II ................. PC
Dance Performance and Technology ......................... SC
Digital Arts: Digital Photography ......................... MC
Digital Media Arts .................................................. GC, PC
Disc Jockey Techniques ........................................ MC, SC
Disc Jockey Techniques I ........................................ MC, SC
Disc Jockey Techniques II ........................................ MC, SC
Documentary Film Production ................................. GC
Drawing and Painting .................................................. MC
Editing ................................................................. SC
Electronic Music ....................................................... GC, MC, PC, SC
Fashion Design ......................................................... MC, PC

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Fashion Design: Entrepreneur .........................................................PC
Fashion Design: Level I .................................................................MC, PC
Fashion Design: Level II .................................................................PC
Fashion Illustration.................................................................PC
Fashion Merchandising and Design ........................................MC
Film and Media Production .........................................................GC
Graphic Design ................................................................. MC, PC
Illustration ................................................................. CG, MC, PC
Illustration and Sequential Art ...............................................CG, MC, PC
Image Consultant ................................................................. MC
Interior Design ................................................................. MC, PC, SC
Intermediate Piano Pedagogy .................................................. MC
Motion Picture Production.........................................................SC
Motion Picture, Television, and New Media Production ........ SC
Music ................................................................. PC
Music Business I ................................................................. CG, GC, MC, PC, PV, SC, SM
Music Business II ................................................................. CG, GC, MC, PC, PV, SC, SM
Music Industries: Music Business ........................................ CG, GC, MC, PC, PV, SC, SM
Pattern Design, Level I .................................................................PC
Pattern Design, Level II .................................................................PC
Photography ................................................................. CG, GC, MC, PC
Retail Sales Manager ................................................................. MC
Screenwriting ................................................................. SC
Sequential Art ................................................................. CG, MC, PC
Technical Theatre ................................................................. MC, PC, SC
Technical Theatre: Audio Technician ..................................... GC, MC, PC, PV
Technical Theatre: Cosplay I .................................................. MC
Technical Theatre: Cosplay II .................................................. MC
Technical Theatre: Costuming .............................................. GC, MC, PC, PV
Technical Theatre: Hair and Makeup ........................................ MC
Technical Theatre: Lighting ................................................... MC, PC, PV
Technical Theatre: Properties ........................................ MC, PC, PV, SC
Technical Theatre: Puppetry ................................................... MC, PC, PV
Technical Theatre: Set/Scenic Construction ......................... MC, PC
Technical Theatre: Stage Crew Technician ......................... GC, MC, PC, PV, SC
Textile and Apparel: Fashion Stylist ........................................ MC
Time-Based Media ................................................................. MC, PC
Visual Communication ................................................................. SC
Visual Communication: Creative Branding .......................... SC
Visual Communication: Design ......................................................... SC

For the most current information regarding common policies degree requirements, log on to https://curriculum.maricopa.edu/curriculum/degrees-certificates/associate-degrees/academic-policies

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**Academic Divisions**

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

### Aviation & Applied Technology
**Bashir Khalil, Division Chair**  
480-988-8112  |  bashir.khalil@cgc.edu

**Courses**
- AET - Aeronautics
- AJS - Administration of Justice Studies
- AMT - Aircraft Maintenance Technology
- EUT - Electric Utility Technology
- LET - Law Enforcement Technology
- PPT - Power Plant Technology

**Career Programs**
- Administration of Justice
- Aircraft Maintenance Technology
- Aircraft Maintenance Technology-Airframe
- Aircraft Maintenance Technology-Powerplant
- Airway Science Technology, Flight Emphasis
- Certified Flight Instructor Instrument Airplane Rating
- Corrections
- Crime Scene Investigation
- Electric Utility Technology
- Fingerprint Identification and Photography
- Forensic Science
- Homeland Security
- Law Enforcement
- Law Enforcement Training
- Leadership in Public Safety Organizations
- Legal Studies
- Unmanned Aircraft Systems
- Victimology

### Biological Sciences
**Kimberley Patterson, Division Chair**  
480-732-7083  |  kimberley.patterson@cgc.edu

**Courses**
- BIO - Biology

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### Business & Computing Studies
**Thomas Pearson, Division Chair**
480-726-4131 | tom.pearson@cgc.edu

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

**Career Programs**
- Accounting
- Administrative Professional
- Adobe Foundations: Animation and Graphics Production
- Amazon Web Services Practitioner
- Android App Development
- Business Administration Fastrack
- Cisco Certified Network Professional: Enterprise Advanced Routing and Services
- 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
Desktop Support
Enrolled Agent
General Business
Human Resources Management
Information Technology
iOS App Development
Linux Associate
Linux System Administration
Management
Microsoft Desktop Associate
Microsoft Office Professional
Microsoft Office Specialist
Microsoft System Administration
Network and Systems Administration
Oracle Database Operations
Organizational Leadership
Organizational Management
Programming and Systems Analysis
Programming and Systems Analysis Level I
Programming and Systems Analysis Level II
Red Hat Linux Administrator
Red Hat Linux Engineer
Retail Management
Risk Management and Insurance
Social Media Marketing
VMware Network Administrator
Web App Development
Web Design
Web Design/Development
Web Development
Web Foundations

Communication & Fine Arts
Vanessa Sandoval, Division Chair
480-732-7267 | vanessa.sandoval@cgc.edu

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

Career Programs
Illustration
Illustration and Sequential Art
Music Business I
Music Business II
Music Industries: Music Business
Photography
Sequential Art

Composition, Creative Writing & Literature
Mary Zimmerer, Division Chair
480-857-5441 | mary.zimmerer@cgc.edu

Courses
CRE - Critical Reading
CRW - Creative Writing
ENG - English
ENH - English Humanities
HUM - Humanities
JRN - Journalism
Modern Languages & Humanities
Paul Petrequin, Division Chair
480-857-5256 | paul.petrequin@cgc.edu

Courses
- ASL - American Sign Language
- CCS - Chicana and Chicano Studies
- ESL - English as a Second Language
- GER - German
- HIS - History
- NAV - Navajo
- PHI - Philosophy
- REL - Religious Studies
- SPA - Spanish
- SPH - Spanish Humanities

Career Programs
Creative Writing

Health Sciences
Kimberly McGee, Division Chair
480-726-4246 | kimberly.mcgee@cgc.edu

Courses
- EMT - Emergency Medical Technology
- EXS - Exercise Science
- FON - Food and Nutrition
- HES - Health Science
- MSP - Mortuary Science
- PED - Physical Education
- REC - Recreation
- WED - Wellness Education

Career Programs
- Emergency Medical Technology
- Emergency Medical Technology Comprehensive
- Exercise Science: Health, Fitness and Sports Performance
- Mortuary Science
- Personal Trainer
- Personal Trainer: Advanced

Library, Learning Center & Counseling
Christine Kilbridge, Division Chair
480-857-5138 | christine.kilbridge@cgc.edu

Courses
- BHS - Behavioral Health Services Technology
- CPD - Counseling and Personal Development
- IFS - Information Studies

Mathematics
Linda Meng, Division Chair
480-857-5531 | linda.meng@cgc.edu

Courses
- MAT - Mathematics

Physical Sciences & Engineering
Brian Woodrum, Interim Division Chair
480-732-7359 | brian.woodrum@cgc.edu

Courses
- AIM - Artificial Intelligence and Machine Learning
- AST - Astronomy
- CHM - Chemistry
- ECE - Engineering Science
- EEE - Electrical Engineering
- ELE - Electronics
- ELT - Electronics Technology
- GLG - Geology
GPH - Physical Geography
PHY - Physics

Career Programs
Artificial Intelligence
Artificial Intelligence and Machine Learning
Engineering

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Psychology
Karen Reeder, Department Lead
480-857-5226 | karen.reeder@cgc.edu

Courses
PSY - Psychology

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Social & Behavioral Sciences
Linda Zehr, Interim Division Chair
480-857-5530 | linda.zehr@cgc.edu

Courses
AFR - African American Studies
AIS - American Indian Studies
ASB - Anthropology
ASM - Anthropology
CFS - Child/Family Studies
ECH - Early Childhood Education
ECN - Economics
EDU - Education
EED - Early Education
ETL - Excellence/Teaching/Learning
POS - Political Science
SOC - Sociology
WST - Women's Studies

Career Programs
Early Childhood Education
Foundations of Early Childhood Education
Women and Gender Studies
Educational Programs

The Chandler-Gilbert Community College (CGCC) mission statement calls for serving “students and its diverse communities by providing quality life-long learning opportunities in a learner-centered environment through effective, accessible educational programs and activities.” CGCC faculty, staff, and administration are committed to providing a “dynamic learning community reflecting collaboration, diversity, and student success through quality, enthusiastic teaching, learning, and serving.” 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.

- 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:
  1. Associate in Applied Science degree programs – usually a two-year program of course work.
  3. Individual courses – designed to meet individual career or personal needs.

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.

- Academic Certificates for students who wish to gain additional expertise in an academic area.
- Special programs include:
  - Continuing Education and Workforce Development
  - English as a Second Language
  - Fitness, Wellness, and Recreation
  - Honors Program
  - Performing Arts

OCCUPATIONAL PROGRAMS

Aviation & Applied Technology

Administration of Justice Studies

Associate in Applied Science: AAS 3181
60-69 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 is an interdisciplinary program designed to prepare students for various careers within the criminal justice system and/or transfer to a four year institution. 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 four Certificates of Completion in Corrections, Law...
Enforcement, Legal Studies, and Victimology, and/or a transfer option.

**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 course has prerequisites and/or corequisites.  
**++** indicates any suffixed courses.

**Program Prerequisites: None**

**Required Courses: 27 Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS109</td>
<td>Substantive Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>AJS123</td>
<td>Ethics and the Administration of Justice</td>
<td>3</td>
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<tr>
<td>AJS200</td>
<td>Current Issues in Criminal Justice (3) OR AJS/EMT/</td>
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<tr>
<td>FSC/ SWU258</td>
<td>Victimology and Crisis Management (3)</td>
<td>3</td>
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<tr>
<td>AJS212</td>
<td>Juvenile Justice Procedures</td>
<td>3</td>
</tr>
<tr>
<td>AJS225</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>AJS230</td>
<td>The Police Function</td>
<td>3</td>
</tr>
<tr>
<td>AJS240</td>
<td>The Corrections Function</td>
<td>3</td>
</tr>
<tr>
<td>AJS260</td>
<td>Procedural Criminal Law</td>
<td>3</td>
</tr>
</tbody>
</table>

**Restricted Electives: 12-13 Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS113</td>
<td>Criminal Justice Crime Control Policies and Practices</td>
<td>3</td>
</tr>
<tr>
<td>AJS119</td>
<td>Computer Applications in Justice Studies</td>
<td>3</td>
</tr>
<tr>
<td>AJS162</td>
<td>Domestic Violence</td>
<td>3</td>
</tr>
<tr>
<td>AJS201</td>
<td>Rules of Evidence</td>
<td>3</td>
</tr>
<tr>
<td>AJS205</td>
<td>Effective Communication and Report Writing in Criminal Justice (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>AJS210</td>
<td>Constitutional Law</td>
<td>3</td>
</tr>
</tbody>
</table>

**Free Electives: 7-9 Credits**

Recommend the following for transfer:
- FOR105  Forensic Science: Physical Evidence (4) OR FOR106  Forensic Science: Biological Evidence (4) OR any course with the [SQ] general education designation (4)  4

Recommend the following for transfer:
- any course with an [HU] and [G] general education designation or an [HU] and [H] general education designation  3-5

**General Education: 12-22 Credits**

**Core: 12-18 Credits**

**First-Year Composition**

- +ENG101 First-Year Composition (3) AND +ENG102 First-Year Composition (3) OR

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Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
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**Critical Reading**
- **ENG107** First-Year Composition for ESL (3) AND **ENG108** First-Year Composition for ESL (3) 6

**Oral Communication**
- **COM100** Introduction to Human Communication (3) OR **COM110** Interpersonal Communication (3) OR **COM225** Public Speaking (3) OR **COM230** Small Group Communication (3) 3

Recommend COM225 for students intending to transfer

**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 courses.

**Program Prerequisites:** None

**Required Courses:** 15 Credits
- **AJS101** Introduction to Criminal Justice 3
- **AJS109** Substantive Criminal Law (3) OR **AJS260** Procedural Criminal Law (3) 3
- **AJS123** Ethics and the Administration of Justice 3
- **AJS230** The Police Function 3
- **AJS240** The Corrections Function 3

**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.

**Critical Reading**
- **CRE101** College Critical Reading and Critical Thinking (3) OR Equivalent as indicated by assessment 0-3

**Mathematics**
- **MAT140** College Mathematics (5) OR **MAT141** College Mathematics (4) OR **MAT142** College Mathematics (3) OR **MAT146** College Mathematics with Review (6) OR Any higher approved general education course in the Mathematics area (3-6) 3-6

**Distribution:** 0-4 Credits

**Humanities, Arts and Design**
- Met by AJS123 in the Required Courses area 0

**Social and Behavioral Sciences**
- Met by AJS200 or AJS/EMT/FSC/SWU258 Required Courses area 0

**Natural Sciences**
- Any approved general education course from the Natural Sciences area.
- May be met by FOR105 or FOR106 in Electives area. 0-4

**Associate in Applied Science: AAS 3670 87-112 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. 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...
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

Administration 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 course has prerequisites and/or corequisites.

Admission Criteria
Students wishing to enroll in this Aircraft Maintenance Technology program must complete an application process before being officially accepted into the program.

Program Prerequisites: None

Required Courses: 65-84 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+AMT124</td>
<td>Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations (5)</td>
<td></td>
</tr>
<tr>
<td>+AMT126</td>
<td>Fundamentals of Mathematics and Electricity (9)</td>
<td></td>
</tr>
<tr>
<td>+AMT128</td>
<td>Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittings (5) OR Hold a valid FAA Airframe or Powerplant Certificate (0)</td>
<td>0-19</td>
</tr>
<tr>
<td>+AMT220</td>
<td>Fundamentals of Aircraft Wood Structures, Covering and Finishing and Bonded Structures</td>
<td>3</td>
</tr>
<tr>
<td>+AMT222</td>
<td>Atmosphere Control, Fire Protection, Ice and Rain Protection Systems</td>
<td>4</td>
</tr>
<tr>
<td>+AMT224</td>
<td>Aircraft Sheet Metal</td>
<td>5</td>
</tr>
<tr>
<td>+AMT226</td>
<td>Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position and Warning Systems</td>
<td>7</td>
</tr>
<tr>
<td>+AMT228</td>
<td>Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication and Navigation Systems</td>
<td>7</td>
</tr>
<tr>
<td>+AMT230</td>
<td>Airframe Assembly, Inspection and Welding</td>
<td>6</td>
</tr>
<tr>
<td>+AMT263</td>
<td>Aircraft Turbine Engines</td>
<td>5</td>
</tr>
<tr>
<td>+AMT264</td>
<td>Aircraft Reciprocating Engines</td>
<td>7</td>
</tr>
<tr>
<td>+AMT266</td>
<td>Engine Fuel Systems, Fuel Metering and Induction System</td>
<td>6</td>
</tr>
<tr>
<td>+AMT268</td>
<td>Engine Electrical, Ignition and Starter Systems</td>
<td>6</td>
</tr>
<tr>
<td>+AMT270</td>
<td>Engine Instruments, Fire Protection and Lubrication, Cooling and Exhaust Systems</td>
<td>5</td>
</tr>
<tr>
<td>+AMT272</td>
<td>Propeller Systems and Engine Inspections</td>
<td>4</td>
</tr>
</tbody>
</table>

General Education: 22-28 Credits

Core: 12-18 Credits

First-Year Composition
+ENG101   First-Year Composition (3) OR
+ENG107   First-Year Composition for ESL (3) AND
+ENG102   First-Year Composition (3) OR
+ENG108   First-Year Composition for ESL (3) | 6

Oral Communication
COM100    Introduction to Human Communication (3) OR
COM110    Interpersonal Communication (3) OR
+COM225   Public Speaking (3) OR
COM230    Small Group Communication (3) | 3

Critical Reading
+CRE101   College Critical Reading and Critical Thinking (3) OR Equivalent as indicated by assessment | 0-3

Mathematics
+MAT120   Intermediate Algebra (5) OR
+MAT121   Intermediate Algebra (4) OR
+MAT122   Intermediate Algebra (3) OR
+MAT126   Intermediate Algebra with Review (6) | 3-6

Distribution: 10 Credits

Humanities, Arts and Design
Any approved general education course from the Humanities, Arts and Design area. | 3

Social and Behavioral Sciences
Any approved general education course in the Social and Behavioral Sciences area. | 3

Natural Sciences
+PHY101   Introduction to Physics | 4
Aircraft Maintenance Technology

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 course has prerequisites and/or corequisites

Admission Criteria
Students wishing to enroll in this certificate program must complete an application process before being officially accepted into the program.

Program Prerequisites: None

Required Courses: 65-84 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+AMT124</td>
<td>Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations (5)</td>
<td></td>
</tr>
<tr>
<td>+AMT126</td>
<td>Fundamentals of Mathematics and Electricity (9)</td>
<td></td>
</tr>
<tr>
<td>+AMT128</td>
<td>Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittings (5) OR Hold a valid FAA Airframe or Powerplant Certificate (0)</td>
<td>0-19</td>
</tr>
<tr>
<td>+AMT220</td>
<td>Fundamentals of Aircraft Wood Structures, Covering and Finishing and Bonded Structures</td>
<td>3</td>
</tr>
<tr>
<td>+AMT222</td>
<td>Atmosphere Control, Fire Protection, Ice and Rain Protection Systems</td>
<td>4</td>
</tr>
<tr>
<td>+AMT224</td>
<td>Aircraft Sheet Metal</td>
<td>5</td>
</tr>
<tr>
<td>+AMT226</td>
<td>Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position and Warning Systems</td>
<td>7</td>
</tr>
<tr>
<td>+AMT228</td>
<td>Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication and Navigation Systems</td>
<td>7</td>
</tr>
<tr>
<td>+AMT230</td>
<td>Airframe Assembly, Inspection and Welding</td>
<td>6</td>
</tr>
<tr>
<td>+AMT263</td>
<td>Aircraft Turbine Engines</td>
<td>5</td>
</tr>
<tr>
<td>+AMT264</td>
<td>Aircraft Reciprocating Engines</td>
<td>7</td>
</tr>
<tr>
<td>+AMT266</td>
<td>Engine Fuel Systems, Fuel Metering and Induction System</td>
<td>6</td>
</tr>
<tr>
<td>+AMT268</td>
<td>Engine Electrical, Ignition and Starter Systems</td>
<td>6</td>
</tr>
<tr>
<td>+AMT270</td>
<td>Engine Instruments, Fire Protection and Lubrication, Cooling and Exhaust Systems</td>
<td>5</td>
</tr>
<tr>
<td>+AMT272</td>
<td>Propeller Systems and Engine Inspections</td>
<td>4</td>
</tr>
</tbody>
</table>

Aircraft Maintenance Technology-Airframe

Associate in Applied Science: AAS 3668
73-79 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. This degree prepares students to enter careers in aircraft and helicopter structural manufacturing and maintenance, where graduates can potentially work in general, corporate, commercial, or 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-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 course has prerequisites and/or corequisites.

Admission Criteria
Students wishing to enroll in this Aircraft Maintenance Technology-Airframe program must complete an application process before being officially accepted into the program.

Program Prerequisites: None

Required Courses: 51 Credits

- AMT124 Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations 5
- AMT126 Fundamentals of Mathematics and Electricity 9
- AMT128 Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittings 5
- AMT220 Fundamentals of Aircraft Wood Structures, Covering and Finishing and Bonded Structures 3
- AMT222 Atmosphere Control, Fire Protection, Ice and Rain Protection Systems 4
- AMT224 Aircraft Sheet Metal 5
- AMT226 Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position and Warning Systems 7
- AMT228 Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication and Navigation Systems 7
- AMT230 Airframe Assembly, Inspection and Welding 6

General Education: 22-28 Credits

Core: 12-18 Credits

First-Year Composition
- ENGI01 First-Year Composition (3) OR
- ENGI07 First-Year Composition for ESL (3) AND
- ENGI02 First-Year Composition (3) OR
- ENGI08 First-Year Composition for ESL (3) 6

Oral Communication
- COM100 Introduction to Human Communication (3) OR
- COM110 Interpersonal Communication (3) OR
- +COM225 Public Speaking (3) OR
- COM230 Small Group Communication (3) 3

Critical Reading
- +CRE101 College Critical Reading and Critical Thinking (3) OR
- Equivalent as indicated by assessment 0-3

Mathematics
- +MAT120 Intermediate Algebra (5) OR
- +MAT121 Intermediate Algebra (4) OR
- +MAT122 Intermediate Algebra (3) OR
- +MAT126 Intermediate Algebra with Review (6) 3-6

Distribution: 10 Credits

Humanities, Arts and Design
Any approved general education course from the Humanities, Arts and Design area. 3

Social and Behavioral Sciences
Any approved general education course in the Social and Behavioral Sciences area 3

Natural Sciences
- +PHY101 Introduction to Physics 4

Aircraft Maintenance Technology-Airframe

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, manufacturing, and military sectors. Graduates are eligible to apply for the Federal Aviation Administration (FAA), Aviation Maintenance Technician--Airframe
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

Aircraft Maintenance Technology-Airframe

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 course has prerequisites and/or corequisites.

Admission Criteria
Students wishing to enroll in this certificate program must complete an application process before being officially accepted into the program.

Program Prerequisites: None

Required Courses: 32-51 Credits

+AMT124 Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations (5)
+AMT126 Fundamentals of Mathematics and Electricity (9)
+AMT128 Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittings (5) OR
Hold a valid FAA Powerplant Certificate (0) 0-19
+AMT220 Fundamentals of Aircraft Wood Structures, Covering and Finishing and Bonded Structures 3
+AMT222 Atmosphere Control, Fire Protection, Ice and Rain Protection Systems 4
+AMT224 Aircraft Sheet Metal 5
+AMT226 Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position and Warning Systems 7
+AMT228 Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication and Navigation Systems 7
+AMT230 Airframe Assembly, Inspection and Welding 6

Aircraft Maintenance Technology-Powerplant

Associate in Applied Science: AAS 3665

74-80 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 course has prerequisites and/or corequisites.

Admission Criteria
Students wishing to enroll in this Aircraft Maintenance Technology-Powerplant program must complete an application process before being officially accepted into the program.

Program Prerequisites: None

Required Courses: 52 Credits

+AMT124 Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations 5
+AMT126 Fundamentals of Mathematics and Electricity 9
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

**Social and Behavioral Sciences**
Any approved general education course in the Social and Behavioral Sciences area 3

**Natural Sciences**
+PHY101 Introduction to Physics 4

---------------------------------
**Aircraft Maintenance Technology-Powerplant**

**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. 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 written, oral, and practical exams. An Associates 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 course has prerequisites and/or corequisites.

**Admission Criteria**
Students wishing to enroll in this certificate program must complete an application process before being officially accepted into the program.

**Program Prerequisites: None**

**Required Courses: 32-52 Credits**
+AMT124 Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations (5)
+AMT126 Fundamentals of Mathematics and Electricity (9)
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

+AMT128  Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittings (5) OR Hold a valid FAA Airframe Certificate (0) 0-19

+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 and Lubrication, Cooling and Exhaust Systems  5
+AMT272  Propeller Systems and Engine Inspections  4

Airway Science Technology - Flight Emphasis

Associate in Applied Science: AAS 3707  67-73 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.

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 been accepted into 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.

Transfer of Pilot Ratings
Students with a private pilot certificate obtained without college credit must complete the private pilot ground school and flight lessons contained in the private pilot test course before enrolling in any 200-level ground or flight courses.

Students holding commercial pilot, single-engine land certification must obtain division approval prior to enrollment in flight instructor certification.

Aviation and related courses from other colleges and universities will not automatically transfer to CGCC. All aviation transfer courses, flight or non-flight, are reviewed by the Aviation Division Chair for transferability. In all cases, it is the responsibility of the student to initiate the process.

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. Students are advised to obtain a Class I certificate if they are planning a career in professional flight. Veteran students must have at least a Class II medical before beginning 200-level flight courses.

Program Notes
Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum GPA = 2.50.
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

**Admission Criteria**

Students must apply for acceptance into the Associate in Applied Science (AAS) in Airway Science Technology, Flight Emphasis program before enrolling in any 100-level courses by completing an application.

**Program Prerequisites:** None

**Required Courses:** 45 Credits

<table>
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<tr>
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<td>AET107</td>
<td>Private Pilot Ground School</td>
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<td>AET110</td>
<td>Private Pilot Flight (I) OR</td>
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<tr>
<td>AET112</td>
<td>Private Pilot Flight Test Course (I)</td>
<td>1</td>
</tr>
<tr>
<td>AET115</td>
<td>Aviation Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>AET203</td>
<td>Basic Airplane Systems</td>
<td>3</td>
</tr>
<tr>
<td>AET207</td>
<td>Attitude Instruments and Navigation</td>
<td>3</td>
</tr>
<tr>
<td>AET208</td>
<td>Aviation Safety</td>
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<td>AET210</td>
<td>Instrument Commercial Flight I</td>
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</tr>
<tr>
<td>AET213</td>
<td>Aerodynamics and Performance</td>
<td>3</td>
</tr>
<tr>
<td>AET217</td>
<td>Instrument Procedures</td>
<td>3</td>
</tr>
<tr>
<td>AET220</td>
<td>Instrument Commercial Flight II</td>
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<tr>
<td>AET225</td>
<td>Advanced Aircraft Systems</td>
<td>4</td>
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<tr>
<td>AET227</td>
<td>Certified Flight Instructor: Airplane, Single</td>
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<tr>
<td></td>
<td>Engine Land Ground School</td>
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<tr>
<td>AET229</td>
<td>Crew Resource Management</td>
<td>3</td>
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<tr>
<td>AET230</td>
<td>Certified Flight Instructor: Airplane, Single</td>
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<td>Engine Land</td>
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<tr>
<td>AET237</td>
<td>Multiengine Airplane Pilot Ground School</td>
<td>2</td>
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<tr>
<td>AET240</td>
<td>Multiengine Airplane Pilot Flight</td>
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<tr>
<td>UAS107</td>
<td>Unmanned Aircraft Systems Operator Certification</td>
<td>3</td>
</tr>
<tr>
<td>+AET203</td>
<td>Basic Airplane Systems</td>
<td>3</td>
</tr>
<tr>
<td>+AET207</td>
<td>Attitude Instruments and Navigation</td>
<td>3</td>
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<td>+AET208</td>
<td>Aviation Safety</td>
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<td>+AET210</td>
<td>Instrument Commercial Flight I</td>
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<tr>
<td>+AET213</td>
<td>Aerodynamics and Performance</td>
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<td>+AET217</td>
<td>Instrument Procedures</td>
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<tr>
<td>+AET220</td>
<td>Instrument Commercial Flight II</td>
<td>1</td>
</tr>
<tr>
<td>+AET225</td>
<td>Advanced Aircraft Systems</td>
<td>4</td>
</tr>
<tr>
<td>+AET227</td>
<td>Certified Flight Instructor: Airplane, Single</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engine Land Ground School</td>
<td></td>
</tr>
<tr>
<td>+COM225</td>
<td>Public Speaking (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>COM230</td>
<td>Small Group Communication (3) OR</td>
<td></td>
</tr>
</tbody>
</table>

**Critical Reading**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>+CRE101</td>
<td>College Critical Reading and Critical Thinking (3) OR</td>
<td></td>
</tr>
<tr>
<td>Equivalent as indicated by assessment</td>
<td>0-3</td>
<td></td>
</tr>
</tbody>
</table>

**Mathematics**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+MAT120</td>
<td>Intermediate Algebra (5) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT121</td>
<td>Intermediate Algebra (4) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT122</td>
<td>Intermediate Algebra (3) OR</td>
<td></td>
</tr>
<tr>
<td>MAT126</td>
<td>Intermediate Algebra with Review (6)</td>
<td>3-6</td>
</tr>
</tbody>
</table>

**Distribution:** 10 Credits

**Humanities, Arts and Design**

Any approved general education course from the Humanities, Arts and Design area. 3

**Social and Behavioral Sciences**

Any approved general education course from the Social and Behavioral Sciences area. 3

**Natural Sciences**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+PHY101</td>
<td>Introduction to Physics</td>
<td>4</td>
</tr>
</tbody>
</table>

**Certified Flight Instructor Instrument Airplane Rating**

**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.

+ indicates course has prerequisites and/or corequisites.
Students must earn a grade of "C" or better for all courses required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

Program Prerequisites: None

Required Courses: 4 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+AET258</td>
<td>Certified Flight Instructor: Instrument Airplane Ground School</td>
<td>3</td>
</tr>
<tr>
<td>+AET270</td>
<td>Certified Flight Instructor: Instrument Airplane Flight</td>
<td>1</td>
</tr>
</tbody>
</table>

Certificates

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.

Required Courses: 15 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS123</td>
<td>Ethics and the Administration of Justice (3) OR</td>
<td></td>
</tr>
<tr>
<td>AJS255</td>
<td>Crime, Law, and Mental Health (3)</td>
<td>3</td>
</tr>
<tr>
<td>AJS212</td>
<td>Juvenile Justice Procedures</td>
<td>3</td>
</tr>
<tr>
<td>AJS240</td>
<td>The Correction Function</td>
<td>3</td>
</tr>
</tbody>
</table>

AJS205    | Effective Communication and Report Writing in Criminal Justice (3) OR 3
AJS275    | Criminal Investigation (3)                      |         |

Crime Scene Investigation

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 course has prerequisites and/or corequisites.

Required Courses: 16-18 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS213</td>
<td>Evidence Technology/Fingerprints (3) OR</td>
<td></td>
</tr>
<tr>
<td>AJS243</td>
<td>Crime Scene Reconstruction (3)</td>
<td>3</td>
</tr>
<tr>
<td>AJS215</td>
<td>Criminalistics: Physical Evidence (3) OR</td>
<td></td>
</tr>
<tr>
<td>AJS219</td>
<td>Crime Scene Technology: Physical Evidence (3) OR</td>
<td></td>
</tr>
<tr>
<td>FOR105</td>
<td>Forensic Science: Physical Evidence (4)</td>
<td>3-4</td>
</tr>
<tr>
<td>AJS216</td>
<td>Criminalistics: Biological Evidence (3) OR</td>
<td></td>
</tr>
<tr>
<td>FOR106</td>
<td>Forensic Science: Biological Evidence (4)</td>
<td>3-4</td>
</tr>
<tr>
<td>AJS214</td>
<td>Evidence Technology Photography</td>
<td>3</td>
</tr>
<tr>
<td>AJS275</td>
<td>Criminal Investigation I</td>
<td>3</td>
</tr>
<tr>
<td>AJS290BN</td>
<td>Courtroom Testimony Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>
Electric Utility Technology

Associate in Applied Science: AAS 3855
64-70 Credits

Program Contact
Mark Weaver | 480-988-8255 | mark.weaver@cgc.edu

Program Description
The Associate in Applied Science (AAS) in Electric Utility Technology program is designed to prepare the student for the position of an apprentice-level line worker who is familiar with the use of tools, materials, and the equipment of the electric utility industry. Students will be trained in power line installation and maintenance, pole climbing and use of tools, truck and equipment operation, and overhead and underground distribution, construction, and maintenance of electrical lines. A Certificate of Completion (CCL) in Electric Utility 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.

Students must obtain First Aid/Cardiopulmonary Resuscitation (CPR) certification by the completion of EUT215.

Student must provide an Arizona Department of Transportation Medical Certification to the Division Office of Aviation and Applied Technology prior to the first class period for EUT115.

Students must obtain a Commercial Drivers License from the State of Arizona and/or an interstate Commercial Drivers License Class A with no restrictions prior to completion of the Required Courses.

+ indicates course has prerequisites and/or corequisites.

Admission Criteria
Formal application and admission to the Electric Utility Technology program is required.

Program Prerequisites: None

Required Courses: 30-33 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUT103</td>
<td>Introduction to Rigging</td>
<td>2</td>
</tr>
<tr>
<td>EUT104</td>
<td>Equipment Safety and Operation</td>
<td>2</td>
</tr>
<tr>
<td>EUT110</td>
<td>Line Work I</td>
<td>2</td>
</tr>
<tr>
<td>+EUT112</td>
<td>Basic Electricity: AC and DC</td>
<td>4</td>
</tr>
<tr>
<td>+EUT115</td>
<td>Field Training I</td>
<td>4</td>
</tr>
<tr>
<td>+EUT210</td>
<td>Line Work II</td>
<td>2</td>
</tr>
<tr>
<td>+EUT211</td>
<td>Electrical Apparatus</td>
<td>4</td>
</tr>
<tr>
<td>+EUT215</td>
<td>Field Training II</td>
<td>4</td>
</tr>
<tr>
<td>+MAT120</td>
<td>Intermediate Algebra (5) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT121</td>
<td>Intermediate Algebra (4) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT122</td>
<td>Intermediate Algebra (3) OR</td>
<td></td>
</tr>
<tr>
<td>MAT126</td>
<td>Intermediate Algebra with Review (6)</td>
<td>3-6</td>
</tr>
<tr>
<td>+PPT120</td>
<td>Energy Industry Fundamentals</td>
<td>3</td>
</tr>
</tbody>
</table>

Restricted Electives: 15 Credits

Selection must be from a minimum of 2 different course prefixes. Selected courses will not apply in both the Required and Restricted Electives areas.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC++++</td>
<td>Any ACC Accounting courses</td>
<td></td>
</tr>
<tr>
<td>BPC++++</td>
<td>Any BPC Business-Personal Computer courses</td>
<td></td>
</tr>
<tr>
<td>CAD++++</td>
<td>Any CAD Computer-Aided Drafting courses</td>
<td></td>
</tr>
<tr>
<td>CIS++++</td>
<td>Any CIS Computer-Information Systems courses</td>
<td></td>
</tr>
<tr>
<td>COM++++</td>
<td>Any COM Communication courses</td>
<td></td>
</tr>
<tr>
<td>DFT++++</td>
<td>Any DFT Drafting courses</td>
<td></td>
</tr>
<tr>
<td>ECE++++</td>
<td>Any ECE Engineering Science courses</td>
<td></td>
</tr>
<tr>
<td>EEE++++</td>
<td>Any EEE Electrical Engineering courses</td>
<td></td>
</tr>
<tr>
<td>ELE++++</td>
<td>Any ELE Electronic courses</td>
<td></td>
</tr>
<tr>
<td>ELT++++</td>
<td>Any ELT Electronics Technology</td>
<td></td>
</tr>
<tr>
<td>EMT++++</td>
<td>Any EMT Emergency Medical Technology courses</td>
<td></td>
</tr>
<tr>
<td>HES++++</td>
<td>Any HES Health Science courses</td>
<td></td>
</tr>
<tr>
<td>GBS++++</td>
<td>Any GBS General Business courses</td>
<td></td>
</tr>
<tr>
<td>NET++++</td>
<td>Any NET Networking Technology courses</td>
<td></td>
</tr>
<tr>
<td>PED++++</td>
<td>Any PED Physical Education courses</td>
<td></td>
</tr>
<tr>
<td>PHY++++</td>
<td>Any PHY Physics courses</td>
<td></td>
</tr>
<tr>
<td>PPT++++</td>
<td>Any PPT Power Plant Technology courses</td>
<td></td>
</tr>
<tr>
<td>SPA++++</td>
<td>Any SPA Spanish Courses</td>
<td></td>
</tr>
<tr>
<td>UAS++++</td>
<td>Any UAS Unmanned Aircraft Systems courses</td>
<td></td>
</tr>
</tbody>
</table>

General Education: 19-22 Credits
Core: 9-12 Credits
First-Year Composition
+ENG101  First-Year Composition (3) OR
+ENG107  First-Year Composition for ESL (3) AND
+ENG102  First-Year Composition (3) OR
+ENG108  First-Year Composition for ESL (3)  6

Oral Communication
COM100  Introduction to Human Communication (3) OR
COM110  Interpersonal Communication (3) OR
+COM225  Public Speaking (3) OR
COM230  Small Group Communication (3)  3

Critical Reading
+CRE101  College Critical Reading and Critical Thinking (3) OR
Equivalent by assessment. 0-3

Mathematics
Met by MAT12+ in Required Course area 0

Distribution: 10 Credits

Humanities, Arts and Design
Any approved general education course from the Humanities, Arts and Design area. 3

Social and Behavioral Sciences
Any approved general education course in the Social and Behavioral Sciences area. 3

Natural Sciences
Any approved general education course in the Natural Sciences area. 4

Electric Utility Technology
Certificate of Completion: CCL 5055
30-33 Credits

Program Contact
Mark Weaver | 480-988-8255 | mark.weaver@cgc.edu

Program Description
The Certificate of Completion (CCL) in Electric Utility Technology program is designed to prepare the student for the position of an apprentice-level line worker who is familiar with the use of tools, materials, and the equipment of the electric utility industry. Students will be trained in power line installation and maintenance, pole climbing and use of tools, truck and equipment operation and overhead and underground distribution, construction and maintenance of electrical lines. This certificate is fully embedded in the Associate in Applied Science (AAS) in Electric Utility 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 course has prerequisites and/or corequisites.

Student must provide an Arizona Department of Transportation Medical Certification to the Division Office of Aviation and Applied Technology prior to the first class period for EUT115.

Students must obtain a Commercial Drivers™ License valid in the state of Arizona prior to completion of the Required Courses.

Students must obtain First Aid/Cardiopulmonary Resuscitation (CPR) certification by the completion of EUT215.

Admission Criteria
Formal application and admission to the Electric Utility Technology program is required.

Program Prerequisites: None

Required Courses: 30-33 Credits
EUT103  Introduction to Rigging 2
EUT104  Equipment Safety and Operation 2
EUT110  Line Work I 2
+EUT112  Basic Electricity: AC and DC 4
+EUT115  Field Training I 4
+EUT210  Line Work II 2
+EUT211  Electrical Apparatus 4
+EUT215  Field Training II 4
+MAT120  Intermediate Algebra (5) OR
+MAT121  Intermediate Algebra (4) OR
+MAT122  Intermediate Algebra (3) OR
MAT126  Intermediate Algebra with Review (6) 3-6
PPT120  Energy Industry Fundamentals 3
Fingerprint Identification and Photography

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 course has prerequisites and/or corequisites

Program Prerequisites: None

Required Courses: 10 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS213</td>
<td>Evidence Technology/Fingerprints</td>
<td>3</td>
</tr>
<tr>
<td>AJS214</td>
<td>Evidence Technology/Photography</td>
<td>3</td>
</tr>
<tr>
<td>AJS290BN</td>
<td>Courtroom Testimony Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Forensic Science

Associate in Applied Science AAS 3183
60-65 Credits

Program Contact
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

Program Description
The Associate in Applied Science (AAS) in Forensic Science provides students 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 course has prerequisites and/or corequisites

Program Prerequisites: None

Required Courses: 31-41 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS123</td>
<td>Ethics and the Administration of Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS275</td>
<td>Criminal Investigation I</td>
<td>3</td>
</tr>
<tr>
<td>AJS290BN</td>
<td>Courtroom Testimony Seminar</td>
<td>1</td>
</tr>
<tr>
<td>AJS215</td>
<td>Criminalistics: Physical Evidence (3) OR</td>
<td></td>
</tr>
<tr>
<td>AJS219</td>
<td>Crime Scene Technology: Physical Evidence (3) OR</td>
<td></td>
</tr>
<tr>
<td>FOR105</td>
<td>Forensic Science: Physical Evidence (4)</td>
<td>3-4</td>
</tr>
<tr>
<td>FOR106</td>
<td>Forensic Science: Biological Evidence (4)</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Students should select courses from one of the following emphases based on career goals.

Crime Scene (15 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS109</td>
<td>Substantive Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>AJS210</td>
<td>Constitutional Law</td>
<td>3</td>
</tr>
<tr>
<td>AJS213</td>
<td>Evidence Technology/Fingerprints</td>
<td>3</td>
</tr>
<tr>
<td>AJS214</td>
<td>Evidence Technology/Photography</td>
<td>3</td>
</tr>
<tr>
<td>AJS260</td>
<td>Procedural Criminal Law</td>
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</table>

Lab Science (23 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASM/FOR275</td>
<td>Forensic Anthropology</td>
<td>4</td>
</tr>
<tr>
<td>+CHM151</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>+CHM151LL</td>
<td>General Chemistry I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>+CHM152</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>+CHM152LL</td>
<td>General Chemistry II Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>+PHY111</td>
<td>General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>+PHY112</td>
<td>General Physics II</td>
<td>4</td>
</tr>
</tbody>
</table>

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Any course with the HU, C and G general education designations (3) OR
Any course with the HU, C and H general education designations (3) 3

**Restricted Electives: 3 Credits**
Students must complete 3 credits of restricted electives.

**Students interested in the Crime Scene Emphasis**
CIS105 Survey of Computer Information Systems (3) OR
BPC110 Computer Usage and Applications (3) OR
AJS123 Any AJS Administration of Justice Studies course not listed in the required courses area (3) 3

**Students interested in the Lab Science Emphasis**
CIS105 Survey of Computer Information Systems (3) OR
BPC110 Computer Usage and Applications (3) 3

**Free Electives: 0-10 Credits**
Students must choose zero (0) to ten (10) additional credits of general elective courses. Total number of general electives required will largely depend upon emphasis selected.

**General Education Requirements: 12-24 Credits**

**General Education Core: 12-20 Credits**

**First Year Composition: 6 Credits**
+ENG101 First-Year Composition (3) OR
+ENG107 First-Year Composition for ESL (3) AND
+ENG102 First-Year Composition (3) OR
+ENG108 First-Year Composition for ESL (3)

**Oral Communication: 3 Credits**
+COM225 Public Speaking 3

**Critical Reading: 0-3 Credits**
+CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent by assessment

**Mathematics: 3-8 Credits**

**Crime Scene Emphasis**
+MAT140 College Mathematics (5) OR
+MAT141 College Mathematics (4) OR
+MAT142 College Mathematics (3) OR
Higher course with an [MA] general education designation 3-5

**Lab Science Emphasis**
+MAT150 College Algebra/Functions (5) OR
+MAT151 College Algebra/Functions (4) OR
+MAT152 College Algebra/Functions (3) AND
+MAT182 Plane Trigonometry (3) OR
+MAT187 Precalculus (5) OR
Higher course with an [MA] general education designation 3-8

**General Education Distribution: 0-4 Credits**

**Humanities, Arts and Design: 0 Credits**
Met by AJS123 in Required Courses area

**Social and Behavioral Sciences: 0 Credits**
Met by AJS101 in Required Courses area

**Natural Sciences: 0-4 Credits**

**Recommended Courses for Crime Scene Emphasis:**
+CHM130 Fundamental Chemistry (3) AND
+CHM130LL Fundamental Chemistry Laboratory (1) OR
+CHM151 General Chemistry I (3) AND
+CHM151LL General Chemistry I Laboratory (1) OR
+FOR105 Forensic Science: Physical Evidence (4) OR
+FOR106 Forensic Science: Biological Evidence (4) 0-4

**Lab Science Emphasis met by CHM151 and CHM151LL**

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**Forensic Science**

**Certificate of Completion: CCL 5326**
**18 Credits**

**Program Contact**
Lisa Ruschak | 480-726-4078 | lisa.ruschak@cgc.edu

**Program Description**
The Certificate of Completion (CCL) in Forensic Science is designed to provide students with the technical skills and knowledge necessary to evaluate and process a crime scene for items of evidentiary value, document crime scene evidence, and collect and retain items consistent with forensic procedures.
Program Notes
Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Program Prerequisites: None

Required Courses: 18 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS201</td>
<td>Rules of Evidence</td>
<td>3</td>
</tr>
<tr>
<td>AJS213</td>
<td>Evidence Technology/Fingerprints</td>
<td>3</td>
</tr>
<tr>
<td>AJS215</td>
<td>Criminalistics: Physical Evidence</td>
<td>3</td>
</tr>
<tr>
<td>AJS216</td>
<td>Criminalistics: Biological Evidence</td>
<td>3</td>
</tr>
<tr>
<td>AJS241</td>
<td>Police Photography</td>
<td>3</td>
</tr>
<tr>
<td>AJS275</td>
<td>Criminal Investigation I</td>
<td>3</td>
</tr>
</tbody>
</table>

Homeland Security

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.

Program Prerequisites: None

Required Courses: 15 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS/DPR/</td>
<td>Emergency Response to Terrorism</td>
<td>3</td>
</tr>
<tr>
<td>FSC148</td>
<td>Fundamentals of Emergency Management</td>
<td>3</td>
</tr>
<tr>
<td>AJS/DPR/</td>
<td>Hazard Mitigation</td>
<td>3</td>
</tr>
<tr>
<td>FSC149</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AJS195</td>
<td>International and Domestic Terrorism</td>
<td>3</td>
</tr>
</tbody>
</table>

Law Enforcement

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 required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

Program Prerequisites: None

Required Courses: 15 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJS101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS123</td>
<td>Ethics and the Administration of Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS205</td>
<td>Effective Communication and Report Writing in Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJS230</td>
<td>The Police Function</td>
<td>3</td>
</tr>
<tr>
<td>AJS275</td>
<td>Criminal Investigation I</td>
<td>3</td>
</tr>
</tbody>
</table>
Law Enforcement Training

Associate in Applied Science: AAS 3188
62-68 Credits

Program Contact
Jonathan 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 course has prerequisites and/or corequisites.

Program Prerequisites: None

Admission Criteria
Must meet AzPOST minimum requirements for a law enforcement officer and meet any physical requirements by the Academy Director.

Required Courses: 40 Credits
Certificate of Completion in Law Enforcement Training Academy (5991) 40

General Education: 22-28 Credits

Core: 12-18 Credits

First-Year Composition
+ENG101 First-Year Composition (3) OR
+ENG107 First-Year Composition for ESL (3) AND
+ENG102 First-Year Composition (3) OR
+ENG108 First-Year Composition for ESL (3) OR
+ENG111 Technical and Professional Writing (3) 6

Oral Communication
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3
Recommended: COM110 or COM230

Critical Reading
+CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment 0-3

Mathematics
Any approved general education course in the Mathematics area 3-6
Recommended for transfer:
+MAT140 College Mathematics (5) OR
+MAT141 College Mathematics (4) OR
+MAT142 College Mathematics (3) OR
Any higher approved general education course in the Mathematical Applications [MA] area (3-6)

Distribution: 10 Credits

Humanities, Arts and Design
Any approved general education course in the Humanities, Arts and Design area 3
Recommended: AJS123 Ethics and the Administration of Justice (3)

Social and Behavioral Sciences
Any approved general education course in the Social and Behavioral Sciences area 3

Natural Sciences
Any approved general education course in the Natural Sciences area 4

Law Enforcement Training Academy

Certificate of Completion: CCL 5991N
40 Credits

Program Contact
Jonathan Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

Program Description
The Certificate of Completion (CCL) in Law Enforcement Training Academy is available.
Leadership in Public Safety Organizations

Certificate of Completion: CCL 5211N

6 Credits

Program Contact
Jonathan Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

Program Description
The Certificate of Completion (CCL) in Leadership in Public Safety Organizations program builds the industry knowledge and skills for individuals to transition to leadership positions in the field of public safety. This CCL will introduce students to the fundamental concepts and skills of professionalism, organizational culture and management, characteristics of effective teams, conflict resolution, motivation, systems-thinking, problem-solving, and leadership as applicable to public safety organizations. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of front-line leadership positions within the fields of public safety including law enforcement, fire service, and public safety support operations such as communication operators and property and records management.

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.

+ indicates course has prerequisites and/or corequisites

Program Prerequisites: None

Required Courses: 6 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET173</td>
<td>2</td>
</tr>
<tr>
<td>LET174</td>
<td>3</td>
</tr>
<tr>
<td>LET175</td>
<td>1</td>
</tr>
</tbody>
</table>

Leadership in Public Safety Organizations

Certificate of Completion: CCL 5211N

6 Credits

Program Contact
Jonathan Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

Program Description
The Certificate of Completion (CCL) in Leadership in Public Safety Organizations program builds the industry knowledge and skills for individuals to transition to leadership positions in the field of public safety. This CCL will introduce students to the fundamental concepts and skills of professionalism, organizational culture and management, characteristics of effective teams, conflict resolution, motivation, systems-thinking, problem-solving, and leadership as applicable to public safety organizations. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of front-line leadership positions within the fields of public safety including law enforcement, fire service, and public safety support operations such as communication operators and property and records management.

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.

+ indicates course has prerequisites and/or corequisites

Program Prerequisites: None

Required Courses: 6 Credits

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<tr>
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</tbody>
</table>

Leadership in Public Safety Organizations

Certificate of Completion: CCL 5211N

6 Credits

Program Contact
Jonathan Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

Program Description
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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.

+ indicates course has prerequisites and/or corequisites

Program Prerequisites: None

Required Courses: 6 Credits

<table>
<thead>
<tr>
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Leadership in Public Safety Organizations

Certificate of Completion: CCL 5211N

6 Credits

Program Contact
Jonathan Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

Program Description
The Certificate of Completion (CCL) in Leadership in Public Safety Organizations program builds the industry knowledge and skills for individuals to transition to leadership positions in the field of public safety. This CCL will introduce students to the fundamental concepts and skills of professionalism, organizational culture and management, characteristics of effective teams, conflict resolution, motivation, systems-thinking, problem-solving, and leadership as applicable to public safety organizations. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of front-line leadership positions within the fields of public safety including law enforcement, fire service, and public safety support operations such as communication operators and property and records management.

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.

+ indicates course has prerequisites and/or corequisites

Program Prerequisites: None

Required Courses: 6 Credits

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Leadership in Public Safety Organizations

Certificate of Completion: CCL 5211N

6 Credits

Program Contact
Jonathan Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

Program Description
The Certificate of Completion (CCL) in Leadership in Public Safety Organizations program builds the industry knowledge and skills for individuals to transition to leadership positions in the field of public safety. This CCL will introduce students to the fundamental concepts and skills of professionalism, organizational culture and management, characteristics of effective teams, conflict resolution, motivation, systems-thinking, problem-solving, and leadership as applicable to public safety organizations. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of front-line leadership positions within the fields of public safety including law enforcement, fire service, and public safety support operations such as communication operators and property and records management.

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.

+ indicates course has prerequisites and/or corequisites

Program Prerequisites: None

Required Courses: 6 Credits

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</table>

Leadership in Public Safety Organizations

Certificate of Completion: CCL 5211N

6 Credits

Program Contact
Jonathan Terpay | 480-988-8756 | jonathan.terpay@cgc.edu

Program Description
The Certificate of Completion (CCL) in Leadership in Public Safety Organizations program builds the industry knowledge and skills for individuals to transition to leadership positions in the field of public safety. This CCL will introduce students to the fundamental concepts and skills of professionalism, organizational culture and management, characteristics of effective teams, conflict resolution, motivation, systems-thinking, problem-solving, and leadership as applicable to public safety organizations. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of front-line leadership positions within the fields of public safety including law enforcement, fire service, and public safety support operations such as communication operators and property and records management.

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.

+ indicates course has prerequisites and/or corequisites

Program Prerequisites: None

Required Courses: 6 Credits

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<tr>
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</tr>
<tr>
<td>LET175</td>
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</tr>
</tbody>
</table>
Legal Studies

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.

Program Prerequisites: None

Required Courses: 16 Credits
- 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 (3) OR
- AJS210 Constitutional Law 3
- AJS260 Procedural Criminal Law 3

Unmanned Aircraft Systems

Associate in Applied Science: AAS 3184

60-65 Credits

Program Contact
Charles Morgan | 480-988-8104 | charles.morgan@cgc.edu

Program Description
The Associate in Applied Science (AAS) in Unmanned Aircraft Systems (UAS) program prepares students for entry level positions in the UAS industry by providing foundational knowledge and skills in UAS mission planning, applications, maintenance, laws and regulations, data analytics, and project management using UAS platforms. Program content includes an introduction to UAS flight, history, avionics, sensors, communications systems and selectable paths including data analysis and applications such as emergency responders, geographic information systems, precision agriculture, and in commercial and government sectors. Students will prepare for and conduct unmanned flights similar to those commonly performed in the industry observing Federal Aviation Administration’s (FAA) regulations that govern sUAS operations. This program helps prepare students for the FAA Part 107 Certification.

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 course has prerequisites and/or corequisites.

Admission Criteria
Students wishing to enroll in the Unmanned Aircraft Systems program must complete an application process before being officially accepted into the program.

Program Prerequisites: None

Required Courses: 38 Credits
+ AET208 Aviation Safety 3
+ PHY111 General Physics I 4
+ UAS100 sUAS Batteries and Electronics 5
UAS101 Introduction to Unmanned Aircraft Systems Operation 3
UAS107 Unmanned Aircraft Systems Operator Certification 3
+ UAS205 sUAS Instruments and Autopilot Programming and Uses 3
+ UAS206 sUAS Instrument and Autopilot Flight Lab 2
+ UAS207 sUAS Dynamics and Design 5
+ UAS208 sUAS Dynamics and Design Lab 2
+ UAS211 sUAS Ground Control Stations, Telemetry, and Comms 3
+ UAS212 sUAS Maintenance Lab 2
+ UAS215 sUAS Commercial Flight Training 3

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
General Education: 22-27 Credits

Core: 12-17 Credits

First-Year Composition
+ENG101  First-Year Composition (3) OR  
+ENG107  First-Year Composition for ESL (3) AND  
+ENG102  First-Year Composition (3) OR  
+ENG108  First-Year Composition for ESL (3)  6

Oral Communication
COM100  Introduction to Human Communication (3) OR  
COM110  Interpersonal Communication (3) OR  
+COM225  Public Speaking (3) OR  
COM230  Small Group Communication (3)  3

Critical Reading
+CRE101  College Critical Reading and Critical Thinking (3) OR  
Equivalent as indicated by assessment 0-3

Mathematics
+MAT187  Precalculus (5) OR  
Any approved general education course in the Mathematical Applications [MA] area for which MAT187 is a prerequisite. (3-5)  3-5

Distribution: 10 Credits

Humanities, Arts and Design
Any approved general education course from the Humanities, Arts and Design area. 3

Social and Behavioral Sciences
Any approved general education course from the Social and Behavioral Sciences area. 3

Natural Sciences
Any approved general education course from the Natural Sciences area. 4

Victimology
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.

Program Prerequisites: None

Required Courses: 15 Credits
AJS101  Introduction to Criminal Justice 3  
AJS162  Domestic Violence 3  
AJS225  Criminology 3  
AJS255  Crime, Law and Mental Health 3  
AJS/EMT/FSC/ SWU258  Victimology and Crisis Management 3

-----------------------------

Biological Sciences

Sustainability
Academic Certificate: AC 6240N
15-18 Credits

Program Contact
Kimberley Patterson | 480-732-7083 | kimberley.patterson@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.
courses required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

Required Courses: 6 Credits
SSH111 Sustainable Cities 3
SUS110 Sustainable World 3

Restricted Electives: 9-12 Credits
Students must select three focus area classes
ASM104 Bones, Stones, and Human Evolution 4
BIO105 Environmental Biology 4
CHM107 Chemistry and Society (3) AND
+CHM107LL Chemistry and Society Laboratory (1) 4
COM263 Elements of Intercultural Communication 3
FON135 Sustainable Cooking 3
ECN212 Microeconomic Principles 3
EPS150 Introduction to Entrepreneurship 3
ENV101 Introduction to Environmental Science 4
GLG110 Geological Disasters and the Environment (3) AND
GLG111 Geological Disasters and the Environment Lab (1) 4
GPH113 Introduction to Physical Geography 4
PHI116 Environmental Ethics 3
PSY112 Psychology and Culture 3
SBU200 Society and Business 3
SUS100 Introduction to Sustainability 3
SCT100 Introduction to Sustainable Built Environments 3

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.

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed courses.
Consultation with an academic advisor is recommended for course selection.

Program Prerequisites: None

Required Courses: 33-36 Credits
ACC111 Accounting Principles I (3) AND
+ACC230 Uses of Accounting Information I (3) AND
+ACC240 Uses of Accounting Information II (3) OR
ACC111 Accounting Principles I (3) AND
+ACC112 Accounting Principles II (3) AND
+ACC212 Managerial Accounting (3) OR
ACC211 Financial Accounting (3) AND
+ACC212 Managerial Accounting (3) 6-9
ACC105 Payroll, Sales and Property Taxes (3) OR
+ACC222 Payroll Accounting (3) 3
+ACC115 Computerized Accounting 3
ACC121 Income Tax Preparation (3) OR
+ACC221 Tax Accounting (3) 3
+ACC219 Intermediate Accounting I 3
CIS114DE Excel Spreadsheet 3
CIS105 Survey of Computer Information Systems 3
GBS151 Introduction to Business 3
GBS205 Legal, Ethical and Regulatory Issues in Business 3
GBS120 Workplace Communication Skills (3) OR
+GBS233 Business Communication 3

---------------------------------------------------------------

Business & Computing Studies

Accounting

Associate in Applied Science: AAS 3149
61-70 Credits

Program Contacts
Barbara Gonzalez | 602-243-8044 |
barbara.gonzalez@cgc.edu

Program Description
The Associate in Applied Science (AAS) in Accounting

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
### Restricted Electives: 6 Credits
Students must select six (6) credits from the list below:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ACC+++++</td>
<td>Any ACC Accounting course(s) except courses used to satisfy Required Courses area</td>
<td>0-6</td>
</tr>
<tr>
<td>GBS131</td>
<td>Business Calculations</td>
<td>3</td>
</tr>
<tr>
<td>+GBS220</td>
<td>Quantitative Methods in Business</td>
<td>3</td>
</tr>
<tr>
<td>+GBS221</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>GBS261</td>
<td>Investments I</td>
<td>3</td>
</tr>
<tr>
<td>MGT101</td>
<td>Techniques of Supervision (3) OR</td>
<td></td>
</tr>
<tr>
<td>MGT175</td>
<td>Business Organization and Management (3) OR</td>
<td></td>
</tr>
<tr>
<td>MGT229</td>
<td>Management and Leadership I (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

### General Education: 22-28 Credits

#### Core: 12-18 Credits

**First-Year Composition**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>+ENG101</td>
<td>First-Year Composition (3) OR</td>
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<tr>
<td>+ENG107</td>
<td>First-Year Composition for ESL (3) AND</td>
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</tr>
<tr>
<td>+ENG102</td>
<td>First-Year Composition (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ENG108</td>
<td>First-Year Composition for ESL (3)</td>
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</table>

**Oral Communication**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM100</td>
<td>Introduction to Human Communication (3) OR</td>
<td></td>
</tr>
<tr>
<td>COM110</td>
<td>Interpersonal Communication (3) OR</td>
<td></td>
</tr>
<tr>
<td>+COM225</td>
<td>Public Speaking (3) OR</td>
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</tr>
<tr>
<td>COM230</td>
<td>Small Group Communication (3)</td>
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</table>

**Critical Reading**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>+CRE101</td>
<td>College Critical Reading and Critical Thinking (3) OR</td>
<td>0-3</td>
</tr>
</tbody>
</table>

**Mathematics**

Any approved general education course from the Mathematics [MA] area | 3-6 |

### Distribution: 10 Credits

#### Humanities, Arts and Design

Any approved general education course in the Humanities, Arts and Design [HU] area | 3 |

#### Social and Behavioral Sciences

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ECN211</td>
<td>Macroeconomic Principles (3) OR</td>
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</tr>
<tr>
<td>ECN212</td>
<td>Microeconomic Principles (3) OR</td>
<td></td>
</tr>
<tr>
<td>SBU200</td>
<td>Society and Business (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Natural Sciences

Any approved general education course in the Natural Sciences area | 4 |

### Accounting

#### Certificate of Completion: CCL 5665

**23-26 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.

+ indicates course has prerequisites and/or corequisites.

Consultation with an academic advisor is recommended for course selection.

**Program Prerequisites: None**

**Required Courses: 24-27 Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC111</td>
<td>Accounting Principles I (3) AND</td>
</tr>
<tr>
<td>+ACC230</td>
<td>Uses of Accounting Information I (3) AND</td>
</tr>
<tr>
<td>+ACC240</td>
<td>Uses of Accounting Information II (3) OR</td>
</tr>
<tr>
<td>ACC111</td>
<td>Accounting Principles I (3) AND</td>
</tr>
<tr>
<td>+ACC112</td>
<td>Accounting Principles II (3) AND</td>
</tr>
<tr>
<td>+ACC212</td>
<td>Managerial Accounting (3) OR</td>
</tr>
<tr>
<td>ACC211</td>
<td>Financial Accounting (3) AND</td>
</tr>
<tr>
<td>+ACC212</td>
<td>Managerial Accounting (3)</td>
</tr>
<tr>
<td>ACC105</td>
<td>Payroll, Sales and Property Taxes (3) OR</td>
</tr>
<tr>
<td>+ACC222</td>
<td>Payroll Accounting (3)</td>
</tr>
</tbody>
</table>

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
ACC121 Income Tax Preparation (3) OR
+ACC221 Tax Accounting (3) 3
+ACC115 Computerized Accounting 3
CIS114DE Excel Spreadsheet 3
CIS105 Survey of Computer Information Systems 3
GBS151 Introduction to Business 3

Administrative Professional

Associate in Applied Science : AAS 3680
61-67 Credits

Program Contact
Lana Short | 480-732-7191 | lana.short@cgc.edu

Program Description
The Associate in Applied Science (AAS) in the Administrative Professional degree is designed to provide training for various office positions. The curriculum incorporates people and technological skills essential for job success. Includes instruction in business communications, office procedures, public relations, accounting, records management, and report preparation. A Certificate of Completion (CCL) in Administrative Professional 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.

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed courses.

Program Prerequisites: None

Required Courses: 24 Credits
BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3
+ACC115 Computerized Accounting 3
CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3
GBS120 Workplace Communication Skills 3
GBS131 Business Calculations 3
GBS151 Introduction to Business 3
Select three (3) of the following courses:
BPC101AA Introduction to Computers I 1

BPC/OAS111AA Computer Keyboarding I 1
CIS121AE Windows Operating System: Level I 1
CIS121AI Mac Operating System 1
+CIS122AE Windows Operating System: Level II 1
CIS133AA Internet/Web Development Level I-A 1

Restricted Electives: 15 Credits
Students should select fifteen (15) credits from the following courses, except courses used to satisfy the Required Courses area, in consultation with a program advisor:
ACC+++ Any ACC Accounting prefixed course (except ACC115) 3
MGT251 Human Relations in Business 3
MGT126 Customer Service Skills and Strategies 3
CIS133DA Internet/Web Development: Level I 3
+CIS124DE Advanced Excel Spreadsheet: Level II 3
CIS103 Introduction to Social Media 3
MKT110 Marketing and Social Networking 3
CIS177DM Microsoft Access: Database Management 3
GBS205 Legal, Ethical, and Regulatory Issues in Business 3
MKT271 Principles of Marketing 3

General Education: 22-28 Credits

Core: 12-18 Credits
First-Year Composition
+ENG101 First-Year Composition (3) OR
+ENG107 First-Year Composition for ESL (3) AND
+ENG102 First-Year Composition (3) OR
+ENG108 First-Year Composition for ESL (3) 6

Oral Communication
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Any approved general education course from the Critical Reading area OR
Equivalent as indicated by assessment 0-3

Mathematics
Any approved general education course from the Mathematics area OR
Equivalent as indicated by assessment 3-6

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Distribution: 10 Credits

**Humanities, Arts and Design**
Any approved general education course from the Humanities, Arts and Design area. 3

**Social and Behavioral Sciences**
SBU200 Society and Business 3

**Natural Sciences**
Any approved general education course from the Natural Sciences area. 4

__________________________________________________________

**Administrative Professional**

**Certificate of Completion: CCL 5677**

18 Credits

**Program Contact**
Lana Short | 480-732-7191 | lana.short@cgc.edu

**Program Description**
The Certificate of Completion (CCL) in the Administrative Professional program is designed to provide students with basic office skills. This program is recommended for students with little or no office-related work experience or college experience. Includes instruction in business communications, office procedures, and report preparation. An Associate in Applied Science (AAS) in Administrative Professional is available.

**Program Notes**
The Certificate of Completion in Administrative Professional is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

**Program Prerequisites: None**

**Required Courses: 18 Credits**
BPC110 Computer Usage and Applications (3) OR CIS105 Survey of Computer Information Systems (3) 3

CIS13DE Microsoft Word: Word Processing 3
GBS120 Workplace Communication Skills 3
GBS131 Business Calculations 3
GBS151 Introduction to Business 3

Select three (3) of the following courses:
BPC101AA Introduction to Computers I 1
BPC/OAS111AA Computer Keyboarding I 1
CIS121AE Windows Operating System: Level I 1
CIS121AI Mac Operating System 1
+CIS122AE Windows Operating System: Level II 1
CIS133AA Internet/Web Development Level I-A 1

__________________________________________________________

**Adobe Foundations: Animation and Graphics Production**

**Certificate of Completion: CCL 5167N**

9 Credits

**Program Contact**
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

**Program Description**

**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.

**Program Prerequisites: None**

**Required Courses: 9 Credits**
CIS120DB Introduction to Adobe Illustrator 3
CIS120DC Introduction to Adobe Animate 3
CIS120DF Introduction to Adobe Photoshop 3

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Amazon Web Services Practitioner

Certificate of Completion: CCL 5141N
2 Credits

Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

Program Description
The Certificate of Completion (CCL) in Amazon Web Services 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 AWS Cloud Practitioner certification, which is the first 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.

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

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Program Prerequisites: None

Required Courses: 2 Credits
CLD110 Amazon Web Services Academy Cloud Foundations 2

Android App Development

Certificate of Completion: CCL 5834N
9-12 Credits

Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description
The Certificate of Completion (CCL) in Android App Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on Android mobile apps. This CCL will help prepare students to take the Associate Android Developer industry certification. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificate of Completion (CCL) in Mobile App Development, and Certificate of Completion (CCL) in Native Mobile App Development.

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. Students should consult with a Department Advisor in arranging their schedules. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

Program Prerequisites: None

Required Courses: 9-12 Credits
CIS105 Survey of Computer Information Systems (3) OR Permission of Program Director, Department or Division Chair (0) 0-3
+CIS150 Programming Fundamentals (3) OR +CIS150AB Object-Oriented Programming Fundamentals (3) OR
+CIS156 Python Programming: Level I (3) OR +CIS159 Visual Basic Programming I (3) OR

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title and Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS162AD</td>
<td>C# Level I (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS163AA</td>
<td>Java Programming: Level I (3)</td>
<td></td>
</tr>
<tr>
<td>CIS150 or CIS150AB recommended for students with no programming experience or who plan to complete the AAS 3099 or CCL 5193 in Mobile App Development.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+CIS165DA</td>
<td>Introduction to Android Application Development</td>
<td>3</td>
</tr>
<tr>
<td>+CIS265DA</td>
<td>Advanced Android Application Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**Business Administration Fastrack**

**Certificate of Completion: CCL 5152**

**27 Credits**

**Program Contact**
Nicki Lynn | 480-732-7394 | nicki.lynn@cgc.edu

**Program Description**
The Certificate of Completion (CCL) in Business Administration Fastrack program provides opportunities for individuals to update, upgrade, or develop essential business skills. The program’s focus is preparing students for job advancement and career opportunities in today’s business environment as defined by industry practitioners. Each course includes learning activities and projects which may be offered in an accelerated five-week or eight-week format. Additional features of the program include: student directed learning stressing the dynamic business environment, communication skills, leadership development, and performing effectively within a team environment.

**Program Notes**
The Certificate of Completion in Business Administration Fastrack is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

**Program Prerequisites:** None

**Required Courses:** 27 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title and Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC110</td>
<td>Understanding and Using Accounting Systems (3) OR</td>
<td></td>
</tr>
<tr>
<td>ACC111</td>
<td>Accounting Principles I (3)</td>
<td>3</td>
</tr>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
<td>3</td>
</tr>
<tr>
<td>GBS120</td>
<td>Workplace Communication Skills</td>
<td>3</td>
</tr>
<tr>
<td>GBS151</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>GBS205</td>
<td>Legal, Ethical, and Regulatory Issues in Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT126</td>
<td>Customer Service Skills and Strategies</td>
<td>3</td>
</tr>
<tr>
<td>MGT175</td>
<td>Business Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT251</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>MKT271</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Cisco Certified Network Professional: Enterprise Advanced Routing and Services**

**Certificate of Completion: CCL 5187N**

**8 Credits**

**Program Contact**
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

**Program Description**
The Certificate of Completion (CCL) in Cisco Certified Network Professional: Enterprise Advanced Routing and Services builds the advanced knowledge and skills needed for professional-level networking technologies and architecture. This CCL includes concepts of implementation and troubleshooting of advanced routing technologies and services including Layer 3 VPN services, infrastructure security, and infrastructure 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 Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) certification exam aligned with the CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications. Additional Certificates of Completion (CCLs) in Cisco Certified Network Security (CCNA Security), Cisco Certified
Network Professional: Enterprise Core, Cisco Certified Network Professional: Enterprise, Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, 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 for all courses required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite skills aligned with the Cisco Certified Network Associate (CCNA) industry certification who are interested in expanding their knowledge in the area in professional-level networking or to enhance their employment opportunities. Speak to a program director for additional information.

All courses within the Required and Restricted elective areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

Program Prerequisites: None

Admission Criteria:
This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the following prerequisites to the courses within the Required Course area as follows with a C or better OR have a Cisco Certified Network Associate (CCNA) industry certification OR receive permission of the Program Director:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks</td>
<td>4</td>
</tr>
<tr>
<td>+CNT150AB</td>
<td>Switching, Routing, and Wireless Essentials</td>
<td>4</td>
</tr>
<tr>
<td>+CNT160AB</td>
<td>Enterprise Networking, Security, and Automation</td>
<td>4</td>
</tr>
</tbody>
</table>

Students also have the option to complete the full CCL in this program, Cisco Network Administration: CCNP (major code 5037), that includes the prerequisites and required courses.

Required Courses: 8 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>+CNT250</td>
<td>Cisco Certified Network Professional: Enterprise Advanced Routing and Services (8) OR</td>
<td></td>
</tr>
<tr>
<td>+CNT250AA</td>
<td>Cisco Certified Network Professional: Enterprise Advanced Routing and Services I (4) AND</td>
<td></td>
</tr>
<tr>
<td>+CNT250AB</td>
<td>Cisco Certified Network Professional: Enterprise Advanced Routing and Services II (4)</td>
<td>8</td>
</tr>
</tbody>
</table>

Certificate of Completion: CCL 5190
16 Credits

Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

Program Description
The Certificate of Completion (CCL) in Cisco Certified Network Professional: Enterprise builds the advanced knowledge and skills needed for professional-level networking technologies and architecture. This CCL includes fundamental concepts of virtualization, network assurance, security, automation, and the implementation and troubleshooting of advanced routing technologies, 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 Cisco Enterprise Network Core Technologies (ENCOR) certification and Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) exams aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core, CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications.
Additional Certificates of Completion (CCLs) in Cisco Certified Network Security (CCNA Security), Cisco Certified Network Professional: Enterprise Core, Cisco Certified Network Professional: Enterprise Advanced Routing and Services, Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available.

Program Notes
Currently not Title IV Federal Financial Aid eligible. This Certificate of Completion (CCL) is intended for industry professionals with the requisite skills aligned with the Cisco Certified Network Associate (CCNA) industry certification who are interested in expanding their knowledge in the area in professional-level networking or to enhance their employment opportunities. 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 course has prerequisites and/or corequisites.
++ indicates any suffixed courses.

All courses within the Required and Restricted elective areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

Program Prerequisites: None

Required Courses: 16 Credits

+ CNT240 Cisco Certified Network Professional: Enterprise Core (8) OR
+ CNT240AA Cisco Certified Network Professional: Enterprise Core I (4) AND
+ CNT240AB Cisco Certified Network Professional: Enterprise Core II (4) 8
+ CNT250 Cisco Certified Network Professional: Enterprise Advanced Routing and Services (8) OR
+ CNT250AA Cisco Certified Network Professional: Enterprise Advanced Routing and Services I (4) AND

+ CNT250AB Cisco Certified Network Professional: Enterprise Advanced Routing and Services II (4)

Certificate of Completion: CCL 5189N
8 Credits

Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

Program Description
The Certificate of Completion (CCL) in Cisco Certified Network Professional: Enterprise Core builds the knowledge and skills needed for professional-level networking technologies and architecture. This CCL includes the fundamental concepts of virtualization, network assurance, security, and automation, 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 Cisco Enterprise Network Core Technologies (ENCOR) certification exam aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core certifications.

Additional Certificates of Completion (CCLs) in Cisco Certified Network Security (CCNA Security), Cisco Certified Network Professional: Enterprise, Cisco Certified Network Professional: Enterprise Core and Advanced Routing and Services, Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, 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 for all courses required within the program. Overall program minimum GPA = 2.00.
Cisco Network Administration and Security

Certificate of Completion: CCL 5036
16-19 Credits

Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@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
The Certificate of Completion in Cisco Network Administration and Security is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

**Required Courses: 8 Credits**

+ CNT240 Cisco Certified Network Professional: Enterprise Core (8) OR + CNT240AA Cisco Certified Network Professional: Enterprise Core I (4) AND + CNT240AB Cisco Certified Network Professional: Enterprise Core II (4) 8

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
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.

All courses within the Required and Restricted elective areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.

Program Prerequisites: None

Required Courses: 16-19 Credits

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3) OR Permission of Program Director (0)</td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks</td>
</tr>
<tr>
<td>+CNT150AB</td>
<td>Switching, Routing, and Wireless Essentials</td>
</tr>
<tr>
<td>+CNT160AB</td>
<td>Enterprise Networking, Security, and Automation</td>
</tr>
<tr>
<td>+CNT202</td>
<td>Cisco Secure Firewall Appliance Configuration (4) OR Cisco Certified Network Associate Security (4)</td>
</tr>
</tbody>
</table>

**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 course has prerequisites and/or corequisites. ++ indicates any suffixed course.

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.

All courses within the Required Courses area are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.

Program Prerequisites: None

Required Courses: 12-15 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3) OR Permission of Program Director (0)</td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks</td>
</tr>
<tr>
<td>+CNT150AB</td>
<td>Switching, Routing, and Wireless Essentials</td>
</tr>
<tr>
<td>+CNT160AB</td>
<td>Enterprise Networking, Security, and Automation</td>
</tr>
</tbody>
</table>

**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 course has prerequisites and/or corequisites. ++ indicates any suffixed course.

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.

All courses within the Required Courses area are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.
### Cisco Network Administration: CCNP

**Certificate of Completion: CCL 5037**  
**20-23 Credits**

**Program Contact**  
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

**Program Description**  
The Certificate of Completion (CCL) in Network Administration: Cisco Network Professional (CCNP) provides students with advanced knowledge and skills to install, configure, and maintain Cisco routers and switches; configure advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs); troubleshoot complex hardware and software configurations; and perform administrative tasks in a network at the professional level. 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 Cisco Certified Network Professional Certifications (CCNP) examinations.

Students who complete this program may seek employment in a variety of environments. An additional Certificate of Completion (CCL) in Cisco Network Administration and Security, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available.

**Program Notes**  
The Certificate of Completion in Cisco Network Administration: CCNP is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.  
++ indicates any suffixed course.

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.

All courses within the Required and Restricted elective areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

**Program Prerequisites:** None

**Required Courses:** 20-30 Credits

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
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<td>CIS105</td>
<td>Survey of Computer Information Systems (3) OR</td>
<td>0-3</td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks</td>
<td>4</td>
</tr>
<tr>
<td>+CNT150AB</td>
<td>Switching, Routing, and Wireless Essentials</td>
<td>4</td>
</tr>
<tr>
<td>+CNT160AB</td>
<td>Enterprise Networking, Security, and Automation</td>
<td>4</td>
</tr>
<tr>
<td>+CNT200</td>
<td>CCNP ROUTE: Implementing Cisco IP Routing</td>
<td>4</td>
</tr>
<tr>
<td>+CNT220</td>
<td>CCNP SWITCH: Implementing Cisco IP Switching</td>
<td>4</td>
</tr>
</tbody>
</table>

**Program Contact**  
Tom Pearson | 480-726-4131 | tom.pearson@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.

+ indicates course has prerequisites and/or corequisites.

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.

All courses within the Required areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

Program Prerequisites: None

Required Courses: 6-9 Credits
CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3
+BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+BPC270 A+ Exam Prep: Operating System Configuration and Support 3

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 for all courses required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

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.

All courses within the Required areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

Program Prerequisites: None

Required Courses: 9-12 Credits
CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3
+BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+BPC270 A+ Exam Prep: Operating System Configuration and Support 3

Certificate of Completion: CCL 5039N
9-12 Credits

Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Program Prerequisites: None

Required Courses: 9-12 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3) OR</td>
<td></td>
</tr>
<tr>
<td>Permission of program director (0)</td>
<td>0-3</td>
<td></td>
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<tr>
<td>+BPC170</td>
<td>A+ Exam Prep: Computer Hardware Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>+BPC270</td>
<td>A+ Exam Prep: Operating System Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

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 course has prerequisites and/or corequisites.

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.

All courses within the Required Courses and Restricted Electives areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.

Program Prerequisites: None

Required Courses: 9-13 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
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<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3) OR</td>
<td></td>
</tr>
<tr>
<td>Permission of program director (0)</td>
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<tr>
<td>+BPC170</td>
<td>A+ Exam Prep: Computer Hardware Configuration and Support</td>
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<tr>
<td>+BPC270</td>
<td>A+ Exam Prep: Operating System Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Networking (3) OR</td>
<td>3-4</td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks (4) OR</td>
<td>3-4</td>
</tr>
</tbody>
</table>

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 course has prerequisites and/or corequisites.

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.

All courses within the Required Courses and Restricted Electives areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.
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.

+ indicates course has prerequisites and/or corequisites.

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.

All courses within the Required Courses area are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

**Program Prerequisites: None**

**Required Courses: 9-19 Credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Permission of Program Director (0)</td>
<td>0-3</td>
<td></td>
</tr>
<tr>
<td>+BPC170</td>
<td>A+ Exam Prep: Computer Hardware Configuration and Support</td>
<td>3</td>
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</table>

Select from one of the following areas of specialization.

**Specialization I: Credits 3-6**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS270</td>
<td>Essentials of Network and Information Security</td>
<td>3</td>
</tr>
<tr>
<td>+ITS110</td>
<td>Information Security Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System</td>
<td>3</td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I</td>
<td>3</td>
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</table>

**Specialization 2: Credits 9-10**

<table>
<thead>
<tr>
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<td>CNT140AB</td>
<td>Introduction to Networks</td>
<td>3</td>
</tr>
<tr>
<td>CIS190</td>
<td>Introduction to Networking</td>
<td>3</td>
</tr>
<tr>
<td>CIS250</td>
<td>Management of Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>+CIS271DB</td>
<td>Information Security Essentials</td>
<td>3</td>
</tr>
</tbody>
</table>

**Cyber Engineering**

**Certificate of Completion: CCL 5149**

**42-46 Credits**

**Program Contact**

Tom Pearson | 480 -726-4131 | tom.pearson@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**

The Certificate of Completion in Cyber Engineering is currently not Title IV Federal Financial Aid eligible.
Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Only required courses taken within eight (8) years of completion of the program may be applied towards this degree. Consult with your faculty mentor or academic advisor.

Program Prerequisites: None

Required Courses: 42‑46 Credits

The following courses are required and included in the CCL in Cybersecurity Fundamentals.

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Only required courses taken within eight (8) years of completion of the program may be applied towards this degree. Consult with your faculty mentor or academic advisor.

Program Prerequisites: None

Required Courses: 41‑42 Credits

The following courses are required and included in the CCL in Cybersecurity Fundamentals.

Cyber Operations

Certificate of Completion: CCL S165
41‑42 Credits

Program Contact
Tom Pearson | 480‑726‑4131 | tom.pearson@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
The Certificate of Completion in Cyber Operations is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Only required courses taken within eight (8) years of completion of the program may be applied towards this degree. Consult with your faculty mentor or academic advisor.

Program Prerequisites: None

Required Courses: 41‑42 Credits

The following courses are required and included in the CCL in Cybersecurity Fundamentals.
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu.

### Cybersecurity

**Associate in Applied Science : AAS 3197**  
61-77 Credits

**Program Contact**  
Tom Pearson | 480-726-4131 | tom.pearson@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, Power Systems, and Cyber Engineering.

**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 course has prerequisites and/or corequisites.  
++ indicates any suffixed courses.

Only required courses and restricted electives taken within eight (8) years of completion of the program may be applied towards this degree. Consult with your faculty mentor or academic advisor.

**Required Prerequisites: None**

**Required Courses: 24-31 Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>+BPC270</td>
<td>A+ Exam Prep: Operating System Configuration and Support (3) OR</td>
<td></td>
</tr>
<tr>
<td>MST150++</td>
<td>Any Microsoft Windows course (3)</td>
<td>3</td>
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<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CIS111</td>
<td>Ethics in Information Technology (3) OR</td>
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</tr>
<tr>
<td>+ITS120</td>
<td>Legal, Ethical and Regulatory Issues (3)</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS156</td>
<td>Python Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Networking (3) OR</td>
<td></td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks (4)</td>
<td>3-4</td>
</tr>
<tr>
<td>+ITS110</td>
<td>Information Security Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+ITS240</td>
<td>Ethical Hacking and Network Defense</td>
<td>3</td>
</tr>
</tbody>
</table>

+ indicates course has prerequisites and/or corequisites.  
++ indicates any suffixed courses.

The following courses are required in the CCL in Cyber Operations.

<table>
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<tr>
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<th>Course Name</th>
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<tr>
<td>+BPC170</td>
<td>A+ Exam Prep: Computer Hardware Configuration and Support (3)</td>
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<tr>
<td>+CIS238DL</td>
<td>Linux System Administration (3) OR</td>
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</tr>
<tr>
<td>+CIS238RH</td>
<td>Red Hat System Administration II (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS290AC</td>
<td>Computer Information Systems Internship (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS298AC</td>
<td>Special Projects (3)</td>
<td>3</td>
</tr>
<tr>
<td>+ITS291</td>
<td>Computer Forensics Foundations</td>
<td>4</td>
</tr>
<tr>
<td>+ITS292</td>
<td>Advanced Computer Forensics</td>
<td>4</td>
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</tbody>
</table>

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu.
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

### Restricted Electives: 15-18 Credits

Students must complete 15-18 credits from the following list of courses. Courses that are required for an emphasis in Cyber Operations, Cyber Engineering, Linux System Administration, Microsoft System Administration, Cisco Networking CCNA Security, and/or Power Systems are noted. Courses cannot be repeated for credit.

#### Specialization I: Cyber Operations Credits: 17

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>+BPC170</td>
<td>A+ Exam Prep: Computer Hardware Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>+CIS238DL</td>
<td>Linux System Administration (3) OR</td>
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</tr>
<tr>
<td>+CIS238RH</td>
<td>Red Hat System Administration II (3)</td>
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</tr>
<tr>
<td>+CIS290AC</td>
<td>Computer Information Systems Internship (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>+CIS298AC</td>
<td>Special Projects (3)</td>
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</tr>
<tr>
<td>+ITS291</td>
<td>Computer Forensics Foundations</td>
<td>4</td>
</tr>
<tr>
<td>+ITS292</td>
<td>Advanced Computer Forensics</td>
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#### Specialization II: Linux System Administration Credits: 15

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<tr>
<td>+CIS238DL</td>
<td>Linux System Administration (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>+CIS238RH</td>
<td>Red Hat System Administration II (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS239DL</td>
<td>Linux Shell Scripting</td>
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<td>+CIS240DL</td>
<td>Linux Network Administration</td>
<td>3</td>
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<tr>
<td>+CIS271DL</td>
<td>Linux Security</td>
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<tr>
<td>+CIS275DL</td>
<td>Linux Capstone</td>
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#### Specialization III: Microsoft System Administration Credits: 15

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<tr>
<td>+CIS121AH</td>
<td>Microsoft PowerShell/Command Line Operations</td>
<td>3</td>
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<tr>
<td>+MST155DC</td>
<td>Installation, Storage, and Compute with Windows Server</td>
<td>4</td>
</tr>
<tr>
<td>+MST157DC</td>
<td>Networking with Windows Server</td>
<td>4</td>
</tr>
<tr>
<td>+MST158DC</td>
<td>Identity Management with Windows Server 2016</td>
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#### Specialization IV: Cisco Network Administration and Security Credits: 16

<table>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>+CNT140AB</td>
<td>Introduction to Networks</td>
<td>4</td>
</tr>
<tr>
<td>+CNT150AB</td>
<td>Switching, Routing, and Wireless Essentials</td>
<td>4</td>
</tr>
<tr>
<td>+CNT160AB</td>
<td>Enterprise Networking, Security, and Automation</td>
<td>4</td>
</tr>
<tr>
<td>+CNT202</td>
<td>Cisco Secure Firewall Appliance Configuration (4) OR</td>
<td>4</td>
</tr>
<tr>
<td>+CNT205</td>
<td>Cisco Certified Network Associate Security (4)</td>
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#### Specialization V: Power Systems Credits: 18

<table>
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<tbody>
<tr>
<td>+CIS274DA</td>
<td>Introduction to Power Systems Security</td>
<td>3</td>
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<tr>
<td>+CIS275DA</td>
<td>Generation and Transmission Systems Security</td>
<td>3</td>
</tr>
<tr>
<td>+CIS275DB</td>
<td>Smart Grid and Distribution System Security</td>
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<td>Embedded Systems Security</td>
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<td>CPD104</td>
<td>Career and Personal Development</td>
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<td>PPT120</td>
<td>Energy Industry Fundamentals</td>
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#### Specialization VI: Cyber Engineering Credits: 18

<table>
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<td>+CIS119DO</td>
<td>Introduction to Oracle: SQL (3) OR</td>
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<td>+CIS276++</td>
<td>Any SQL Database course (3)</td>
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<tr>
<td>+CIS162++</td>
<td>Any C Programming: Level I course</td>
<td>3</td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks</td>
<td>4</td>
</tr>
<tr>
<td>+CIS238DL</td>
<td>Linux System Administration (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>+CIS238RH</td>
<td>Red Hat System Administration II (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS250</td>
<td>Management of Information Systems</td>
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<tr>
<td>+CIS262++</td>
<td>Any C Programming: Level II course</td>
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#### General Education: 22-28 Credits

**Core: 12-18 Credits**

**First-Year Composition**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>First-Year Composition (3) OR</td>
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</tr>
<tr>
<td>+ENG107</td>
<td>First-Year Composition for ESL (3) AND</td>
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<td>+ENG102</td>
<td>First-Year Composition (3) OR</td>
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</tr>
<tr>
<td>+ENG108</td>
<td>First-Year Composition for ESL (3)</td>
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**Oral Communication**

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<tr>
<td>COM100</td>
<td>Introduction to Human Communication (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>COM110</td>
<td>Interpersonal Communication (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>+COM225</td>
<td>Public Speaking (3) OR</td>
<td>3</td>
</tr>
</tbody>
</table>
COM230  Small Group Communication (3)  3
COM100 required for students intending to transfer to ASU West to earn a Bachelor of Science in Applied Computing (Cybersecurity).

Critical Reading
+CRE101  College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0)  0-3

Mathematics
Any approved general education course in the Mathematics area  3-6

Distribution: 10 Credits

Humanities, Arts and Design
Any approved general education course(s) in 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 from the Natural Sciences area.  4

Program Notes
The Certificate of Completion in Cybersecurity Fundamentals is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Only required courses taken within eight (8) years of completion of the program may be applied towards this degree. Consult with your faculty mentor or academic advisor.

Program Prerequisites: None

Required Courses: 24-31 Credits

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Only required courses taken within eight (8) years of completion of the program may be applied towards this degree. Consult with your faculty mentor or academic advisor.

Program Prerequisites: None

Required Courses: 24-31 Credits

+BPC270  A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++  Any Microsoft Windows course (3)  3
CIS105  Survey of Computer Information Systems 3
CIS111  Ethics in Information Technology (3) OR
+ITS120  Legal, Ethical and Regulatory Issues (3)  3
CIS126DL  Linux Operating System (3) OR
CIS126RH  Red Hat System Administration I (3)  3
+CIS126  Any approved general education course from the Natural Sciences area.  4
+CIS190  Introduction to Networking (3) OR
+CNT140AB  Introduction to Networks (4)  3-4
+CIS250  Management of Information Systems (3)  0-3
+CIS270  Essentials of Network and Information Security (3) OR
+CIS271DB  Information Security Essentials (3) AND Information Security Principles (3) OR
+ITS110  Information Security Fundamentals (3)  3-6
+ITS240  Ethical Hacking and Network Defense  3

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.
For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Desktop Support

Certificate of Completion: CCL 5043
19-22 Credits

Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@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
The Certificate of Completion in Desktop Support is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

All courses within the Required Courses and Restricted Electives areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.

Program Prerequisites: None

Required Courses: 18-19 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BPC170</td>
<td>A+ Exam Prep: Computer Hardware Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>BPC270</td>
<td>A+ Exam Prep: Operating System Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>CIS102DA</td>
<td>Customer User Support</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Networking (3) OR</td>
<td></td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks (4)</td>
<td>3-4</td>
</tr>
</tbody>
</table>

(Note: CNT140AB is recommended for students interested in pursuing their Cisco Network Administration Certification)

Restricted Electives: 1-3 Credits

Students must select one to three (1-3) credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC171</td>
<td>Recycling Used Computer Technology</td>
<td>1</td>
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<tr>
<td>+CIS290AA</td>
<td>Computer Information Systems Internship</td>
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<tr>
<td>+CIS290AB</td>
<td>Computer Information Systems Internship</td>
<td>2</td>
</tr>
<tr>
<td>+CIS290AC</td>
<td>Computer Information Systems Internship</td>
<td>3</td>
</tr>
<tr>
<td>+CIS296WB</td>
<td>Cooperative Education</td>
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</tr>
<tr>
<td>+CIS296WC</td>
<td>Cooperative Education</td>
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</tr>
<tr>
<td>+CIS298AA</td>
<td>Special Projects</td>
<td>1</td>
</tr>
<tr>
<td>+CIS298AB</td>
<td>Special Projects</td>
<td>2</td>
</tr>
<tr>
<td>+CIS298AC</td>
<td>Special Projects</td>
<td>3</td>
</tr>
</tbody>
</table>

Enrolled Agent

Certificate of Completion: CCL 5958
17-18 Credits

Program Contact
Barbara Gonzalez | 602-243-8044 | barbara.gonzalez@cgc.edu

Program Description
Description: The Certificate of Completion (CCL) in Enrolled Agent program helps to prepare students for the Enrolled Agent Examination. The Internal Revenue Service (IRS) Enrolled Agent credential allows tax practitioners to represent taxpayers before the IRS when it comes to collections, audits, and appeals. Enrolled Agents’ expertise in the continually changing
field of taxation enables them to effectively represent taxpayers at all administrative levels within the IRS. Students who successfully complete this CCL may also seek employment as tax preparers.

Program Notes
The Certificate of Completion in Enrolled Agent is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

Consultation with an Academic Advisor is recommended for course selection. The Volunteer Income Tax Assistance (VITA) program internship is only available in the spring semester. Contact a program adviser for more information.

Program Prerequisites: None
Required Courses: 15 Credits
ACC111 Accounting Principles I (3) OR
ACC211 Financial Accounting (3) 3
ACC121 Income Tax Preparation 3
ACC221 Tax Accounting 3
+ACC224 Tax Practice Administration and Business Entity Analysis 3
CIS105 Survey of Computer Information Systems 3

Restricted Electives: 2-3 Credits
Students should select 2-3 credits from the list below:
ACC105 Payroll, Sales and Property Taxes 3
+ACC112 Accounting Principles II 3
+ACC115 Computerized Accounting 3
+ACC222 Payroll Accounting 3
+ACC230 Uses of Accounting Information I 3
+ACC270AB Accounting Internship 2
+ACC270AC Accounting Internship 3

Associate in Applied Science: AAS 3148
61-66 Credits
Program Contact
Nicki Lynn | 480-732-7394 | nicki.lynn@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 course has prerequisites and/or corequisites.

Program Prerequisites: None
Required Courses: 21 Credits
ACC111 Accounting Principles I 3
CIS105 Survey of Computer Information Systems 3
GBS120 Workplace Communication Skills (3) OR
+GBS233 Business Communication (3) 3
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 (3) 3
MKT271 Principles of Marketing 3

Restricted Electives: 18 Credits
Students should select eighteen (18) credits from the following courses. 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 3
CIS117DM Microsoft Access: Database Management 3
CIS133DA Internet/Web Development Level I 3
EPS+++ Any EPS Entrepreneurial Studies course(s)
GBS+++ Any GBS General Business course(s)
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

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**General Business**

**Certificate of Completion: CCL 5683**

**21 Credits**

**Program Contact**

Nicki Lynn | 480-732-7394 | nicki.lynn@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 course has prerequisites and/or corequisites.

**Program Prerequisites: None**

**Required Courses: 12 Credits**

- **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: 9 Credits**

Students should select nine (9) credits from the following courses. Any 100/200 level prefixed courses may be selected, except courses used to satisfy the Required Courses area.

- **ACC+++** Any ACC Accounting course(s) 1-3
- **CIS114** Excel Spreadsheet 3
- **CIS117** Microsoft Access: Database Management 3
- **CIS133** Internet/Web Development Level I 3
- **EPS+++** Any EPS Entrepreneurial Studies course(s) 1-3
- **GBS+++** Any GBS General Business course(s) 1-3
- **MGT+++** Any MGT Management course(s) 1-3
- **MKT+++** Any MKT Marketing course(s) 1-3
- **REA+++** Any REA Real Estate course(s) 1-3
- **SBS+++** Any SBS Small Business Management course(s) 1-3

**General Education: 22-27 Credits**

**Core: 12-17 Credits**

**First-Year Composition**

- **+ENG101** First-Year Composition (3) OR **+ENG107** First-Year Composition for ESL (3) AND **+ENG102** First-Year Composition (3) OR **+ENG108** First-Year Composition for ESL (3) 6

**Oral Communication**

- **COM100** Introduction to Human Communication (3)
- **COM110** Interpersonal Communication (3)
- **+COM225** Public Speaking (3) OR **COM230** Small Group Communication (3) 3

**Critical Reading**

- **+CRE101** College Critical Reading and Critical Thinking (3) OR Equivalent by Assessment 0-3

**Mathematics**

Any approved general education course from the Mathematics area. 3-5

**Distribution: 10 Credits**

**Humanities, Arts and Design**

Any approved general education course in the Humanities, Arts and Design area. 3

**Social and Behavioral Sciences**

- **ECN211** Macroeconomic Principles (3) OR **ECN212** Microeconomic Principles (3) OR **SBU200** Society and Business (3) 3

**Natural Sciences**

Any approved general education course in the Natural Sciences area. 4

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Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

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### Information Technology

**Associate in Applied Science: AAS 3196**

**60-65 Credits**

**Program Contacts**

Tom Pearson | 480-726-4131 | tom.pearson@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**

The Certificate of Completion in Human Resources Management is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

**Program Prerequisites:** None

**Required Courses: 24 Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GBS205</td>
<td>Legal, Ethical, and Regulatory Issues in Business</td>
<td>3</td>
</tr>
<tr>
<td>GBS131</td>
<td>Business Calculations</td>
<td>3</td>
</tr>
<tr>
<td>MAT112</td>
<td>Mathematical Concepts and Applications</td>
<td>3</td>
</tr>
<tr>
<td>Satisfactory completion of higher level Mathematics course</td>
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</tbody>
</table>

Courses at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu.

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**Human Resources Management**

**Certificate of Completion: CCL 5580**

**24 Credits**

**Program Contact**

Nicki Lynn | 480-732-7394 | nicki.lynn@cgc.edu

**Program Description**

The Certificate of Completion (CCL) in Human Resources Management program is designed to provide skills necessary for careers in human resources management. The program is designed to provide students a series of courses with an emphasis in management and is designed to prepare students for an entry-level position in human resources. Graduates may be employed in employment (recruiting, interviewing, and hiring), benefits administration, compensation, and employee relations.

**Program Notes**

The Certificate of Completion in Human Resources Management is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

**Program Prerequisites:** None

**Required Courses: 24 Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications</td>
<td>3</td>
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<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
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<td>GBS205</td>
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</table>

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu.

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**Information Technology**

**Associate in Applied Science: AAS 3196**

**60-65 Credits**

**Program Contacts**

Tom Pearson | 480-726-4131 | tom.pearson@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**

The Certificate of Completion in Human Resources Management is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

**Program Prerequisites:** None

**Required Courses: 24 Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
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</table>

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---

**Human Resources Management**

**Certificate of Completion: CCL 5580**

**24 Credits**

**Program Contact**

Nicki Lynn | 480-732-7394 | nicki.lynn@cgc.edu

**Program Description**

The Certificate of Completion (CCL) in Human Resources Management program is designed to provide skills necessary for careers in human resources management. The program is designed to provide students a series of courses with an emphasis in management and is designed to prepare students for an entry-level position in human resources. Graduates may be employed in employment (recruiting, interviewing, and hiring), benefits administration, compensation, and employee relations.

**Program Notes**

The Certificate of Completion in Human Resources Management is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

**Program Prerequisites:** None

**Required Courses: 24 Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
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<td>Computer Usage and Applications</td>
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<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
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Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu.
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For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

+ indicates course has prerequisite and/or corequisite.
++ indicates all suffixed courses.

Program Prerequisites: None

Required Courses: 32-38 Credits

Specialization 1: Cybersecurity Fundamentals

<table>
<thead>
<tr>
<th>Credits:</th>
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<tbody>
<tr>
<td>Information Technology Core Credits:</td>
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<tr>
<td>+BPC270</td>
<td>A+ Exam Prep: Operating System Configuration and Support (3) OR</td>
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<td>MST150++</td>
<td>Any Microsoft Windows course (3) 3</td>
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<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems 3</td>
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<tr>
<td>CIS117DM</td>
<td>Microsoft Access: Database Management (3) OR</td>
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<tr>
<td>+CIS119DO</td>
<td>Introduction to Oracle: SQL (3) OR</td>
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<tr>
<td>+CIS276DA</td>
<td>MySQL Database (3) OR</td>
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<td>+CIS276DB</td>
<td>SQL Server Database (3) 3</td>
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<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
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<td>CIS126RH</td>
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<tr>
<td>+CIS156</td>
<td>Python Programming: Level I 3</td>
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<tr>
<td>+CIS190</td>
<td>Introduction to Networks (3) OR</td>
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<td>CNT140AB</td>
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<tr>
<td>CIS224</td>
<td>Project management (3) OR</td>
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<tr>
<td>+CIS250</td>
<td>Management of Information Systems (3) 3</td>
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</tbody>
</table>

Students taking CIS271DB would be required to take CIS250.

Cybersecurity Fundamentals Credits: 9-12

| CIS11 | Ethics in Information Technology (3) OR |
| +ITS120 | Legal, Ethical and Regulatory Issues (3) 3 |
| +CIS270 | Essentials of Network and Information Security (3) OR |
| +CIS271DB | Information Security Essentials (3) AND |
| +CIS272DB | Information Security Principles (3) OR |
| +ITS110 | Information Security Fundamentals (3) 3-6 |
| +ITS240 | Ethical Hacking and Network Defense 3 |

Related Area Credits: 0-5

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:

| 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 36-38

<table>
<thead>
<tr>
<th>Credits:</th>
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<tbody>
<tr>
<td>Information Technology Core Credits:</td>
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</tr>
<tr>
<td>+BPC270</td>
<td>A+ Exam Prep: Operating System Configuration and Support (3) OR</td>
</tr>
<tr>
<td>CIS26DL</td>
<td>Linux Operating System (3) OR</td>
</tr>
<tr>
<td>CIS26RH</td>
<td>Red Hat System Administration I (3) OR</td>
</tr>
<tr>
<td>MST150++</td>
<td>Microsoft Windows (3) 3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Computer Information Systems 3</td>
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<tr>
<td>+CIS119DO</td>
<td>Introduction to Oracle: SQL 3</td>
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<tr>
<td>CIS133DA</td>
<td>Internet/Web Development Level I 3</td>
</tr>
<tr>
<td>+CIS156</td>
<td>Python Programming: Level I (3) OR</td>
</tr>
<tr>
<td>+CIS162++</td>
<td>Any C Programming: Level I course (3) OR</td>
</tr>
<tr>
<td>+CIS163AA</td>
<td>Java Programming: Level I (3) 3</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Networks (3) OR</td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks (4) 3-4</td>
</tr>
<tr>
<td>CIS224</td>
<td>Project management (3) OR</td>
</tr>
<tr>
<td>CIS250</td>
<td>Management of Information Systems (3) 3</td>
</tr>
</tbody>
</table>

Database Development Credits: 15

| CIS117DM | Microsoft Access: Database Management (3) OR |
| +CIS119 | Database Modeling and Design (3) 3 |
| +CIS150++ | Programming Fundamentals 3 |
| +CIS164AB | Oracle: PL/SQL Programming (3) OR |
| +CIS276DA | MySQL Database (3) OR |
| +CIS276DB | SQL Server Database (3) 3 |
| +CIS271AM | Advanced Microsoft Access: Database Management (3) OR |
| +CIS276DB | SQL Server Database (3) 3 |
| +CIS225AB | Object-Oriented Analysis and Design 3 |

Related Area Credits: 0-2

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:

| BPC+++++ | Any BPC Business-Personal Computers courses |

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
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Specialization 4: Foundations of Mobile App Development Credits: 33-38

Information Technology Core Credits: 21-22

- CIS105 Survey of Computer Information Systems 3
- +BPC270 A+ Exam Prep: Operating System Configuration and Support 3
- CIS126DL Linux Operating System (3) OR
- CIS126RH Red Hat System Administration I (3) OR
- +MST150++ Microsoft Windows (3) 3
- CIS117DM Microsoft Access: Database Management (3) OR
- +CIS119DO Introduction to Oracle: SQL (3) OR
- +CIS276DA MySQL Database (3) OR
- +CIS276DB SQL Server Database (3) 3
- CIS126RL Red Hat System Administration II (3) OR
- CIS133DA Internet/Web Development Level I 3
- +CIS150AB Object Oriented Programming Fundamentals (3) OR
- +CIS156 Python Programming: Level I (3) OR
- +CIS162++ Any C Programming: Level I course (3) OR
- +CIS163AA Java Programming: Level I (3) 3
- +CIS190 Introduction to Networks (3) OR
- CNT140AB Introduction to Networks (4) 3-4
- CIS224 Project management (3) OR
- +CIS250 Management of Information Systems (3) 3

Desktop Support Credits: 6

- +BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
- CIS102DA Customer User Support 3

Foundations of Mobile App Development Credits: 12

- CIS120DF Computer Graphics: Adobe Photoshop 3
- +CIS165 Introduction to IOS Application Development I 3
- +CIS165DA Android Mobile Device Programming 3
- +CIS165DB C#/VB.NET: Windows 8 App Development (3) OR
- +CIS165DC Xamarin/C# Cross Platform Development (3) 3

Related Area Credits: 0-5

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:

- 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

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**Specialization 5: Microsoft Office Professional**

Credits: 31-38

**Information Technology Core Credits: 18-19**

- **CIS105** Survey of Computer Information Systems 3
- **CIS117DM** Microsoft Access: Database Management 3
- **CIS133DA** Internet/Web Development Level I 3
- **+CIS150AB** Object Oriented Programming Fundamentals (3) OR...
- **+CIS156** Python Programming: Level I (3) OR...
- **+CIS162++** Any C Programming: Level I course (3) OR...
- **+CIS163AA** Java Programming: Level I (3) 3
- **+CIS190** Introduction to Networks (3) OR...
- **CNT140AB** Introduction to Networks (4) 3-4
- **MST150++** Microsoft Windows (3) OR...
- **BPC270** A+ Exam Prep: Operating System Configuration and Support (3) 3

**Microsoft Office Professional Credits: 11-13**

- **BPC111AA** Computer Keyboarding (1) OR...
- **Permission of Program Director (0) 0-1**
- **CIS113DE** Microsoft Word: Word Processing 3
- **CIS114DE** Excel Spreadsheet 3
- **CIS118DB** Desktop Presentation: PowerPoint 3
- **CIS124AA** Project Management Software: Level I (I) AND
- **CIS124BA** Project Management Software: Level II (I) OR
- **CIS224** Project Management Microsoft Project for Windows (3) 2-3

**Related Area Credits: 0-8**

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:

- **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

**Information Technology Core: 21-22**

- **CIS105** Survey of Computer Information Systems 3
- **CIS117DM** Microsoft Access: Database Management (3) OR...
- **+CIS119DO** Introduction to Oracle: SQL (3) OR...
- **+CIS276DA** MySQL Database (3) OR...
- **+CIS276DB** SQL Server Database (3) 3
- **CIS133DA** Internet/Web Development Level I 3
- **+CIS150AB** Object Oriented Programming Fundamentals (3) OR...
- **+CIS156** Python Programming: Level I (3) OR...
- **+CIS162++** Any C Programming: Level I course (3) OR...
- **+CIS163AA** Java Programming: Level I (3) 3
- **+CIS190** Introduction to Networks (3) OR...
- **CNT140AB** Introduction to Networks (4) 3-4
- **CIS224** Project Management Microsoft Project for Windows (3) 2-3

**Microsoft Server Credits: 15**

- **CIS121AH** Microsoft PowerShell/Command Line Operations 3
- **+MST155DC** Installation, Storage, & Compute With Windows Server 4
- **+MST157DC** Networking With Windows Server 4
- **+MST158DC** Installing and Configuring Windows Server 4

**Related Area Credits: 0-2**

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:

- **BPC+++++** Any BPC Business-Personal Computers courses
- **CIS+++++** Any CIS Computer Information Systems courses
- **CLD+++++** Any CLD Cloud Computing courses
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

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Specialization 8: Programming and Systems Analysis
Level 1 Courses:

Information Technology Core Credits: 21-22

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Oracle: SQL (3) OR</td>
</tr>
<tr>
<td>+CIS276DA</td>
<td>MySQL Database (3) OR</td>
</tr>
<tr>
<td>+CIS276DB</td>
<td>SQL Server Database (3)</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I (3) OR</td>
</tr>
<tr>
<td>MST150++</td>
<td>Microsoft Windows (3)</td>
</tr>
<tr>
<td>CIS133DA</td>
<td>Internet/Web Development Level I</td>
</tr>
<tr>
<td>+CIS150AB</td>
<td>Object Oriented Programming Fundamentals (3) OR</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Networks (3) OR</td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks (4) 3-4</td>
</tr>
<tr>
<td>CIS224</td>
<td>Project management (3) OR</td>
</tr>
<tr>
<td>+CIS250</td>
<td>Management of Information Systems (3)</td>
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</table>

Programming and Systems Analysis Credits: 9

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS159</td>
<td>Visual Basic Programming I (3) OR</td>
</tr>
<tr>
<td>+CIS162++</td>
<td>Any C Programming: Level I course (3) OR</td>
</tr>
<tr>
<td>+CIS163AA</td>
<td>Java Programming: Level I (3)</td>
</tr>
<tr>
<td>+CIS165++</td>
<td>Any Mobile Application Development course (3)</td>
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<tr>
<td>+CIS166++</td>
<td>Any Web Scripting course</td>
</tr>
<tr>
<td>GBS151</td>
<td>Introduction to Business</td>
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</table>

Related Area Credits: 1-8

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC+++++</td>
<td>Any BPC Business-Personal Computers courses</td>
</tr>
<tr>
<td>CIS+++++</td>
<td>Any CIS Computer Information Systems courses</td>
</tr>
<tr>
<td>CLD+++++</td>
<td>Any CLD Cloud Computing courses</td>
</tr>
<tr>
<td>CNT+++++</td>
<td>Any CNT Cisco Network Technology courses</td>
</tr>
<tr>
<td>ITS+++++</td>
<td>Any ITS Information Technology Security courses</td>
</tr>
<tr>
<td>MST+++++</td>
<td>Any MST Microsoft Technology courses</td>
</tr>
</tbody>
</table>

Specialization 9: Redhat Linux Engineer 32-38

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Oracle Database Operations Credits: 9

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS190</td>
<td>Oracle: Database Administration</td>
</tr>
<tr>
<td>+CIS154</td>
<td>Database Modeling and Design</td>
</tr>
<tr>
<td>+CIS164AB</td>
<td>Oracle: Developer PL/SQL Programming</td>
</tr>
</tbody>
</table>

Related Area Credits: 2-8

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC+++++</td>
<td>Any BPC Business-Personal Computers courses</td>
</tr>
<tr>
<td>CIS+++++</td>
<td>Any CIS Computer Information Systems courses</td>
</tr>
<tr>
<td>CLD+++++</td>
<td>Any CLD Cloud Computing courses</td>
</tr>
<tr>
<td>CNT+++++</td>
<td>Any CNT Cisco Network Technology courses</td>
</tr>
<tr>
<td>ITS+++++</td>
<td>Any ITS Information Technology Security courses</td>
</tr>
<tr>
<td>MST+++++</td>
<td>Any MST Microsoft Technology courses</td>
</tr>
</tbody>
</table>

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Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Information Technology Core Credits: 21-22

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CIS117DM</td>
<td>Microsoft Access: Database Management</td>
<td>3</td>
</tr>
<tr>
<td>+CIS19DO</td>
<td>Introduction to Oracle: SQL</td>
<td>3</td>
</tr>
<tr>
<td>+CIS276DA</td>
<td>MySQL Database</td>
<td>3</td>
</tr>
<tr>
<td>+CIS276DB</td>
<td>SQL Server Database</td>
<td>3</td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I</td>
<td>3</td>
</tr>
<tr>
<td>CIS133DA</td>
<td>Internet/Web Development Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS150AB</td>
<td>Object Oriented Programming Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+CIS156</td>
<td>Python Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS162++</td>
<td>Any C Programming: Level I course</td>
<td>3</td>
</tr>
<tr>
<td>+CIS163AA</td>
<td>Java Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks</td>
<td>3-4</td>
</tr>
<tr>
<td>CIS224</td>
<td>Project management</td>
<td>3</td>
</tr>
<tr>
<td>+CIS250</td>
<td>Management of Information Systems</td>
<td>3</td>
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</table>

Redhat Linux Engineer Credits: 6

<table>
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<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>+CIS238RH</td>
<td>Red Hat System Administration II</td>
<td>3</td>
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<tr>
<td>+CIS240RH</td>
<td>Red Hat System Administration III</td>
<td>3</td>
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Related Area Credits: 5-11

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:

- **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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BPC270</td>
<td>A+ Exam Prep: Operating System Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System</td>
<td>3</td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I</td>
<td>3</td>
</tr>
<tr>
<td>MST150++</td>
<td>Microsoft Windows</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
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</table>

Specialization 11: 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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CIS117DM</td>
<td>Microsoft Access: Database Management</td>
<td>3</td>
</tr>
<tr>
<td>+CIS19DO</td>
<td>Introduction to Oracle: SQL</td>
<td>3</td>
</tr>
<tr>
<td>+CIS276DA</td>
<td>MySQL Database</td>
<td>3</td>
</tr>
<tr>
<td>+CIS276DB</td>
<td>SQL Server Database</td>
<td>3</td>
</tr>
<tr>
<td>CIS133DA</td>
<td>Internet/Web Development Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS150AB</td>
<td>Object Oriented Programming Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+CIS156</td>
<td>Python Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS162++</td>
<td>Any C Programming: Level I course</td>
<td>3</td>
</tr>
<tr>
<td>+CIS163AA</td>
<td>Java Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Networks</td>
<td>3-4</td>
</tr>
<tr>
<td>CNT140AB</td>
<td>Introduction to Networks</td>
<td>3-4</td>
</tr>
<tr>
<td>CIS224</td>
<td>Project management</td>
<td>3</td>
</tr>
<tr>
<td>+CIS250</td>
<td>Management of Information Systems</td>
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</tr>
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</table>

Web Foundation Credits: 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS120DF</td>
<td>Adobe Photoshop Level I: Digital Imaging</td>
<td>3</td>
</tr>
<tr>
<td>CIS136</td>
<td>Content Management Systems:</td>
<td>3</td>
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</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS166AA</td>
<td>Introduction to Javascript</td>
<td>3</td>
</tr>
<tr>
<td>+CIS233DA</td>
<td>Internet/Web Development Level II</td>
<td>3</td>
</tr>
<tr>
<td>+CIS235</td>
<td>e-Commerce</td>
<td>3</td>
</tr>
</tbody>
</table>

Related Area Credits: 0-2

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:

- **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

Information Technology Core Credits: 21-22

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>+BPC270</td>
<td>A+ Exam Prep: Operating System Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System</td>
<td>3</td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I</td>
<td>3</td>
</tr>
<tr>
<td>MST150++</td>
<td>Microsoft Windows</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Information Technology Core Credits: 21-22

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

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Mathematical Applications [MA] area. 3-6

Distribution: 10 Credits

Humanities, Arts and Design
Any approved general education course from the Humanities, Arts and Design [HU] area. 3

Social and Behavioral Sciences
Any approved general education course from the Social-Behavioral Sciences [SB] area. 3

Natural Sciences
Any approved general education course from the Natural Science [SG] or [SQ] area. 4

iOS App Development
Certificate of Completion: CCL 5914N
9-12 Credits

Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description
The Certificate of Completion (CCL) in iOS App Development prepares students for positions in app development for the Apple iPad, iPhone, and Apple Watch series. The program emphasizes knowledge and skills required to design, develop, test, and document structured and object-oriented programs utilizing Swift and Xcode. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificates of Completion (CCLs) in Native App Development and Mobile 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 required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisite and/or corequisites.

Program Prerequisites: None

Required Courses: 9-12 Credits
CISI05 Survey of Computer Information Systems (3) OR
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.

All courses within the Required areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

Program Prerequisites: None

Required Courses: 6-9 Credits

- CIS105  Survey of Computer Information Systems (3) OR
  Permission of program director (0)  0-3
- CIS126DL  Linux Operating System  3
- +CIS238DL  Linux System Administration  3

Linux System Administration

Certificate of Completion: CCL 5052N

6-9 Credits

Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

Program Description
The Certificate of Completion (CCL) in Linux System Administration program is designed to help prepare students for a variety of industry-recognized Linux certification exams as well as provide practical hands-on skills for the workplace. The program includes a core of Linux classes including 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-I) 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
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 course has prerequisites and/or corequisites.
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 course has prerequisites and/or corequisites.
++ indicates any suffixed course.

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.

All courses within the Required Courses and Restricted Electives areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.

Program Prerequisites: None
Required Courses: 15-18 Credits
CIS105 Survey of Computer Information Systems (3) OR Permission of program director (0) 0-3

Students should select from one of the following two tracks (Linux or Red Hat Enterprise Linux): Linux Track
CIS126DL Linux Operating System 3
+CIS238DL Linux System Administration 3
+CIS239DL Linux Shell Scripting 3
+CIS240DL Linux Network Administration 3
+CIS275DL Linux Capstone 3

Red Hat Enterprise Linux Track
CIS126RH Red Hat System Administration I 3
+CIS238RH Red Hat System Administration II 3
+CIS239RH Linux Shell Scripting 3
+CIS240RH Red Hat System Administration III 3
+CIS275DL Linux Capstone 3

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 course has prerequisites and/or corequisites.
++ indicates any suffixed course.

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.

All courses within the Required Courses and Restricted Electives areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.

Program Prerequisites: None
Required Courses: 15-18 Credits
CIS105 Survey of Computer Information Systems (3) OR Permission of program director (0) 0-3

Students should select from one of the following two tracks (Linux or Red Hat Enterprise Linux): Linux Track
CIS126DL Linux Operating System 3
+CIS238DL Linux System Administration 3
+CIS239DL Linux Shell Scripting 3
+CIS240DL Linux Network Administration 3
+CIS275DL Linux Capstone 3

Red Hat Enterprise Linux Track
CIS126RH Red Hat System Administration I 3
+CIS238RH Red Hat System Administration II 3
+CIS239RH Linux Shell Scripting 3
+CIS240RH Red Hat System Administration III 3
+CIS275DL Linux Capstone 3

Required Courses: 21 Credits
ACC111 Accounting Principles I 3
BPC110 Computer Usage and Applications (3) OR CIS105 Survey of Computer Information Systems (3) 3
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: 3-4 Credits
Students should select eighteen (18) credits from the following courses in consultation with a Department...
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

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**Microsoft Desktop Associate**

**Certificate of Completion: CCL 5030N**

**3 Credits**

**Program Contact**

Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

**Program Description**

The Certificate of Completion (CCL) in Microsoft Desktop Associate program is designed to provide students with background knowledge and skills required for learning the specific tasks and industry recognized standards associated with how to effectively install and configure Windows operating systems. The course includes basic features of the Windows operating system, virtualization improvements, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. It is designed to prepare students for the Microsoft 365 Certified: Modern Desktop Administrator Associate certification exam. 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 to help prepare them for multiple industry certification exams. 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.

+ indicates course has prerequisites and/or corequisites.

Students are encouraged, but not required, to complete CIS105, or CIS190, or CNT140AB prior to

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Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

---
beginning this CCL.

All courses within the Required areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

Program Prerequisites: None

Required Courses: 16-22 Credits

BPC/OAS111AA Computer Keyboarding I (1) OR Permission of Program Director (0) 0-1
CIS105 Survey of Computer Information Systems (3) OR Permission of Program Director (0) 0-3
CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3
CIS117DM Microsoft Access: Database Management 3
CIS118DB Desktop Presentation: Powerpoint 3
+BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS121AE Windows Operating System: Level I (1) AND
CIS122AE Windows Operating System: Level II (1) OR
MST150++ Microsoft Windows (3) 2-3
CIS124AA Project Management Software: Level I (1) AND
CIS124BA Project Management Software: Level II (1) OR
CIS224 Project Management Microsoft Project for Windows (3) 2-3

Microsoft Office Professional

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
The Certificate of Completion in Microsoft Office Professional is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites. ++ indicates any suffixed course.

Only required courses taken within eight (8) years of completion of the program may be applied towards this certificate. Consult with your faculty mentor or academic advisor.

Program Prerequisites: None

Required Courses: 16-22 Credits

BPC/OAS111AA Computer Keyboarding I (1) OR Permission of Program Director (0) 0-1
CIS105 Survey of Computer Information Systems (3) OR Permission of Program Director (0) 0-3
CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3
CIS117DM Microsoft Access: Database Management 3
CIS118DB Desktop Presentation: Powerpoint 3
+BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS121AE Windows Operating System: Level I (1) AND
CIS122AE Windows Operating System: Level II (1) OR
MST150++ Microsoft Windows (3) 2-3
CIS124AA Project Management Software: Level I (1) AND
CIS124BA Project Management Software: Level II (1) OR
CIS224 Project Management Microsoft Project for Windows (3) 2-3

Microsoft Office Specialist

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, database and presentation 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
The Certificate of Completion in Microsoft Office Specialist is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Only required courses taken within eight (8) years of completion of the program may be applied towards this certificate. Consult with your faculty mentor or academic advisor.

Program Prerequisites: None

Required Courses: 25-31 Credits
The following courses are required and included in Microsoft Office Professional CCL

BPC/OAS111AA Computer Keyboarding I (1) OR Permission of Program Director (0) 0-1
CIS105 Survey of Computer Information Systems (3) OR Permission of Program Director (0) 0-3
CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3
CIS117DM Microsoft Access: Database Management 3
CIS118DB Desktop Presentation: Powerpoint 3
+BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS121AE Windows Operating System: Level I (1) AND
CIS122AE Windows Operating System: Level II (1) OR
MST150++ Microsoft Windows (3) 2-3
CIS124AA Project Management Software: Level I (1) AND
CIS124BA Project Management Software: Level II (1) OR
CIS224 Project Management Microsoft Project for Windows (3) 2-3

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

Microsoft System Administration

Certificate of Completion: CCL 5031
18-21 Credits

Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

Program Description
The Certificate of Completion (CCL) in Microsoft System Administration program is designed to provide students with background knowledge and skills required for learning the specific tasks and industry recognized standards associated with computer networks and data communications. The program includes a core of Microsoft courses to develop professionals who implement, manage, and troubleshoot existing network and system environments based on current Microsoft operating systems including active directory, messaging services, file and print servers, and firewalls. The courses in the program are also designed to help prepare students for the Microsoft 365 Certified: Modern Desktop Administrator Associate and Microsoft Certified Solutions Associate (MCSA) - Windows Server 2016 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 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
The Certificate of Completion in Microsoft System Administration is currently not Title IV Federal Financial Aid eligible.

Students must earn a grade of “C” or better for all courses required within the program. Overall program minimum GPA = 2.00.
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

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Program Prerequisites: None

Required Courses: 18-21 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3) OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May be waived by permission of the Program Director (0)</td>
<td>0-3</td>
</tr>
<tr>
<td>CIS12IAH</td>
<td>Microsoft PowerShell/Command Line Operations</td>
<td>3</td>
</tr>
<tr>
<td>MST150++</td>
<td>Any Microsoft Windows course</td>
<td>3</td>
</tr>
<tr>
<td>+MST155DC</td>
<td>Installation, Storage, and Compute with Windows Server</td>
<td>4</td>
</tr>
<tr>
<td>+MST157DC</td>
<td>Networking with Windows Server</td>
<td>4</td>
</tr>
<tr>
<td>+MST158DB</td>
<td>Installing and Configuring Windows Server</td>
<td>4</td>
</tr>
</tbody>
</table>

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.

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

For students considering university transfer consult with an Academic, Program, or Faculty Advisor at the college and/or university transfer partner.

All courses within the Required Courses and Restricted Electives areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.

Students may receive credit for courses within the program based on current industry certifications. Consult with an Academic Advisor or Program Director.

Program Prerequisites: None

Required Courses: 30-37 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+BPC170</td>
<td>A+ Exam Prep: Computer Hardware Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>+BPC270</td>
<td>A+ Exam Prep: Operating System Configuration and Support</td>
<td>3</td>
</tr>
<tr>
<td>CIS102DA</td>
<td>Customer User Support</td>
<td>3</td>
</tr>
</tbody>
</table>
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

### 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

#### Emphasis 6: Vmware Network Administrator - Credits: 12
CIS189 Virtualization and IT Solutions for Digital Businesses 3
+CIS197 VMware ESXi Server Enterprise 3
+CIS198 VMware vSphere: Optimize and Scale 3
+CIS200 VMware NSX: Install, Configure, Manage 3

### 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
CNT140AB Introduction to Networks 4
+CNT150AB Switching, Routing, and Wireless Essentials 4
+CNT160AB Enterprise Networking, Security, and Automation 4
+CNT200 CCNP ROUTE: Implementing Cisco IP Routing 4
+CNT220 CCNP SWITCH: Implementing Cisco IP Switching 4

#### Emphasis 1: Cisco System Administration (CCNA) and Security - Credits: 12
+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 (4) 4

#### Emphasis 2: Cisco System Administration (CCNP) - Credits: 16
+CNT150AB Switching, Routing, and Wireless Essentials 4
+CNT160AB Enterprise Networking, Security, and Automation 4
+CNT200 CCNP ROUTE: Implementing Cisco IP Routing 4
+CNT220 CCNP SWITCH: Implementing Cisco IP Switching 4

#### Emphasis 3: Linux System Administration - Credits: 12
+CIS238DL Linux System Administration 3
+CIS239DL Linux Shell Scripting 3
+CIS240DL Linux Network Administration 3
+CIS275DL Linux Capstone 3

#### Emphasis 4: Red Hat Enterprise Linux Administration - Credits: 12
+CIS238RH Red Hat System Administration II 3
+CIS239DL Linux Shell Scripting 3
+CIS240RH Red Hat System Administration III 3
+CIS275DL Linux Capstone 3

#### Emphasis 5: Microsoft System Administration - Credits: 18
CIS121AH Microsoft PowerShell/Command Line Operations 3

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Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS275DL</td>
<td>Linux Capstone</td>
<td>3</td>
</tr>
<tr>
<td><strong>Microsoft Electives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MST+++++</td>
<td>Any MST Microsoft Technology Course</td>
<td>1</td>
</tr>
<tr>
<td>CIS121AB</td>
<td>Microsoft Command Line Operations</td>
<td>3</td>
</tr>
<tr>
<td>CIS121AH</td>
<td>Microsoft PowerShell/Command Line Operations</td>
<td>3</td>
</tr>
<tr>
<td><strong>Security Electives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+CIS270</td>
<td>Essentials of Network and Information Security</td>
<td>3</td>
</tr>
<tr>
<td>+CIS271DB</td>
<td>Information Security Essentials</td>
<td>3</td>
</tr>
<tr>
<td>+CIS272DB</td>
<td>Information Security Principles</td>
<td>3</td>
</tr>
<tr>
<td>+ITS110</td>
<td>Information Security Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td><strong>Vmware Electives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIS189</td>
<td>Virtualization and IT Solutions for Digital</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Businesses</td>
<td></td>
</tr>
<tr>
<td>+CIS197</td>
<td>VMware ESXi Server Enterprise</td>
<td>3</td>
</tr>
<tr>
<td>+CIS198</td>
<td>VMware vSphere: Optimize and Scale</td>
<td>3</td>
</tr>
<tr>
<td>+CIS200</td>
<td>VMware NSX: Install, Configure, Manage</td>
<td>3</td>
</tr>
</tbody>
</table>

**Other Information Technology Electives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC171</td>
<td>Recycling Used Computer Technology</td>
<td>1-3</td>
</tr>
<tr>
<td>CIS111</td>
<td>Ethics in Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>CIS124AA</td>
<td>Project Management Software: Level I</td>
<td>1</td>
</tr>
<tr>
<td>+CIS124BA</td>
<td>Project Management Software: Level II</td>
<td>1</td>
</tr>
<tr>
<td>+CIS156</td>
<td>Python Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS190</td>
<td>Introduction to Networking</td>
<td>3</td>
</tr>
<tr>
<td>CIS224</td>
<td>Project Management Microsoft Project for Windows</td>
<td>3</td>
</tr>
<tr>
<td>+CIS240</td>
<td>Local Area Network Planning and Design</td>
<td>3</td>
</tr>
<tr>
<td>+CIS250</td>
<td>Management of Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>+CIS266</td>
<td>Network Integration Capstone</td>
<td>4</td>
</tr>
<tr>
<td>CIS290++</td>
<td>Computer Information Systems Internship</td>
<td>1-3</td>
</tr>
<tr>
<td>+ITS120</td>
<td>Legal, Ethical, and Regulatory Issues</td>
<td>3</td>
</tr>
<tr>
<td>+CIS290AA</td>
<td>Computer Information Systems Internship</td>
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<tr>
<td>+CIS290AB</td>
<td>Computer Information Systems Internship</td>
<td>2</td>
</tr>
<tr>
<td>+CIS290AC</td>
<td>Computer Information Systems Internship</td>
<td>3</td>
</tr>
<tr>
<td>+CIS296WB</td>
<td>Cooperative Education</td>
<td>2</td>
</tr>
<tr>
<td>+CIS296WC</td>
<td>Cooperative Education</td>
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</tr>
<tr>
<td>+CIS298AA</td>
<td>Special Projects</td>
<td>1</td>
</tr>
<tr>
<td>+CIS298AB</td>
<td>Special Projects</td>
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</tr>
<tr>
<td>+CIS298AC</td>
<td>Special Projects</td>
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</tr>
</tbody>
</table>

**General Education: 22-28 Credits**

**Core: 12-15 Credits**

**First-Year Composition**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ENG101</td>
<td>First-Year Composition (3)</td>
<td></td>
</tr>
<tr>
<td>+ENG107</td>
<td>First-Year Composition for ESL (3) AND</td>
<td></td>
</tr>
<tr>
<td>+ENG102</td>
<td>First-Year Composition (3)</td>
<td></td>
</tr>
<tr>
<td>+ENG108</td>
<td>First-Year Composition for ESL (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ENG111</td>
<td>Technical and Professional Writing (3)</td>
<td>6</td>
</tr>
<tr>
<td>(ENG111 does not count as an ENG Transfer option)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Oral Communication**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM100</td>
<td>Introduction to Human Communication (3)</td>
<td></td>
</tr>
<tr>
<td>COM110</td>
<td>Interpersonal Communication (3) OR</td>
<td></td>
</tr>
<tr>
<td>+COM225</td>
<td>Public Speaking (3) OR</td>
<td></td>
</tr>
<tr>
<td>COM230</td>
<td>Small Group Communication (3)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COM225 is recommended for students transferring to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Northern Arizona University.</td>
<td></td>
</tr>
</tbody>
</table>

**Critical Reading**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>+CRE101</td>
<td>College Critical Reading and Critical Thinking (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equivalent as indicated by assessment</td>
<td>0-3</td>
</tr>
</tbody>
</table>

**Mathematics**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>+MAT140</td>
<td>College Mathematics (5) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT141</td>
<td>College Mathematics (4) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT142</td>
<td>College Mathematics (3) OR</td>
<td></td>
</tr>
<tr>
<td>MAT145</td>
<td>College Mathematics with Review (5) OR</td>
<td></td>
</tr>
<tr>
<td>MAT146</td>
<td>College Mathematics with Review (6) OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equivalent or higher level mathematics course in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>the Mathematical Applications [MA] area.</td>
<td>3-6</td>
</tr>
</tbody>
</table>

**Distribution: 10 Credits**

**Humanities, Arts and Design**

Any approved general education course from the Humanities, Arts and Design [HU] area. 3

**Social and Behavioral Sciences**

Any approved general education course from the Social-Behavioral Sciences [SB] area. 3

**Natural Sciences**

Any approved general education course from the Natural Sciences [SG] or [SQ] area. 4
Oracle Database Operations

Certificate of Completion: CCL 5183N

12 Credits

Program Prerequisites: None

Required Courses: 12 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS119DO</td>
<td>Introduction to Oracle: SQL</td>
<td>3</td>
</tr>
<tr>
<td>+CIS119DP</td>
<td>Oracle: Database Administration</td>
<td>3</td>
</tr>
<tr>
<td>+CIS154</td>
<td>Database Modeling and Design</td>
<td>3</td>
</tr>
<tr>
<td>+CIS164AB</td>
<td>Oracle: PL/SQL Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

Program Contact
Prema Rayappa | 480-732-7230 | prema.rayappa@cgc.edu

Program Description
The Certificate of Completion (CCL) in Oracle Database Operations program provides training for students seeking professional positions in designing, creating, and maintaining databases. This program allows students to create PL/SQL application code that can be shared by multiple forms, reports, and data management tools. As an Oracle Academic Initiative institution, this program is designed to prepare students for industry-recognized certifications. Courses in the program also help prepare students wanting to pursue Oracle Application Developer Certified Associate and Oracle Database Administrator Certified Associate industry-certified examinations (Oracle Corporation OCA certifications). This certificate can embed into the Associate of Applied Science (AAS) degree in Information Technology.

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 course has prerequisites and/or corequisites.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience of foundational knowledge in word processing, spreadsheets, databases, presentation software, operating systems, and networking. Consult with a program advisor or director to determine if this CCL aligns with intended academic/career goals.

The 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.

Organizational Leadership

Certificate of Completion: CCL 5731

18 Credits

Program Contact
Nicki Lynn | 480-732-7394 | nicki.lynn@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 in all courses within the program. Overall program minimum GPA = 2.00

+ indicates course has prerequisite and/or corequisites.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience of foundational knowledge in word processing, spreadsheets, databases, presentation software, operating systems, and networking. Consult with a program advisor or director to determine if this CCL aligns with intended academic/career goals.

The 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.
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

Organizational Management

Associate in Applied Science: AAS 3727

60-65 Credits

Program Contact
Nicki Lynn | 480-732-7394 | nicki.lynn@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 course has prerequisite and/or corequisites.

Program Prerequisites: None

Required Courses: 18 Credits
Certificate of Completion in Organizational Leadership (5731) Requirements listed below

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3
GBS110 Human Relations in Business and Industry (3) OR
MGT251 Human Relations in Business (3) 3
GBS120 Workplace Communication Skills 3
GBS151 Introduction to Business 3

MGT175 Business Organization and Management (3) OR
TQM240 Project Management in Quality Organizations (3) 3
MGT101 Techniques of Supervision (3) OR
MGT229 Management and Leadership I (3) 3

Restricted Electives: 20 Credits
Students must choose 20 industry/job related course credits from any MCCCD occupational program and/or Academic Certificate.

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: 22-27 Credits

Core: 12-17 Credits

First-Year Composition
+ENG101 First-Year Composition (3) OR
+ENG107 First-Year Composition for ESL (3) AND
+ENG102 First-Year Composition (3) OR
+ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Any approved general education course from the Oral Communication area 3

Critical Reading
+CRE101 College Critical Reading and Critical Thinking (3) OR Equivalent by assessment 0-3

Mathematics
Any approved general education course from the Mathematics [MA] area 3-5

Distribution: 10 Credits

Humanities, Arts and Design
Any approved general education course 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

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Natural Science
Any approved general education course in the Natural Sciences (Quantitative) [SQ] area or the Natural Sciences (General) [SG] area.

Programming and Systems Analysis

Associate in Applied Science: AAS 3844
61-67 Credits

Program Contact
Patricia Baker | 480-732-7392 | patricia.baker@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 (CCL) in Programming and Systems Analysis Level I and Level II and iOS Application 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.

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed courses.

Consultation with an Academic Advisor is recommended for course selection.

Program Prerequisites: None

Required Courses: 33-34 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBS151</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I (3) OR</td>
<td></td>
</tr>
<tr>
<td>+MST150++</td>
<td>Any Microsoft Windows course (3)</td>
<td>3</td>
</tr>
<tr>
<td>CIS133DA</td>
<td>Internet/Web Development Level I (3)</td>
<td></td>
</tr>
</tbody>
</table>

Students interested in pursuing an iOS Certificate of Completion (CCL) are recommended to take CIS150AB.

+CIS150      Programming Fundamentals (3) OR
+CIS150AB    Object-Oriented Programming Fundamentals (3) 3
+CIS166++    Any Web Scripting course(s)            3
+CIS190      Introduction to Networks (3) OR        3
+CNT140AA    Introduction to Networks (4) OR         3
++MST140     Microsoft Networking Essentials (3)    3-4
+CIS225      Business Systems Analysis and Design (3) OR
+CIS225AB    Object-Oriented Analysis and Design (3) OR
+CIS250      Management of Information Systems (3)  3
+CIS119      DO Introduction to Oracle: SQL (3) OR   3
++CIS276DA   MySQL Database (3) OR                   3
++CIS276DB   SQL Server Database (3)                3

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:

+CIS159      Visual Basic Programming I (3) AND
+CIS259      Visual Basic Programming II (3) OR
+CIS162++    Any C Programming: Level I course (3) AND
+CIS262++    Any C Programming: Level II course (3) OR
+CIS163AA    Java Programming: Level I (3) AND
+CIS263AA    Java Programming: Level II (3) OR
+CIS165++    Any Mobile Application Development course (3) AND
+CIS265      Advanced iOS Application Development (3) 6

Restricted Electives: 6
Students may not use courses from the Required Courses Area.

+CIS224      Project Management Microsoft Project for Windows 3
++CIS151     Computer Game Development-Level I (3) 3
++CIS156     Python Programming: Level I (3)         3
++CIS159     Visual Basic Programming I (3)          3
++CIS162++   Any C Programming: Level I course (3)  3
++CIS163AA   Java Programming: Level I (3)           3
++CIS165++   Any Mobile Application Development course (3) 3
+CIS251      Computer Game Development-Level II (3) 3
+CIS259      Visual Basic Programming II (3)          3
+CIS262++    Any C Programming: Level II course (3)  3
+CIS263AA    Java Programming: Level II (3)           3
+CIS265      Advanced iOS Application Development (3) 3
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 Application 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.

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed courses.

Consultation with an Academic Advisor is recommended for course selection.

Program Prerequisites: None

Required Courses: 24 Credits

Program Contact

Patricia Baker | 480-732-7392 | patricia.baker@cgc.edu
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

### Programming and Systems Analysis Level II

**Certificate of Completion: CCL 5962**

36-37 Credits

**Program Contact**

Patricia Baker | 480-732-7392 | patricia.baker@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 Application 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.

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed courses.

Consultation with an Academic Advisor is recommended for course selection.

**Program Prerequisites: None**

**Required Courses: 33-34 Credits**

The following courses are required and included in CCL Programming and Systems Analysis Level I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CIS133DA</td>
<td>Internet/Web Development Level I</td>
<td>3</td>
</tr>
<tr>
<td>GB151I</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>CIS126DL</td>
<td>Linux Operating System (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS126RH</td>
<td>Red Hat System Administration I (3) OR</td>
<td></td>
</tr>
<tr>
<td>+MST150++</td>
<td>Any Microsoft Windows course (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS150</td>
<td>Programming Fundamentals (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS150AB</td>
<td>Object-Oriented Programming Fundamentals (3) OR</td>
<td></td>
</tr>
</tbody>
</table>

The following courses are required for CCL Programming and Systems Analysis Level II

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>+CIS190</td>
<td>Introduction to Local Area Networks (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CNT140AA</td>
<td>Introduction to Networks (4) OR</td>
<td></td>
</tr>
<tr>
<td>+MST140</td>
<td>Microsoft Networking Essentials (3) OR</td>
<td>3-4</td>
</tr>
<tr>
<td>+CIS225</td>
<td>Business Systems Analysis and Design (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS225AB</td>
<td>Object-Oriented Analysis and Design (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS250</td>
<td>Management of Information Systems (3) OR</td>
<td>3</td>
</tr>
</tbody>
</table>

Select a programming language from below that best aligns with academic and professional goals (1 course for a total of 3 credits) in one of the following areas:

- Visual Basic Programming II (3) OR
- Any C Programming: Level II course (3) OR
- Java Programming: Level II (3) OR
- Advanced iOS Application Development (3) OR

**Restricted Electives: 3 Credits**

Restricted Electives Detail: Select one of the courses below that best aligns with academic and professional goals for a total of 3 credits. Students may not choose courses they have taken from the required courses area.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS224</td>
<td>Project Management Microsoft Project for Windows</td>
<td>3</td>
</tr>
<tr>
<td>+CIS151</td>
<td>Computer Game Development-Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS156</td>
<td>Python Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS159</td>
<td>Visual Basic Programming I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS162++</td>
<td>Any C Programming: Level I course OR</td>
<td></td>
</tr>
<tr>
<td>+CIS163AA</td>
<td>Java Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS165++</td>
<td>Any Mobile Application Development course (3) OR</td>
<td>3</td>
</tr>
</tbody>
</table>

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Red Hat Linux Administrator
Certificate of completion: CCL 5049N
6-9 Credits
Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

Program Description
The Certificate of Completion (CCL) in Red Hat Linux Administrator program is designed to help prepare students for employment or to improve current professional skills. The program includes Red Hat Enterprise Linux system basics and management including sophisticated manipulation of file structures, backup systems, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, and system resource control. This program helps prepare students for the Red Hat Certified System Administrator (RHCSA) certification exam. 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 required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

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.

All courses within the Required areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

Program Prerequisites: None
Required Courses: 6-9 Credits

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3
CIS262++ Any C Programming: Level II course 3
CIS263AA Java Programming: Level II 3
CIS265 Advanced iOS Application Development 3
GBS211 Legal, Ethical and Regulatory Issues of the Internet Studies 3

Red Hat Linux Engineer
Certificate of completion: CCL 5050N
9-12 Credits
Program Contact
Tom Pearson | 480-726-4131 | tom.pearson@cgc.edu

Program Description
The Certificate of Completion (CCL) in Red Hat Linux Engineer program is designed to help prepare students for employment or to improve current professional skills. The program includes Red Hat Enterprise Linux system networking including integrating Linux servers and workstations into a network environment with multi-platform network operating systems with a variety of open-standard and proprietary protocols. This program helps prepare students for the Red Hat Certified System Administrator (RHCSA) and Red Hat Certified Engineer (RHCE) 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 required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

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.

All courses within the Required areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an academic advisor or program director for exceptions.

Program Prerequisites: None
Required Courses: 6-9 Credits

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3
CIS263RH Red Hat System Administration I 3
CIS238RH Red Hat System Administration II 3

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
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 course has prerequisites and/or corequisites.
++ indicates any suffixed course.

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.

All courses within the Required Courses and Restricted Electives areas are not applicable if taken more than five (5) years prior to the completion of the program. Consult with an Academic Advisor or Program Director for exceptions.

Program Prerequisites: None

Required Courses: 9-12 Credits

CIS105    Survey of Computer Information Systems (3) OR Permission of Program Director (0) 0-3
CIS126RH  Red Hat System Administration I 3
+CIS238RH Red Hat System Administration II 3
+CIS240RH Red Hat System Administration III 3

Retail Management

Associate in Applied Science: AAS 3048

61-63 Credits

Program Contact
Nicki Lynn | 480-732-7394 | nicki.lynn@cgc.edu

Program Description
The Associate in Applied Science (AAS) in Retail Management degree is designed to prepare individuals working in the retail management, food industry, and related fields, for the mid-level management position challenges of the future. The curriculum encompasses business essentials and also emphasizes the skill sets needed for effective management and communication in the work environment. Instruction will provide the background and knowledge necessary for students to develop the judgment skills they must exercise as business managers.

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

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed courses.

Program Prerequisites: None

Required Courses: 27-30 Credits

Choose one of the following three accounting sequences:

ACC111    Accounting Principles I (3) AND
+ACC230    Uses of Accounting Information I (3) AND
+ACC240    Uses of Accounting Information II (3) OR
ACC111    Accounting Principles I (3) AND
+ACC112    Accounting Principles II (3) AND
+ACC212    Managerial Accounting (3) OR
ACC211    Financial Accounting (3) AND
+ACC212    Managerial Accounting (3) 6-9
BPC110    Computer Usage and Applications (3) OR
CIS105    Survey of Computer Information Systems (3) 3
MGT101    Techniques of Supervision (3) OR
MGT229    Management and Leadership I (3) 3
MGT180    Retail Management (3) OR
MKT268    Merchandising (3) 3
MGT251    Human Relations in Business 3
MKT271    Principles of Marketing 3
SBU200    Society and Business 3

Restricted Electives: 9-15 Credits

Student must complete an additional nine (9) to fifteen (15) credits from GBS, MGT, and/or MKT prefixed courses (except courses used to satisfy Required Courses area) to complete a minimum of 61 total program credits. Must include at least one MKT course.

GBS+++++ Any GBS General Business course(s)
MGT+++++ Any MGT Management course(s)
MKT+++++ Any MKT Marketing course(s)
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

**Management and Insurance**

**Associate in Applied Science: AAS 3172**

**61-67 Credits**

**Program Contact**

Nicki Lynn | 480-732-7394 | nicki.lynn@cgc.edu

**Program Description**

The Associate in Applied Science (AAS) in Risk Management and Insurance program is designed to provide students with foundational skills in insurance and risk management. This program encourages development of critical thinking, leadership, and communication skills as well as techniques for planning and organizing personal and business insurance strategies. Courses offer a framework of knowledge in management, marketing, financial management, and business planning. The curriculum encompasses several business essentials and also emphasizes the skill sets needed for effective management and communication in the work environment.

**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 course has prerequisites and/or corequisites.

**Program Prerequisites: None**

**Required Courses: 24 Credits**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ACC111</td>
<td>Accounting Principles I (3) OR</td>
</tr>
<tr>
<td>ACC211</td>
<td>Financial Accounting (3)</td>
</tr>
<tr>
<td>BPC110</td>
<td>Computer Usage and Applications (3) OR</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
</tr>
<tr>
<td>COM100</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>MGT251</td>
<td>Human Relations in Business</td>
</tr>
<tr>
<td>MGT229</td>
<td>Management and Leadership I (3) OR</td>
</tr>
<tr>
<td>MGT180</td>
<td>Retail Management (3) OR</td>
</tr>
<tr>
<td>MKT268</td>
<td>Merchandising (3)</td>
</tr>
<tr>
<td>MKT276</td>
<td>Personnel/Human Resources Management</td>
</tr>
<tr>
<td>MKT271</td>
<td>Principles of Marketing</td>
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</table>

**Distribution: 7 Credits**

<table>
<thead>
<tr>
<th>Area</th>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Humanities, Arts and Design</td>
<td>Any approved general education course from the Humanities, Arts and Design area.</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>Met by SBU200 in Required Courses area.</td>
<td></td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>Any approved general education course from the Natural Sciences area.</td>
<td>4</td>
</tr>
</tbody>
</table>

**Retail Management**

**Certificate of Completion: CCL 5286**

**24 Credits**

**Program Contact**

Nicki Lynn | 480-732-7394 | nicki.lynn@cgc.edu

**Program Description**

The Certificate of Completion (CCL) in Retail Management is designed to prepare individuals working in the retail industry, and related fields, for the industry training needs in supervision and management, marketing, financial management, and business planning. The curriculum encompasses several business essentials and also emphasizes the skill sets needed for effective management and communication in the work environment.

**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 course has prerequisites and/or corequisites.

**Program Prerequisites: None**

**Required Courses: 24 Credits**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC111</td>
<td>Accounting Principles I (3) OR</td>
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<tr>
<td>ACC211</td>
<td>Financial Accounting (3)</td>
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<tr>
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</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3)</td>
</tr>
<tr>
<td>COM100</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>MGT251</td>
<td>Human Relations in Business</td>
</tr>
<tr>
<td>MGT229</td>
<td>Management and Leadership I (3) OR</td>
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<td>MGT180</td>
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<td>MKT276</td>
<td>Personnel/Human Resources Management</td>
</tr>
<tr>
<td>MKT271</td>
<td>Principles of Marketing</td>
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</table>

**General Education: 19-24 Credits**

**Core: 12-17 Credits**

**First-Year Composition**

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<tr>
<td>+ENG101</td>
<td>First-Year Composition (3) OR</td>
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<td>+ENG107</td>
<td>First-Year Composition for ESL (3) AND</td>
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<td>+ENG102</td>
<td>First-Year Composition (3) OR</td>
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<tr>
<td>+ENG108</td>
<td>First-Year Composition for ESL (3) OR</td>
</tr>
<tr>
<td>+ENG111</td>
<td>Technical Writing (3)</td>
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</table>

ENG102 or ENG108 recommended for students considering pursuing a bachelors degree at an Arizona university.

**Oral Communication**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>COM100</td>
<td>Introduction to Human Communication</td>
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</table>

**Critical Reading**

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CRE101</td>
<td>College Critical Reading and Critical Thinking (3) OR</td>
<td>3</td>
</tr>
</tbody>
</table>

Equivalent as indicated by assessment.

**Mathematics**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any approved general education course from the Mathematics area</td>
<td>3-5</td>
<td></td>
</tr>
</tbody>
</table>

**Distribution: 7 Credits**

<table>
<thead>
<tr>
<th>Area</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities, Arts and Design</td>
<td>Any approved general education course from the Humanities, Arts and Design area.</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>Met by SBU200 in Required Courses area.</td>
<td></td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>Any approved general education course from the Natural Sciences area.</td>
<td>4</td>
</tr>
</tbody>
</table>
including an introduction to the insurance industry, risk management, principles of property and liability insurance, health, life, personal, and commercial insurance. A Certificate of Completion (CCL) in Risk Management and Insurance is also available and is fully embedded in this program.

**Program Notes**

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

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed courses.

**Program Prerequisites: None**

**Required Courses: 15 Credits**

- INS100 Insurance Industry Profession 3
- INS200 Principles of Property and Liability Insurance 3
- +INS205 Personal Insurance 3
- +INS210 Commercial Insurance 3
- CIS105 Survey of Computer Information Systems (3) OR
- BPC110 Computer Usage and Applications (3) 3

**Restricted Electives: 24 Credits**

Students must choose twenty-four (24) industry/job related credits from the list of Restricted Electives below.

Students must choose 6-9 credits from:

Any INS Insurance Studies course except courses used to satisfy the Required Courses area. 6-9

AND

Students must choose a total of 15-18 credits from other Business courses listed up to the maximum number of credits allowed for each prefix.

<table>
<thead>
<tr>
<th>Course Prefix</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC+++++</td>
<td>Any ACC Accounting course(s)</td>
<td>0-9</td>
</tr>
<tr>
<td>CIS113DE</td>
<td>Microsoft Word: Word Processing (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS114DE</td>
<td>Excel Spreadsheet (3) OR</td>
<td></td>
</tr>
<tr>
<td>CIS117DM</td>
<td>Microsoft Access: Database Management (3)</td>
<td>0-3</td>
</tr>
<tr>
<td>COM+++++</td>
<td>Any COM Communication course(s)</td>
<td>0-3</td>
</tr>
<tr>
<td>EPS+++++</td>
<td>Any EPS Entrepreneurial Studies course(s)</td>
<td>0-6</td>
</tr>
<tr>
<td>FIN+++++</td>
<td>Any FIN Financial Planning course(s)</td>
<td>0-6</td>
</tr>
<tr>
<td>GBS+++++</td>
<td>Any additional GBS General Business course(s)</td>
<td>0-6</td>
</tr>
<tr>
<td>(Recommend GBS120 or GBS233 as one of the course options)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBS+++++</td>
<td>Any IBS International Business course(s)</td>
<td>0-3</td>
</tr>
<tr>
<td>MGT+++++</td>
<td>Any MGT Management course(s)</td>
<td>0-6</td>
</tr>
<tr>
<td>MKT+++++</td>
<td>Any MKT Marketing course(s)</td>
<td>0-6</td>
</tr>
<tr>
<td>REA+++++</td>
<td>Any REA Real Estate course(s)</td>
<td>0-6</td>
</tr>
<tr>
<td>SBS+++++</td>
<td>Any SBS Small Business Management course(s)</td>
<td>0-6</td>
</tr>
<tr>
<td>TQM+++++</td>
<td>Any TQM Total Quality Management course(s)</td>
<td>0-6</td>
</tr>
</tbody>
</table>

**General Education: 22-28 Credits**

**Core: 12-18 Credits**

- **First-Year Composition**
  - +ENG101 First-Year Composition (3) OR
  - +ENG107 First-Year Composition for ESL (3) AND
  - +ENG102 First-Year Composition (3) OR
  - +ENG108 First-Year Composition for ESL (3) 6

- **Oral Communication**
  - COM100 Introduction to Human Communication (3) OR
  - COM110 Interpersonal Communication (3) OR
  - +COM225 Public Speaking (3) OR
  - COM230 Small Group Communication (3) 3

- **Critical Reading**
  - +CRE101 College Critical Reading and Critical Thinking (3) OR
  - Equivalent as indicated by assessment. 0-3

**Mathematics**

Any approved general education course from the Mathematics area. MAT1++ recommended. 3-6

**Distribution: 10 Credits**

- **Humanities, Arts and Design**
  - Any approved general education course in the Humanities, Arts and Design area. 3

- **Social and Behavioral Sciences**
  - Any approved general education course in the Social and Behavioral Sciences area. 3
Natural Sciences
Any approved general education course in the Natural Sciences area.  4

-----------------------------------------------
Risk Management and Insurance
Certificate of Completion: CCL 5842
18 Credits
Program Contact
Nicki Lynn | 480-732-7394 | nicki.lynn@cgc.edu

Program Description
The Certificate of Completion (CCL) in Risk Management and Insurance program is designed to provide students with foundational skills in insurance and risk management. Courses offer a framework of knowledge including an introduction to the insurance industry, risk management, principles of property and liability insurance, health, life, personal, and commercial insurance. An Associate in Applied Science (AAS) in Risk Management and Insurance is also available.

Program Notes
The Certificate of Completion in Risk Management and Insurance is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Program Prerequisites: None
Required Courses: 12 Credits
INS100 Insurance Industry Profession 3
INS200 Principles of Property and Liability Insurance 3
+INS205 Personal Insurance 3
+INS210 Commercial Insurance 3

Restricted Electives: 6 Credits
Students must choose six (6) industry/job related credits from the list of Restricted Electives below.

COM+++++ Any COM Communication course(s) 0-6
Recommended:
COM110 Interpersonal Communication 3
FIN+++++ Any FIN Financial Planning course(s) 0-6
GBS+++++ Any GBS General Business course(s) 0-6
Recommended:
GBS151 Introduction to Business (3) OR
GBS205 Legal, Ethical, and Regulatory Issues in Business 3

INS+++++ Any INS Insurance Studies course(s) except courses used to satisfy Required Courses area 0-6

MGT+++++ Any MGT Management course(s) 0-6
Recommended:
MGT175 Business Organization and Management 3
MKT+++++ Any MKT Marketing course(s) 0-6
Recommended:
MKT271 Principles of Marketing 3
TQM+++++ Any TQM Total Quality Management course(s) 0-6
Recommended:
TQM101 Quality Customer Service 3

Social Media Marketing
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 course has prerequisites and/or corequisites.

Program Prerequisites: None

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
The Certificate of Completion (CCL) in VMware Network Administrator program is designed to help students prepare for VMware industry certifications and work in a variety of information technology environments including software-defined data centers. Courses will build the knowledge and skills for students to design, install, configure, troubleshoot, and manage virtual environments and help prepare for the CompTIA A+, CompTIA Linux+, CompTIA Network+, VMware VCA, VCP, and/or VCAP-NV Deploy certification exams. 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
The Certificate of Completion in VMware Network Administrator is currently not Title IV Federal Financial Aid eligible.

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

Required Courses: 15 Credits
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: 2-3 Credits
MKT101  Introduction to Public Relations  3
+MKT280AB  Marketing Internship  2
+MKT298AB  Special Projects  2

Certificate of Completion: CCL 5032

Web App Development
Certificate of Completion: CCL 5835N

Program Notes
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
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.

+ indicates course has prerequisites and/or corequisites.

**Program Prerequisites: None**

**Required Courses: 9-12 Credits**
CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director, Department or Division Chair (0) 0-3
+CIS133DA Internet/Web Development Level I 3
+CIS166AA Introduction to JavaScript 3
+CIS233DA Internet/Web Development Level II 3

**Web Design**

**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. A Certificate of Completion (CCL) in Web Development and an Associate in Applied Science (AAS) in Web Design/Development are also available.

**Program Notes**
The Certificate of Completion in Web Design is currently not Title IV Federal Financial Aid eligible.

Students must earn a grade of "C" or better in each course in the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

**Program Prerequisites: None**

**Required Courses: 36-37 Credits**
The following courses are required and also fulfill the requirements for the CCL in Web Foundations:

- CIS105 Survey of Computer Information Systems 3
- CIS120DF Adobe Photoshop Level I: Digital Imaging 3
- CIS133DA Internet/Web Development Level I 3
- +CIS166AA Introduction to JavaScript 3
- +CIS233DA Internet/Web Development Level II 3
- +CIS235 e-Commerce 3

The following courses are required and fulfill the requirements for the CCL in Web Design:

- ADA/ART183 Digital Graphic Arts I (3) OR
- ART100 Introduction to Digital Arts (I) AND
- ART181 Graphic Design I (3) OR
- ART112 Two-Dimensional Design (3) 3-4
- CIS120DB Computer Graphics: Adobe Illustrator 3
- CIS120DA Introduction to Digital Video Editing: Adobe Premiere (3) OR
- CIS120DK Introduction to Digital Video Editing (3) 3
- +CIS138DA Desktop Design and Publishing Using Adobe InDesign 3
- +CIS220DF Adobe Photoshop Level II: Advanced Digital Imaging 3

**Restricted Electives: 2-6 Credits**
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.
Web Design/Development

Associate in Applied Science : AAS 3185
60-67 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.

+ indicates course has prerequisites and/or corequisites.

Program Prerequisites: None

Required Courses: 21 Credits
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 Adobe Photoshop Level I: Digital Imaging 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

Restricted Electives: 17-22 Credits
Specialization I: Web Design, Credits: 17-22

ADA/ART183 Digital Graphic Arts I (3) OR
ART100 Introduction to Digital Arts (I) AND

CIS120DA Introduction to Digital Video Editing: Adobe Premiere (3) OR
CIS120DK Introduction to Digital Video Editing (3) 3
CIS120DB Computer Graphics: Adobe Illustrator 3
CIS120DC Adobe Animate: Digital Animation (3) OR
+CIS220DF Adobe Photoshop Level II: Advanced Digital Imaging (3) 3
+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.

Specialization II: Web Development, Credits: 18

+CIS199DO Introduction to Oracle: SQL (3) OR
+CIS276++ Any Database Management Systems course (3) 3
CIS260L Linux Operating System (3) OR
CIS260RH Red Hat System Administration I (3) 3
+CIS166AE Web Scripting with PHP: Hypertext Preprocessor (PHP) 3

Programming Language: Select two courses for a total of 6 credits
+CIS150AB Object-Oriented Programming Fundamentals 3
+CIS156 Python Programming: Level I 3
+CIS159 Visual Basic Programming I 3
+CIS162++ Any C Programming course 3
+CIS163AA Java Programming: Level I 3
+CIS165++ Any Mobile Application Development course 3
+CIS262AD C# Level II 3
+CIS263AA Java Programming: Level II 3
+CIS265++ Advanced iOS Application Development 3

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.

General Education: 22-28 Credits

Core: 12-18 Credits

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Web Development

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
The Certificate of Completion in Web Development is currently not Title IV Federal Financial Aid eligible.

Students must earn a grade of “C” or better in each course in the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites
++ indicates any suffixed courses

Program Prerequisites: None

Required Courses: 36 Credits

The following courses are required and also fulfill the requirements for the CCL in Web Foundations:

CIS105 Survey of Computer Information Systems 3
CIS120DF Adobe Photoshop Level I: Digital Imaging 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 and fulfill the requirements for the CCL in Web Development:
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

Students must earn a grade of “C” or better in each course in the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

Program Prerequisites: None

Required Courses: 21 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CIS120DF</td>
<td>Adobe Photoshop Level I: Digital Imaging</td>
<td>3</td>
</tr>
<tr>
<td>CIS133DA</td>
<td>Internet/Web Development Level I</td>
<td>3</td>
</tr>
<tr>
<td>CIS136</td>
<td>Content Management Systems:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WordPress</td>
<td></td>
</tr>
<tr>
<td>+CIS166AA</td>
<td>Introduction to Javascript</td>
<td>3</td>
</tr>
<tr>
<td>+CIS233DA</td>
<td>Internet/Web Development Level II</td>
<td>3</td>
</tr>
<tr>
<td>+CIS235</td>
<td>e-Commerce</td>
<td>3</td>
</tr>
</tbody>
</table>

+CIS166AE  Web Scripting with PHP: Hypertext Preprocessor (PHP)  3
+CIS19D0   Introduction to Oracle: SQL (3) OR
+CIS276++  Any Database Management Systems course (3)  3
CIS26DL    Linux Operating System (3) OR
CIS26RH    Red Hat System Administration I (3)  3

Programming Language: Select two courses for a total of 6 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS150AB</td>
<td>Object-Oriented Programming Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+CIS156</td>
<td>Python Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS159</td>
<td>Visual Basic Programming I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS162++</td>
<td>Any C Programming course</td>
<td>3</td>
</tr>
<tr>
<td>+CIS163AA</td>
<td>Java Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS165++</td>
<td>Any Mobile Application Development course</td>
<td>3</td>
</tr>
<tr>
<td>+CIS262AD</td>
<td>C# Level II</td>
<td>3</td>
</tr>
<tr>
<td>+CIS263AA</td>
<td>Java Programming: Level II</td>
<td>3</td>
</tr>
<tr>
<td>+CIS265++</td>
<td>Advanced iOS Application Development course</td>
<td>3</td>
</tr>
</tbody>
</table>

Restricted Electives: 3 Credits

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

Web Foundations

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
The Certificate of Completion in Web Foundations is currently not Title IV Federal Financial Aid eligible.

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.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 in all courses required within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

Required Courses: 31 Credits
+ADA/ART169 2D Media Design 3
+ADA/ART177 Digital Photographic Imaging I 3
ADA/ART248 Design Self Promotion (3) OR ART255 Art Marketing (3) 3
+ADA/ART289 Computer Illustration 3
ART100 Introduction to Digital Arts 1
ART111 Drawing I 3
ART113 Color (3) OR ART114 Digital Color (3) 3
ART116 Life Drawing I 3
+ART178 Digital Arts Studies 3

Restricted Electives: 6 Credits
Students must select six (6) credits from the following list of courses. Students may select from one emphasis or may select from different emphases to fulfill the six (6) credit requirement.

Animation Emphasis
+ADA/ART/MMT184 Digital Animation I 3
+ART/MMT185 3D Modeling for Animation I 3

Drawing Emphasis
+ART117 Life Drawing II 3
+ART118 Art Anatomy 3
+ART122 Drawing and Composition II 3

Painting Emphasis
+ART165 Watercolor Painting I 3
+ART166 Watercolor Painting II 3
+ART167 Painting I 3
+ART168 Painting II 3
+ART263 Figure Painting 3

Program Contact
Louis Mendoza | 480-732-7089 | louis.mendoza@cgc.edu

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Restricted Electives: 9-18 Credits

**Specialization 1: Sequential Art, Credits: 18**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART119</td>
<td>Penciling for Sequential Art</td>
<td>3</td>
</tr>
<tr>
<td>ART120</td>
<td>Inking for Sequential Art</td>
<td>3</td>
</tr>
<tr>
<td>ART219</td>
<td>Coloring, Toning and Lettering for Sequential Art</td>
<td>3</td>
</tr>
<tr>
<td>ART220</td>
<td>Publishing for the Comic Industry</td>
<td>3</td>
</tr>
<tr>
<td>ART221</td>
<td>Comics Creation</td>
<td>3</td>
</tr>
<tr>
<td>CRW172</td>
<td>Introduction to Comic Book Writing (3) OR</td>
<td></td>
</tr>
<tr>
<td>CRW176</td>
<td>Writing Narrative for Video Games (3) OR</td>
<td></td>
</tr>
<tr>
<td>CRW190</td>
<td>Introduction to Screenwriting (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specialization 2: Illustration, Credits: 9**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADA/ART248</td>
<td>Design Self Promotion (3) OR</td>
<td></td>
</tr>
<tr>
<td>ART255</td>
<td>Art Marketing (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

Students must select six (6) credits from the following list of courses. Students may select from one emphasis or may select from different emphases to fulfill the six (6) credit requirement.

**Animation Emphasis**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ADA/ART/</td>
<td>Digital Animation I</td>
<td>3</td>
</tr>
<tr>
<td>MMT184</td>
<td>3D Modeling for Animation I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Drawing Emphasis**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ART117</td>
<td>Life Drawing II</td>
<td>3</td>
</tr>
<tr>
<td>+ART118</td>
<td>Art Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>+ART122</td>
<td>Drawing and Composition II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Painting Emphasis**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ART165</td>
<td>Watercolor Painting I</td>
<td>3</td>
</tr>
<tr>
<td>+ART166</td>
<td>Watercolor Painting II</td>
<td>3</td>
</tr>
<tr>
<td>+ART167</td>
<td>Painting I</td>
<td>3</td>
</tr>
<tr>
<td>+ART168</td>
<td>Painting II</td>
<td>3</td>
</tr>
<tr>
<td>+ART263</td>
<td>Figure Painting</td>
<td>3</td>
</tr>
</tbody>
</table>

**Free Electives: 0-6 Credits**

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.

**First-Year Composition**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ENG101</td>
<td>First-Year Composition (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ENG107</td>
<td>First-Year Composition for ESL (3) AND</td>
<td></td>
</tr>
<tr>
<td>+ENG102</td>
<td>First-Year Composition (3) OR</td>
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</tr>
<tr>
<td>+ENG108</td>
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</tbody>
</table>

**Oral Communication**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>COM100</td>
<td>Introduction to Human Communication (3) OR</td>
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<tr>
<td>COM110</td>
<td>Interpersonal Communication (3) OR</td>
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<tr>
<td>+COM225</td>
<td>Public Speaking (3) OR</td>
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<tr>
<td>COM230</td>
<td>Small Group Communication (3)</td>
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</table>

**Critical Reading**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CRE101</td>
<td>College Critical Reading and Critical Thinking (3) OR</td>
<td></td>
</tr>
</tbody>
</table>

Equivalent as indicated by assessment. (0) 0-3

**Mathematics**

Any approved general education course from the Mathematics area 3-6

Recommended for students planning to transfer to a four-year university:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+MAT140</td>
<td>College Mathematics (5) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT141</td>
<td>College Mathematics (4) OR</td>
<td></td>
</tr>
<tr>
<td>+MAT142</td>
<td>College Mathematics (3) OR</td>
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<tr>
<td>MAT145</td>
<td>College Mathematics with Review (5) OR</td>
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</tr>
<tr>
<td>MAT146</td>
<td>College Mathematics with Review (6)</td>
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**Distribution: 10 Credits**

**Humanities, Arts and Design**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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</thead>
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<tr>
<td>ARH101</td>
<td>Prehistoric through Gothic Art (3) OR</td>
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<tr>
<td>ARH102</td>
<td>Renaissance through Contemporary Art (3)</td>
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</tbody>
</table>

**Social and Behavioral Sciences**

Any approved general education course from the Social and Behavioral Sciences area. 3

**Natural Sciences**

Any approved general education course from the Natural Sciences area. 4
Music Business I
Certificate of Completion: CCL 5106
16 Credits

Program Contact
Ted Goddard | 480-857-5182 | ted.goddard@cgc.edu

Program Description
The Certificate of Completion (CCL) in Music Business program is an innovative curriculum designed to prepare students for today’s music industry. The certificate and degree with a music business emphasis are designed for both the performing musician and the business student with limited performing experience. This program combines a flexible curriculum with an emphasis in business and marketing, along with music industry related courses and experiences.

Program Notes
The Certificate of Completion in Music Business I is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisite and/or corequisites

Program Prerequisites: None

Required Courses: 11 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MGT253</td>
<td>Owning and Operating a Small Business</td>
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<tr>
<td>MKT110</td>
<td>Marketing and Social Networking (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>MKT271</td>
<td>Principles of Marketing (3)</td>
<td>3</td>
</tr>
<tr>
<td>MUC109</td>
<td>Music Business: Content Creation and Copyright</td>
<td>3</td>
</tr>
<tr>
<td>MUC110</td>
<td>Music Business: Marketing and Monetization</td>
<td>3</td>
</tr>
<tr>
<td>MUC293</td>
<td>Self Promotion for Music</td>
<td>1</td>
</tr>
<tr>
<td>+MTC180</td>
<td>Computer Literacy for Musicians (3) OR</td>
<td></td>
</tr>
<tr>
<td>MUC180</td>
<td>Computer Literacy for the Music Business (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Students who have not already completed MTC180 must take MUC180

Music Business II
Certificate of Completion: CCL 5258
35-37 Credits

Program Contact
Ted Goddard | 480-857-5182 | ted.goddard@cgc.edu

Program Description
The Certificate of Completion (CCL) in Music Business II is designed to provide aspiring music industry professionals with a broad background in music management, production, and entrepreneurship activities. The program combines theoretical and applied learning experiences to help students gain a strategic understanding of commercial music as both an art and profession. An Associate in Applied Science (AAS) in Music Industries: Music Business is available.

Program Notes
The Certificate of Completion in Music Business I is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisite and/or corequisites

Program Prerequisites: None

Required Courses: 25-26 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT253</td>
<td>Owning and Operating a Small Business</td>
<td>3</td>
</tr>
<tr>
<td>MKT110</td>
<td>Marketing and Social Networking (3) OR</td>
<td>3</td>
</tr>
<tr>
<td>MKT271</td>
<td>Principles of Marketing (3)</td>
<td>3</td>
</tr>
<tr>
<td>MUC109</td>
<td>Music Business: Content Creation and Copyright</td>
<td>3</td>
</tr>
<tr>
<td>MUC110</td>
<td>Music Business: Marketing and Monetization</td>
<td>3</td>
</tr>
<tr>
<td>+MTC180</td>
<td>Computer Literacy for Musicians (3) OR</td>
<td></td>
</tr>
<tr>
<td>MUC180</td>
<td>Computer Literacy for the Music Business (3)</td>
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</tr>
<tr>
<td>Note:</td>
<td>Students who have not already completed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MTC180 must take MUC180</td>
<td></td>
</tr>
<tr>
<td>+MUC209</td>
<td>Music Industry Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>MUC293</td>
<td>Self Promotion for Music</td>
<td>1</td>
</tr>
</tbody>
</table>

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Music Industry Capstone Experience
+MUC290AA Music Business Internship (1) OR
+MUC296WA Cooperative Education (1) OR
MUC298AA Special Projects (1) 1

Overview of Music Genres
MUC242 Music Genres and Styles (2) OR
MHL155 Survey of American Music (3) 2-3

Restricted Electives: 10-11 Credits
Students should work with their program advisor to select 10-11 credits from courses that align with the academic/career goals and further their development in the areas of Music Business and Marketing, Music Production, and Commercial Performance. Courses from required courses area may not be used.

Music Business and Marketing
GBS+++ Any GBS General Business course
MKT+++ Any MKT Marketing course
MUC+++ Any MUC Music: Commercial/ Business course

Music Production
MTC+++ Any MTC Music: Theory/ Composition course
MUC+++ Any MUC Music: Commercial/ Business course

Commercial Performance
MTC+++ Any MTC Music: Theory/ Composition course
MUP+++ Any MUP Music: Performance course

Music Industries: Music Business

Associate in Applied Science: AAS 3017
60-66 Credits

Program Contact
Ted Goddard | 480-857-5182 | ted.goddard@cgc.edu

Program Description
The Associate in Applied Science (AAS) in Music Industries: Music Business is designed to provide aspiring music industry professionals with a broad background in music management, production, and entrepreneurship activities. The program combines theoretical and applied learning experiences to help students gain a strategic understanding of commercial music as both an art and profession. Students will choose a focus area among business and marketing, commercial performance, and music production. They will employ analytical and communication skills and explore aesthetic, cultural, and historical perspectives relevant to the music industry.

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 course has prerequisite and/or corequisites.

Program Prerequisites: None

Required Courses: 25-26 Credits
MGT253 Owning and Operating a Small Business 3
MKT110 Marketing and Social Networking 3
MKT271 Principles of Marketing 3
MUC109 Music Business: Content Creation and Copyright 3
MUC110 Music Business: Marketing and Monetization 3
+MTC180 Computer Literacy for Musicians (3) OR
MUC180 Computer Literacy for the Music Business (3) 3

Note: Students who have not already completed MTC180 must take MUC180.

+MUC209 Music Industry Entrepreneurship 3
MUC293 Self Promotion for Music 1

Music Industry Capstone Experience
+MUC290AA Music Business Internship (1) OR
+MUC296WA Cooperative Education (1) OR
MUC298AA Special Projects (1) 1

Overview of Music Genres
MUC242 Music Genres and Styles (2) OR
MHL155 Survey of American Music (3) 2-3

Restricted Electives: 12-13 Credits
Students should work with their program advisor to select 12-13 credits from courses that align with the academic/career goals and further their development in the areas of music business and marketing, music production, and commercial performance. Courses from required courses area may not be used.
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

**Business and Marketing**
- GBS+++  Any GBS General Business course
- MKT+++  Any MKT Marketing course
- MUC+++  Any MUC Music: Commercial/ Business course

**Music Production**
- MTC+++  Any MTC Music: Theory/ Composition course
- MUC+++  Any MUC Music: Commercial/ Business course

**Commercial Performance**
- MTC+++  Any MTC Music: Theory/ Composition course

**Free Electives: 0-1 Credits**
Select courses 100-level or higher to complete a minimum of 60 semester credits. Consult with an Academic and/or Program Advisor.

**General Education: 22-28 Credits**

**Core: 12-18 Credits**

**First-Year Composition**
- +ENG101  First-Year Composition (3) OR +ENG107  First-Year Composition for ESL (3) AND +ENG102  First-Year Composition (3) OR +ENG108  First-Year Composition for ESL (3) OR +ENG111  Technical and Professional Writing (3)  6
  - ENG101 or ENG107 and ENG102 or ENG108 is recommended for students who intend to transfer.

**Oral Communication**
- COM100  Introduction to Human Communication (3) OR
- COM110  Interpersonal Communication (3) OR
- +COM225  Public Speaking (3) OR
- COM230  Small Group Communication (3)  3
  - Consult with an academic advisor about specific COM requirements if intending to transfer.

**Critical Reading**
- +CRE101  College Critical Reading and Critical Thinking (3) OR
  - Equivalent as indicated by assessment 0-3

**Mathematics**
- +MAT140  College Mathematics (5) OR
- +MAT141  College Mathematics (4) OR
- +MAT142  College Mathematics (3) OR
- +MAT145  College Mathematics with Review (5) OR
- MAT146  College Mathematics with Review (6)  3-6

**Distribution: 10 Credits**

**Humanities, Arts and Design**
Any approved general education course from the Humanities Arts and Design area  3

**Social and Behavioral Sciences**
Any approved general education course from the Social and Behavioral Sciences area  3

**Natural Sciences**
Any approved general education course from the Natural Sciences area  4

**Photography**

**Associate in Applied Science : AAS 3195**

**60-64 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.
- + indicates course has prerequisites and/or corequisites.
- There will be costs for supplies and equipment in this program.

**Program Prerequisites: None**

**Required Courses: 26-28 Credits**
- ARH101  Prehistoric Through Gothic Art (3) OR
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

ART137  Alternative Photographic Processes  3
Select 2-13 credits from the following:
+ADA/ART169  2D Media Design  3
+ADA/ART177  Digital Photographic Imaging I  3
ART111  Drawing I  3
ART116  Life Drawing I  3
+ART134  Photography IV  3
+ART178  Digital Arts Studies  3
+ART234  Color Photography I  3
+ART250  Introduction to Printmaking  3
+ART270  Intermediate Computer Photographic Imaging  3
+ART274  Digital Photographic Imaging III  3
+ART290AC  Studio Art  3
+ART290EC  Studio Art: Photography  3
+ART290MC  Studio Art: Digital Photography  3
+ART295DA  Art Workshop/Seminar: Photography  1
+ART295DB  Art Workshop/Seminar: Photography  2
+ART295DC  Art Workshop/Seminar: Photography  3
+ART297AA  Commercial Art Internship  1
SBS200  Small Business Operations  2
SBS204  Small Business Marketing and Advertising  2

Free Electives: 0-7 Credits
Select courses 100-level or higher to complete a minimum of 60 semester credits but no more than a total of 64 semester credits. Consult with the Program Director or an Academic Advisor.

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.

General Education: 19-25 Credits

Core: 12-18 Credits

First-Year Composition
+ENG101  First-Year Composition (3) OR
+ENG107  First-Year Composition for ESL (3) AND
+ENG102  First-Year Composition (3) OR
+ENG108  First-Year Composition for ESL (3)  6

Oral Communication
COM100  Introduction to Human Communication (3) OR
Critical Reading

+CRE101 College Critical Reading and Critical Thinking [3] OR Equivalent as indicated by assessment. 0-3

Mathematics

+MAT140 College Mathematics (5) OR
+MAT141 College Mathematics (4) OR
+MAT142 College Mathematics (3) OR
+MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Any approved general education course in the Mathematical Applications [MA] area (3-6) 3-6

Distribution: 7 Credits

Humanities, Arts and Design

Met by ARH101 OR ARH102 OR ARH115 OR ART131 in Required Courses. 0

Social and Behavioral Sciences

Any approved general education courses in the Social-Behavioral Sciences [SB] area. 3

Natural Sciences

Any approved general education course in the Natural Sciences (Quantitative) [SQ] area or the Natural Sciences (General) [SG] area. 4

Sequential Art

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, storyboards, 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

The Certificate of Completion in Illustration is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.
Composition, Creative Writing & Literature

Creative Writing

Academic Certificate: AC 6224N
24 Credits

Program Contact
Patrick Finn | 480-857-5543 | patrick.finn@cgc.edu

Program Description
The Academic Certificate (AC) in Creative Writing program is designed to provide students and professional writers with access to a community of writers and creative writing activities, instruction and guidance from established authors, and ongoing support in improving their writing skills and marketing their work. As students take courses in the program, they will build a portfolio of original work that may be submitted for publication. The program offers classes, workshops, and other activities such as readings and contests, which are accessible to writers of all levels regardless of academic or professional standing. The program aims to serve a diverse community who may be underrepresented in traditional creative writing programs. Completion of the certificate does not lead to a particular degree program, but may aid students in their pursuit of a career in the writing professions and in their continued enjoyment of writing for personal growth.

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 course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Admission Criteria
Students who wish to enroll in the Creative Writing program must complete a formal application; contact Program Director.

Program Prerequisites: None

Required Courses: 21 Credits
ENC210 may be substituted for CRW150 with permission of the Program Director.
CRW150 Introduction to Creative Writing 3
CRW200 must be repeated for a total of (2) two credits
+CRW200 Readings for Writers (I) 2
+CRW201 Portfolio 1

Students must complete six (6) credits from Series I and nine (9) credits from Series II in consultation with a Program Director.

Series I: Credits: 6
Students must complete two (2) of the following courses for a total of six (6) credits.
CRW120 Introduction to Writing Children’s Literature 3
CRW160 Introduction to Writing Poetry 3
CRW170 Introduction to Writing Fiction 3
CRW172 Introduction to Comic Book Writing 3
CRW180 Intro to Writing Nonfiction 3
CRW190 Introduction to Screenwriting 3
THE118 Playwriting 3

Series II: Credits: 9
Students must complete three (3) of the following courses for a total of nine (9) credits.
+CRW202 The Writer as Witness 3
+CRW203 Dialogue 3
+CRW204 Journaling 3
+CRW220 Intermediate Writing Children's Literature 3
CRW251 Topics in Creative Writing 3
+CRW260 Intermediate Poetry Writing 3
+CRW261 Topics in Writing: Poetry 3
+CRW270 Intermediate Fiction Writing 3
+CRW271 Topics in Writing: Fiction 3
+CRW272 Planning and Structuring the Novel 3
+CRW273 Writing the Novel 3
+CRW274 Revising the Novel 3
+CRW281 Topics in Writing: Non-Fiction 3
+CRW290 Intermediate Screenwriting 3
+CRW291 Topics in Writing: Plays 3

Restricted Electives: 3 Credits
+CRW+++++ Any CRW Creative Writing prefixed course not listed under Required Courses area 1-3

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
EMT104 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 EMT/FSC104AB or program director-approved rotation.

**Program Prerequisites: None**

**Required Courses: 13 Credits**

Students who have current validation in Basic Life Support (BLS) are required to receive credit by evaluation.

- **EMT101**  Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5) OR Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer (0) AND Credit By Evaluation (0.5) 0.5
- **+EMT/FSC104AB**  Applied Practical Studies for Emergency Medical Technology  0.5
- **+EMT104LL**  Emergency Medical Technology Practicum  2
- **+EMT104**  Emergency Medical Technology  10

**Emergency Medical Technology Comprehensive**

**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 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.

+ indicates course has prerequisites and/or corequisites.
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**

The Certificate of Completion in Emergency Medical Technology Comprehensive is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

EMT104 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 EMT/FSC104AB or program director-approved rotation.

**Program Prerequisites: None**

**Required Courses: 13 Credits**

Students who have current validation in Basic Life Support (BLS) are required to receive credit by evaluation.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMT101</td>
<td>Basic Life Support/Cardiopulmonary Resuscitation (CPR) for</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Health Care Providers (0.5) OR Current validation in Basic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Life Support (BLS) Health Care Provider/Professional Rescuer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0) AND Credit By Evaluation (0.5)</td>
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</tr>
<tr>
<td>+EMT/</td>
<td>Applied Practical Studies for Emergency Medical Technology</td>
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<tr>
<td>FSC104AB</td>
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<td>+EMT104</td>
<td>Emergency Medical Technology</td>
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**Restricted Electives: 3-4 Credits**

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<td>+EMT104LL</td>
<td>Emergency Medical Technology Practicum</td>
<td>2</td>
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<table>
<thead>
<tr>
<th><strong>Exercise Science: Health, Fitness and Sports Performance</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Associate in Applied Science: AAS 3059</strong></td>
</tr>
<tr>
<td><strong>63-72.5 Credits</strong></td>
</tr>
</tbody>
</table>

**Program Contact**

Dr. 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 course has prerequisite and/or corequisites.

Students can achieve the AGEC-A by completing the following:
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FON100</td>
<td>Introductory Nutrition (3) OR</td>
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<tr>
<td>FON241</td>
<td>Principles of Human Nutrition (3)</td>
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</tr>
<tr>
<td>PSY101</td>
<td>Introduction to Psychology</td>
<td></td>
</tr>
<tr>
<td>+BIO181</td>
<td>General Biology (Majors) I (4) OR</td>
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</tr>
<tr>
<td>+BIO201</td>
<td>Human Anatomy and Physiology I</td>
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<tr>
<td>PEDI01ST</td>
<td>Strength Training</td>
<td></td>
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<tr>
<td>PEDI01GF</td>
<td>Group Fitness/Aerobics (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01KB</td>
<td>Kickboxing (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01PS</td>
<td>Pilates (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01TC</td>
<td>Tai Chi (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01YH</td>
<td>Hatha Yoga (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01YO</td>
<td>Yoga (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01YP</td>
<td>Power Yoga (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01YR</td>
<td>Restorative Yoga (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01BS</td>
<td>Body Sculpting (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01PC</td>
<td>Physical Conditioning (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01BC</td>
<td>Boot Camp (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01ZU</td>
<td>Zumba Fitness (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01SR</td>
<td>Stretch and Relaxation (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01CY</td>
<td>Cycling - Indoor (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01YG</td>
<td>Gentle Yoga (1) OR</td>
<td></td>
</tr>
<tr>
<td>PEDI01TX</td>
<td>Suspension Training (1)</td>
<td></td>
</tr>
</tbody>
</table>

**Free Electives: 4 Credits**

Students must choose four (4) additional credits of general elective courses. (CHM130 AND CHM130LL), OR (CHM151 and CHM151LL) OR BIO202 are recommended for students who intend to transfer.

**General Education: 15-20 Credits**

**Core: 12-17 Credits**

**First Year Composition**

+ENGI01  First-Year Composition (3) OR  
+ENGI07  First-Year Composition for ESL (3) AND  
+ENGI02  First-Year Composition (3) OR  
+ENGI08  First-Year Composition for ESL (3)  

**Oral Communication**

COM100  Introduction to Human Communication (3) OR  
COM110  Interpersonal Communication (3) OR  
+COM225  Public Speaking (3) OR  
COM230  Small Group Communication (3)  

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

++ indicates any suffixed courses.

Students must complete all Program Prerequisite Courses and General Education Courses before beginning the Required course area of this degree.

Related courses from other colleges and universities will not automatically transfer to CGCC. All transfer courses are reviewed by the Mortuary Science program director for transferability. In all cases, it is the responsibility of the student to initiate the process.

During the fall semester embalming lab, the student must provide his or her own transportation to preceptor-site embalming experiences at local funeral homes.

The nationally accredited Mortuary Science Program AAS degree at CGCC and students scores from the National Board Examination are transferable to states other than Arizona. The examination offered by the International Conference of Funeral Service Examining Boards (ICFSEB) has a fee of $500 and is the responsibility of the student. Scores remain valid for life, even if students wait to practice in the funeral service profession. Licensure is on a state-by-state basis since each state does its own licensing.

Admission Criteria
Students must have completed all first year course work with a minimum GPA of 2.5, and must have proof of high school graduation or GED or permission of Program Director.

Program Prerequisites: 10-11 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC107</td>
<td>Bookkeeping Theory and Practice (4) OR</td>
<td>4</td>
</tr>
<tr>
<td>ACC111</td>
<td>Accounting Principles I (3)</td>
<td>3-4</td>
</tr>
<tr>
<td>BPC/CIS+++++</td>
<td>Any BPC/CIS Business-Personal Computers or Computer Information Systems course</td>
<td>1</td>
</tr>
<tr>
<td>GBS205</td>
<td>Legal, Ethical, and Regulatory Issues in Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT253</td>
<td>Owning and Operating a Small Business</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Courses: 34 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSP101</td>
<td>Orientation to Funeral Service</td>
<td>1</td>
</tr>
<tr>
<td>MSP201</td>
<td>History and Sociology of Funeral Service</td>
<td>3</td>
</tr>
</tbody>
</table>
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

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**Social and Behavioral Sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY101</td>
<td>Introduction to Psychology (3) OR</td>
<td></td>
</tr>
<tr>
<td>PSY156</td>
<td>Understanding Death and Dying (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Natural Sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO160</td>
<td>Introduction to Human Anatomy and Physiology</td>
<td>4</td>
</tr>
</tbody>
</table>

---

**Personal Trainer**

**Certificate of Completion: CCL 5421**

**18-18.5 Credits**

**Program Contact**

Dr. Kim McGee, ACSM (EP-C) | 480-726-4246 |
kimberly.mcgee@cgc.edu

**Program Description**

The Certificate of Completion (CCL) in Personal Trainer is designed to provide students with the foundational skills needed to design and implement fitness routines appropriate to clients’ goals and aligned with current industry best practices. The curriculum for this certificate fosters the development of critical thinking, leadership, and communication skills important for developing and implementing individualized exercise programs. A CCL in Personal Training: Advanced and an Associate in Applied Science (AAS) in Exercise Science: Health, Fitness, and Sports Performance are also available for students interested in continuing their studies in this field.

**Program Notes**

The Certificate of Completion in Personal Trainer is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.
++ indicates any suffixed course.

**Program Prerequisites: None**

**Required Courses: 18-18.5 Credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXS101</td>
<td>Introduction to Exercise Science</td>
<td>3</td>
</tr>
<tr>
<td>+EXS125</td>
<td>Introduction to Exercise Physiology</td>
<td>3</td>
</tr>
</tbody>
</table>

---

**Free Electives: 0-3 Credits**

Students should choose zero (0) to three (3) credits from Free Electives. Any 100/200 level prefixed courses may be selected, except courses used to satisfy the Required Courses area.

**General Education: 22-25 Credits**

**Core: 12-15 Credits**

**First-Year Composition: 6 credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>+ENG101</td>
<td>First-Year Composition (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ENG107</td>
<td>First-Year Composition for ESL (3) AND</td>
<td></td>
</tr>
<tr>
<td>+ENG102</td>
<td>First-Year Composition (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ENG108</td>
<td>First-Year Composition for ESL (3) OR</td>
<td></td>
</tr>
<tr>
<td>+ENG111</td>
<td>Technical and Professional Writing (3)</td>
<td>6</td>
</tr>
</tbody>
</table>

**Oral Communication**

Any approved general education course in the Oral Communication area.

**Critical Reading**

Any approved general education course in the Critical Reading area or equivalent as indicated by assessment. If test exempt, students must complete a (3) credit course from the Free Electives area with a C or better.

**Mathematics**

+ Any approved general education course from the Mathematics area with a C or better.

**Distribution: 10 Credits**

**Humanities, Arts and Design**

Any approved general education course in the Humanities, Arts and Design area. REL100 is recommended 3
Program Prerequisites: None

Required Courses: 31-31.5 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMT101</td>
<td>Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.50) OR</td>
<td>3</td>
</tr>
<tr>
<td>HES106</td>
<td>Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) (0.5) OR</td>
<td>2</td>
</tr>
<tr>
<td>FON241</td>
<td>Principles of Human Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HES106</td>
<td>Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) (0.5) OR</td>
<td>2</td>
</tr>
</tbody>
</table>

Current Basic Life Support (BLS) Health Care Provider/Professional Rescuer certification (0) 0-0.5

EXS210 | Assessment and Program Design: Muscle Manipulation and Motion | 2       |

EXS211 | Assessment and Program Design: Flexibility and Balance | 2       |

EXS212 | Assessment and Program Design: Cardiovascular Health | 2       |

EXS213 | Assessment and Program Design: Weight Management and Motivation | 2       |

EXS214 | Instructional Competency: Flexibility and Mind-Body Exercises | 2       |

EXS216 | Instructional Competency: Muscular Strength and Conditioning | 2       |

EXS218 | Instructional Competency: Cardiovascular Health Exercises and Activities | 2       |

EXS239 | Practical Applications of Personal Training Skills and Techniques Internship (3) OR | 3       |

EXS239AA | Practical Applications of Personal Training Skills and Techniques Internship (1) AND | 2       |

EXS239AB | Practical Applications of Personal Training Skills and Techniques Internship (2) | 3       |

FON100 | Introductory Nutrition (3) OR | 3       |

FON241 | Principles of Human Nutrition                                         | 3       |

HES100 | Healthful Living                                                      | 1       |

PEDI101 | Boot Camp (1) OR | 1       |

PEDI101BS | Body Sculpting (1) OR | 1       |

PEDI101CY | Cycling - Indoor (1) OR | 1       |

PEDI101GF | Group Fitness/Aerobics (1) OR | 1       |

PEDI101KB | Kickboxing (1) OR | 1       |

PEDI101PC | Physical Conditioning (1) OR | 1       |

PEDI101PS | Pilates (1) OR | 1       |

PEDI101SR | Stretch and Relaxation (1) OR | 1       |

PEDI101TC | Tai Chi (1) OR | 1       |
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed.

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**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).

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**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 MCCCDD 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 course has prerequisites and/or corequisites.

**Course Fee Information:**

Please see class schedule for information regarding course fees.

Maricopa Nursing is aligned with Nurse of the Future Competencies: Patient-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; all program prerequisites must be completed prior to submission of application.

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 decision rests with the Nursing Program Chair at the College to which the student is accepted.

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 as a Nursing Assisting 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 Prerequisites: 10-20 Credits
The credit hour range is subject to change depending on the student’s educational experience.

+ BIO156  Introductory Biology for Allied Health (4) OR
+ BIO181  General Biology (Majors) I (4) OR
One year of high school biology 0-4
+ BIO201  Human Anatomy and Physiology I 4
+ CHM130  Fundamental Chemistry (3) AND
+ CHM130LL Fundamental Chemistry Laboratory (1) OR
One year of high school chemistry 0-4
+ ENGI01  First-Year Composition (3) OR
+ ENGI07  First-Year Composition for ESL (3) 3
+ MATI40  College Mathematics (5) OR
+ MATI41  College Mathematics (4) OR
+ MATI42  College Mathematics (3) OR
Satisfactory completion of higher level math course 3-5

Required Courses: 36 Credits
+ 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: 16-19 Credits

Core: 3-6 Credits
First-Year Composition
Three (3) credits of First Year Composition are met by ENGI01 or ENGI07 in Program Prerequisites area.
+ ENGI02  First-Year Composition (3) OR
+ ENGI08  First-Year Composition for ESL (3) 3

Oral Communication
Waived 0

Critical Reading
CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent by assessment 0-3

Mathematics
Met by MATI40, OR MATI41, OR MATI42 OR
Satisfactory completion of higher level mathematics course in Program Prerequisites area 0

Distribution: 13 Credits
Humanities, Arts and Design
Any approved general education course in the Humanities, Arts and Design area 2

Social and Behavioral Sciences
PSY101 Introduction to Psychology 3

Natural Sciences
+ BIO202  Human Anatomy and Physiology II (4) AND
+ BIO205  Microbiology (4) 8

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 course has prerequisites and/or corequisites.
++ indicates any suffixed course.

Program Prerequisites: None

Required Courses: 34-37 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIM100</td>
<td>Introduction to Artificial Intelligence</td>
<td>3</td>
</tr>
<tr>
<td>AIM110</td>
<td>Introduction to Machine Learning</td>
<td>3</td>
</tr>
<tr>
<td>AIM210</td>
<td>Natural Language Processing</td>
<td>3</td>
</tr>
<tr>
<td>AIM220</td>
<td>Artificial Intelligence for Computer Vision</td>
<td>3</td>
</tr>
<tr>
<td>AIM230</td>
<td>Artificial Intelligence for Business Solutions</td>
<td>3</td>
</tr>
<tr>
<td>AIM240</td>
<td>Artificial Intelligence Capstone Project</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems (3) OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May be waived by permission of the Program Director</td>
<td>0-3</td>
</tr>
<tr>
<td>+CIS119DO</td>
<td>Introduction to Oracle: SQL (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS276DA</td>
<td>MySQL Database (3) OR</td>
<td></td>
</tr>
<tr>
<td>+CIS276DB</td>
<td>SQL Server Database (3)</td>
<td>3</td>
</tr>
<tr>
<td>+CIS156</td>
<td>Python Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+ECE102</td>
<td>Engineering Analysis Tools and Techniques</td>
<td>2</td>
</tr>
<tr>
<td>+ECE103</td>
<td>Engineering Problem Solving and Design</td>
<td>2</td>
</tr>
<tr>
<td>+MAT206</td>
<td>Elements of Statistics</td>
<td>3</td>
</tr>
<tr>
<td>+MAT225</td>
<td>Elementary Linear Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

Restricted Electives: 0-3 Credits

Select a programming language from below that best aligns with academic and professional goals (to equal a minimum of 60 credits as needed) in one of the following areas:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>+CIS150</td>
<td>Programming Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+CIS150AB</td>
<td>Object-Oriented Programming Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>+CIS159</td>
<td>Visual Basic Programming I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS162++</td>
<td>Any C Programming: Level I course</td>
<td>3</td>
</tr>
<tr>
<td>+CIS163AA</td>
<td>Java Programming: Level I</td>
<td>3</td>
</tr>
<tr>
<td>+CIS165++</td>
<td>Any Mobile Application Development course</td>
<td>3</td>
</tr>
<tr>
<td>+CSC100++</td>
<td>Introduction to Computer Science (C++)</td>
<td>3-4</td>
</tr>
<tr>
<td>+CSC110++</td>
<td>Introduction to Computer Science (Java)</td>
<td>3-4</td>
</tr>
<tr>
<td>ACC+++</td>
<td>Any ACC Accounting prefixed course (except ACC115)</td>
<td>3</td>
</tr>
</tbody>
</table>

General Education: 23-36 Credits

Core: 13-26 Credits

First-Year Composition

+ENG101   First-Year Composition (3) OR
+ENG107   First-Year Composition for ESL (3) AND
+ENG102   First-Year Composition (3) OR
+ENG108   First-Year Composition for ESL (3)       6

Oral Communication

COM100   Introduction to Human Communication (3) OR
COM110   Interpersonal Communication (3) OR
+COM225   Public Speaking (3) OR
COM230   Small Group Communication (3) OR
Any approved general education course from the Oral Communication area       3

Critical Reading

+CRE101   College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0)                                       0-3

Mathematics

Any approved general education course in the Mathematical Applications [MA] area (that serves as a prerequisite for) MAT22+.

+MAT220   Calculus with Analytic Geometry I (5) OR
+MAT221   Calculus with Analytic Geometry I (4)       4-5
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu.

**Distribution: 10 Credits**

**Humanities, Arts and Design**
Any approved general education course in the Humanities, Arts and Design area. 3

**Social and Behavioral Sciences**
Any approved general education course in the Social-Behavioral Sciences area. 3

**Natural Sciences**
Any approved general education course in the Natural Sciences area. 4

**Artificial Intelligence and Machine Learning**

**Certificate of Completion: 5897N**

**21-36 Credits**

**Program Contact**
Angel Fuentes | 480 - 732-7033| angel.fuentes@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 course has prerequisites and/or corequisites. ++ indicates any suffixed course

**Program Prerequisites: None**

**Required Courses: 21-36 Credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIM100</td>
<td>Introduction to Artificial Intelligence</td>
<td>3</td>
</tr>
<tr>
<td>+AIM110</td>
<td>Introduction to Machine Learning</td>
<td>3</td>
</tr>
<tr>
<td>+AIM210</td>
<td>Natural Language Processing</td>
<td>3</td>
</tr>
<tr>
<td>+AIM220</td>
<td>Artificial Intelligence for Computer Vision</td>
<td>3</td>
</tr>
<tr>
<td>+AIM230</td>
<td>Artificial Intelligence for Business</td>
<td>3</td>
</tr>
<tr>
<td>+AIM240</td>
<td>Artificial Intelligence Capstone Project</td>
<td>3</td>
</tr>
<tr>
<td>CIS105</td>
<td>Survey of Computer Information Systems</td>
<td>(3) OR</td>
</tr>
<tr>
<td></td>
<td>Introduction to Oracle: SQL</td>
<td>(3) OR</td>
</tr>
<tr>
<td>+CIS199DO</td>
<td>May be waived by permission of the Program Director 0-3</td>
<td></td>
</tr>
<tr>
<td>+CIS276DA</td>
<td>MySQL Database</td>
<td>(3) OR</td>
</tr>
<tr>
<td>++CIS276DB</td>
<td>SQL Server Database</td>
<td>(3) OR</td>
</tr>
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<td></td>
<td>May be waived by permission of the Program Director 0-3</td>
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</tr>
<tr>
<td>+CIS156</td>
<td>Python Programming: Level I</td>
<td>(3) OR</td>
</tr>
<tr>
<td></td>
<td>May be waived by permission of the Program Director 0-3</td>
<td></td>
</tr>
<tr>
<td>+MAT14+</td>
<td>Any College Mathematics course</td>
<td>(3-6) OR</td>
</tr>
<tr>
<td>+MAT15+</td>
<td>Any College Algebra/Functions course</td>
<td>(3-6) OR</td>
</tr>
<tr>
<td>+MAT187</td>
<td>Precalculus</td>
<td>(5) OR</td>
</tr>
<tr>
<td></td>
<td>Appropriate District placement OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Permission of Department/Division Chair</td>
<td>0-6</td>
</tr>
<tr>
<td>+MAT206</td>
<td>Elements of Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>
Engineering Technology
Associate in Applied Science: AAS 3228
63–93 Credits

Program Contact
Bassam Matar | 480 - 732-7139 | b.matar@cgc.edu

Program Description
The Associate in Applied Science (AAS) in Engineering Technology program is designed to provide skills required of entry-level engineering technicians. Students are provided with the fundamentals of physics, engineering, computer hardware, programming, engineering design fundamentals, and computer software program usage. A solid foundation in mathematics, science, communication skills, humanities, and social sciences provides a well-rounded curriculum.

Program Notes
Students must earn a grade of "C" or better for all courses required within the program and must have a cumulative GPA of 3.0 in these courses to complete their degree. Overall program minimum GPA = 3.00.

+ indicates course has prerequisites and/or corequisites.

Program Prerequisites: 0–17 Credits
The credit hour range is subject to change depending on the student’s educational experiences. PHY111 AND PHY112 are also strongly recommended for those who have not completed one year of high school physics with a grade of "C" or better.

CHM130 Fundamental Chemistry (3) AND
CHM130LL Fundamental Chemistry Lab (!) OR
CHM130AA Fundamental Chemistry with Lab (4) OR
One year of high school chemistry with a grade of "C" or better taken within the last five years 0-4
+MAT120 Intermediate Algebra (5) OR
+MAT121 Intermediate Algebra (4) OR
+MAT122 Intermediate Algebra (3) OR
Equivalent by assessment 0-5
+MAT187 Precalculus (5) OR
+MAT150 College Algebra/Functions (5) OR
+MAT151 College Algebra/Functions (4) OR
+MAT152 College Algebra/Functions (3) AND
+MAT182 Plane Trigonometry (3) OR
Equivalent by assessment 0-8

Required courses: 32–38
+ECE102 Engineering Analysis Tools and Techniques (2) OR
+ECE102AA Engineering Analysis Tools and Techniques (2) 2
+ECE103 Engineering Problem Solving and Design (2) OR
+ECE103AB Engineering Problem Solving and Design (2) OR
+ECE103EP Engineering Problem Solving and Design (EPICS projects) (2) 2
+EEE202 Circuits and Devices 5
+MAT220 Calculus with Analytic Geometry I (5) OR
+MAT221 Calculus with Analytic Geometry I (4) 4-5
+MAT230 Calculus with Analytic Geometry II (5) OR
+MAT231 Calculus with Analytic Geometry II (4) 4-5
+MAT240 Calculus with Analytic Geometry III (5) OR
+MAT241 Calculus with Analytic Geometry III (4) 4-5
+MAT276 Modern Differential Equations (4) OR
+MAT277 Modern Differential Equations (3) 3-4
+PHY115 University Physics I (5) OR
+PHY121 University Physics I: Mechanics (4) 4-5
+PHY116 University Physics II (5) OR
+PHY131 University Physics II: Electricity and Magnetism (4) 4-5

Restricted Electives: 16–20
Students should select 16-20 credits from the following list of electives based on their area of Engineering and interests. Consultation with Program Director is recommended particularly for students considering transfer to the university so that they optimize their transferable course work.

+BIO181 General Biology [Majors] I 4
+BIO182 General Biology [Majors] II 4
+CHM150 General Chemistry I (4) OR
+CHM151 General Chemistry I (3) AND
+CHM151LL General Chemistry I Laboratory (1) OR
+CHM150AA General Chemistry I (5) OR
+CHM151AA General Chemistry I (5) 4-5
+CHM152 General Chemistry II (3) AND
+CHM152LL General Chemistry II Laboratory (1) OR

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

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<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG101</td>
<td>First-Year Composition (3) OR</td>
<td></td>
</tr>
<tr>
<td>ENG107</td>
<td>First-Year Composition for ESL (3) AND</td>
<td></td>
</tr>
<tr>
<td>ENG102</td>
<td>First-Year Composition (3) OR</td>
<td></td>
</tr>
<tr>
<td>ENG108</td>
<td>First-Year Composition for ESL (3)</td>
<td>6</td>
</tr>
</tbody>
</table>

**Oral Communication**

Any approved general education course from the Oral Communication area 3
COM100 or COM110 or COM230 recommended.

**Critical Reading**

+CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

**Mathematics**

Met by Any Mathematics course listed in the Required Courses area. 0

**Distribution: 6 credits**

**Humanities and Fine Arts**

Any approved general studies course in the Humanities and Fine Arts Area 3

**Social and Behavioral Sciences**

Any approved general studies course in the Social and Behavioral Sciences Area 3

**Natural Sciences**

Met by PHY115 or PHY121 in the Required Courses Area 0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHM152AA</td>
<td>General Chemistry II (4)</td>
<td></td>
</tr>
<tr>
<td>CHM230</td>
<td>Fundamental Organic Chemistry (3) AND</td>
<td></td>
</tr>
<tr>
<td>CHM230LL</td>
<td>Fundamental Organic Chemistry Laboratory (1) OR</td>
<td></td>
</tr>
<tr>
<td>CHM235</td>
<td>General Organic Chemistry I (3) AND</td>
<td></td>
</tr>
<tr>
<td>CHM235LL</td>
<td>General Organic Chemistry I Laboratory (1)</td>
<td>4</td>
</tr>
<tr>
<td>CHM236</td>
<td>General Organic Chemistry IIA (3) OR</td>
<td></td>
</tr>
<tr>
<td>CHM238</td>
<td>General Organic Chemistry IIB (3)</td>
<td>3</td>
</tr>
<tr>
<td>CSC100</td>
<td>Introduction to Computer Science (C++) (3) OR</td>
<td></td>
</tr>
<tr>
<td>CSC100AA</td>
<td>Introduction to Computer Science (C++) (3) OR</td>
<td></td>
</tr>
<tr>
<td>CSC100AB</td>
<td>Introduction to Computer Science (C++) (4) OR</td>
<td></td>
</tr>
<tr>
<td>CSC110</td>
<td>Introduction to Computer Science (Java) (3) OR</td>
<td></td>
</tr>
<tr>
<td>CSC110AB</td>
<td>Introduction to Computer Science (Java)(4) OR</td>
<td>3-4</td>
</tr>
<tr>
<td>CSC205</td>
<td>Object Oriented Programming and Data Structures (3) OR</td>
<td>3-4</td>
</tr>
<tr>
<td>CSC205AB</td>
<td>Object Oriented Programming and Data Structures (4) OR</td>
<td>3-4</td>
</tr>
<tr>
<td>CSC/EEE120</td>
<td>Digital Design Fundamentals (4) OR</td>
<td></td>
</tr>
<tr>
<td>ECE216</td>
<td>Computer-Aided Engineering (2) AND</td>
<td></td>
</tr>
<tr>
<td>ECE216LL</td>
<td>Computer-Aided Engineering Laboratory (1)</td>
<td>3-4</td>
</tr>
<tr>
<td>ECE104</td>
<td>EPICS Gold I</td>
<td>2</td>
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<tr>
<td>ECE105</td>
<td>MATLAB Programming</td>
<td>1</td>
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<tr>
<td>ECE111</td>
<td>Bioengineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>+ECE211</td>
<td>Engineering Mechanics- Statics</td>
<td>3</td>
</tr>
<tr>
<td>+ECE212</td>
<td>Engineering Mechanics- Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>+ECE214</td>
<td>Engineering Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>+ECE215</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>+CSC/EEE220</td>
<td>Programming for Computer Engineering</td>
<td>3</td>
</tr>
<tr>
<td>+CSC/EEE230</td>
<td>Computer Organization and Assembly Language</td>
<td>4</td>
</tr>
<tr>
<td>GLG101</td>
<td>Introduction to Geology I - Physical Lecture</td>
<td>3</td>
</tr>
<tr>
<td>+MAT225</td>
<td>Elementary Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>+MAT227</td>
<td>Discrete Mathematical Structures</td>
<td>3</td>
</tr>
<tr>
<td>+PHY241</td>
<td>University Physics III: Thermodynamics, Optics, and Wave Phenomena</td>
<td>4</td>
</tr>
</tbody>
</table>

**First-Year Composition**

**Core: 9-12 Credits**

**Social & Behavioral Sciences**

**Early Childhood Education**

**Associate in Applied Science: AAS 3186**

**60-71 Credits**

**Program Contact**

Jennifer Peterson | 480-857-5535 | jennifer.peterson@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
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu

### Program Notes
Students must earn a grade of “C” or better for all courses within the program. Overall program minimum GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

### Program Prerequisites: None

### Required Courses: 32 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CFS/ECH176</td>
<td>Child Development (3) OR</td>
</tr>
<tr>
<td>CFS235</td>
<td>Developing Child: Theory into Practice, Prenatal - Age 8 (3) OR</td>
</tr>
<tr>
<td>EED205</td>
<td>The Developing Child: Prenatal to Age Eight (3)</td>
</tr>
<tr>
<td>EED225</td>
<td>Language and Literacy in the Context of Culture and Relationships (3)</td>
</tr>
<tr>
<td>CFS101AH</td>
<td>Art Activities for the Young Child (1) AND</td>
</tr>
<tr>
<td>ECH281</td>
<td>Movement/Music for the Young Child (1) OR</td>
</tr>
<tr>
<td>+EED210</td>
<td>Creative and Cognitive Play (3) OR</td>
</tr>
<tr>
<td>ECH128</td>
<td>Early Learning: Play and the Arts (3)</td>
</tr>
<tr>
<td>EED200</td>
<td>Foundations of Early Childhood Education (3)</td>
</tr>
<tr>
<td>CFS/ECH271</td>
<td>Arranging the Environment (1) AND</td>
</tr>
<tr>
<td>CFS282</td>
<td>Mainstreaming The Young Child with A Disability (1) AND</td>
</tr>
<tr>
<td>ECH282</td>
<td>Discipline/Guidance of Child Groups (1) OR</td>
</tr>
<tr>
<td>EED212</td>
<td>Guidance, Management and the Environment (3)</td>
</tr>
<tr>
<td>CFS123</td>
<td>Health and Nutrition In Early Childhood Settings (1) AND</td>
</tr>
<tr>
<td>CFS125</td>
<td>Safety in Early Childhood Settings (1) AND</td>
</tr>
<tr>
<td>ECH280</td>
<td>Food Experiences With Young Children (1) OR</td>
</tr>
<tr>
<td>EED215</td>
<td>Early Learning: Health, Safety, Nutrition and Fitness (3)</td>
</tr>
<tr>
<td>EED222</td>
<td>Introduction to the Exceptional Young Child: Birth to Age Eight (3) OR</td>
</tr>
<tr>
<td>EDU222</td>
<td>Introduction to the Exceptional Learner (3)</td>
</tr>
<tr>
<td>CFS/ECH269</td>
<td>Child Care Seminar (1) AND</td>
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<tr>
<td>CFS/ECH287</td>
<td>Professional Development in Early Childhood Education (1) OR</td>
</tr>
<tr>
<td>EED255</td>
<td>Portfolio Development and Writing for the Profession (3)</td>
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<tr>
<td>+CFS/ECH284AB</td>
<td>Early Childhood Teaching Internship (3) OR</td>
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<tr>
<td>+EED260</td>
<td>Early Childhood Infant/Toddler Internship (1) AND</td>
</tr>
<tr>
<td>+EED261</td>
<td>Early Childhood Preschool Internship (1) AND</td>
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<tr>
<td>ECH272</td>
<td>Science for the Young Child (1) AND</td>
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<tr>
<td>CFS/ECH273</td>
<td>Math for the Young Child (1) AND</td>
</tr>
<tr>
<td>CFS/ECH275</td>
<td>Literacy Development and the Young Child (1) AND</td>
</tr>
<tr>
<td>ECH279</td>
<td>Early Childhood Curriculum Development (1) OR</td>
</tr>
<tr>
<td>+EED278</td>
<td>Early Learning: Curriculum and Instruction - Birth/Preschool (3)</td>
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<tr>
<td>ECH140</td>
<td>Learning Made Visible Through Documentation (1) AND</td>
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<tr>
<td>ECH270</td>
<td>Observing Young Children (1) OR</td>
</tr>
<tr>
<td>+ EED280</td>
<td>Standards, Observation and Assessment of Typical/Atypical Behaviors of Young Children Birth Age Eight (3) 2-3</td>
</tr>
</tbody>
</table>

### Restricted Electives: 9-12 Credits

Students must select 9-12 credits from the following and must complete a minimum of 60 credits for the 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:

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>CFS+++</td>
</tr>
<tr>
<td>ECH+++</td>
</tr>
<tr>
<td>EDU+++</td>
</tr>
<tr>
<td>EED+++</td>
</tr>
<tr>
<td>FCS+++</td>
</tr>
<tr>
<td>ITD+++</td>
</tr>
</tbody>
</table>

### General Education: 19-25 Credits

### Core: 12-18 Credits

### First-Year Composition

+ENG101      | First-Year Composition (3) OR                                              |
Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu.

Educational Programs  |  CGCC Catalog & Student Handbook 2020-2021

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
The Certificate of Completion in Early Childhood Education is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

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 vaccination.

Program Prerequisites: None

Required Courses: 29-34 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CFS/ECH176</td>
<td>Child Development (3) OR Developing Child: Theory into Practice, Prenatal - Age 8 (3) OR The Developing Child: Prenatal to Age Eight (3)</td>
</tr>
<tr>
<td>CFS235</td>
<td>The Developing Child: Prenatal to Age Eight (3)</td>
</tr>
<tr>
<td>CFS200</td>
<td>Foundations of Early Childhood Education (3)</td>
</tr>
<tr>
<td>CFS/ECH271</td>
<td>Arranging the Environment (1) AND</td>
</tr>
<tr>
<td>CFS282</td>
<td>Mainstreaming The Young Child with A Disability (1) AND</td>
</tr>
<tr>
<td>ECH282</td>
<td>Discipline/Guidance of Child Groups (1) OR</td>
</tr>
<tr>
<td>EED212</td>
<td>Guidance, Management and the Environment (3)</td>
</tr>
<tr>
<td>CFS123</td>
<td>Health and Nutrition In Early Childhood Settings (1) AND</td>
</tr>
<tr>
<td>CFS125</td>
<td>Safety in Early Childhood Settings (1) AND</td>
</tr>
<tr>
<td>ECH280</td>
<td>Food Experiences With Young Children (1) OR</td>
</tr>
<tr>
<td>EED215</td>
<td>Early Learning: Health, Safety, Nutrition and Fitness (3)</td>
</tr>
<tr>
<td>CFS101AH</td>
<td>Art Activities for the Young Child (1) AND</td>
</tr>
</tbody>
</table>

Oral Communication
Any approved General Education course from the Oral Communication area. 3

Note: COM225 is recommended for students who wish to transfer to the BAE at ASU.

Critical Reading
+CRE101 College Critical Reading and Critical Thinking (3) OR Equivalent as indicated by assessment 0-3

Mathematics
Any approved General Education course in the Mathematical Applications [MA] area 3-6

Distribution: 7 Credits

Humanities, Arts and Design
Any approved General Education course 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 EDU222 or EED222 in Required Courses area.0

Natural Sciences
Any approved General Education course in the Natural Sciences area 4

Early Childhood Education

Certificate of Completion: CCL 5056 36 Credits

Program Contact
Jennifer Peterson | 480-857-5535 | jennifer.peterson@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
The Certificate of Completion in Early Childhood Education is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

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 vaccination.

Program Prerequisites: None

Required Courses: 29-34 Credits

<table>
<thead>
<tr>
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<tbody>
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<tr>
<td>CFS235</td>
<td>The Developing Child: Prenatal to Age Eight (3)</td>
</tr>
<tr>
<td>CFS200</td>
<td>Foundations of Early Childhood Education (3)</td>
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<tr>
<td>CFS/ECH271</td>
<td>Arranging the Environment (1) AND</td>
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<td>CFS282</td>
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<td>Guidance, Management and the Environment (3)</td>
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<tr>
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<td>Health and Nutrition In Early Childhood Settings (1) AND</td>
</tr>
<tr>
<td>CFS125</td>
<td>Safety in Early Childhood Settings (1) AND</td>
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</tr>
<tr>
<td>CFS101AH</td>
<td>Art Activities for the Young Child (1) AND</td>
</tr>
</tbody>
</table>
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EID++  Any EID Infant/Toddler Development course(s)

ITD+++  Any ITD Infant/Toddler Development course(s)

Foundations of Early Childhood Education

Certificate of Completion: CCL 5054
18-19 Credits

Program Contact
Jennifer Peterson | 480-857-5535
jennifer.peterson@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. The program requirements meet the 18 hours of coursework required for the Child Development Associate (CDA). 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
The Certificate of Completion in Foundations of Early Childhood Education is currently not Title IV Federal Financial Aid eligible.

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

+ indicates course has prerequisites and/or corequisites.

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 vaccination.

Courses available at CGCC are listed in the Course Descriptions section of this document. General Education Requirements are also listed. For the most current information regarding degree requirements, log on to curriculum.maricopa.edu
Required Courses: 18-19 Credits

- CFS/ECH176 Child Development (3) OR CFS235 Developing Child: Theory into Practice, Prenatal - Age 8 (3) OR
- EED205 The Developing Child: Prenatal to Age Eight (3)
- EED200 Foundations of Early Childhood Education (3)
- CFS/ECH271 Arranging the Environment (l) AND CFS282 Mainstreaming The Young Child with A Disability (l) AND
- ECH282 Discipline/Guidance of Child Groups (l) OR EED212 Guidance, Management and the Environment (3)
- CFS123 Health and Nutrition In Early Childhood Settings (l) AND CFS125 Safety in Early Childhood Settings (l) AND
- ECH280 Food Experiences With Young Children (l) OR
- EED215 Early Learning: Health, Safety, Nutrition and Fitness (3)
- CFS101AH Art Activities for the Young Child (l) AND ECH281 Movement/Music for the Young Child (l) OR
- ECH128 Early Learning: Play and the Arts (3) OR +EED210 Creative and Cognitive Play (3) 2-3
- EDU222 Introduction to the Exceptional Learner (3) OR EED222 Introduction to the Exceptional Young Child: Birth to Age Eight (3)
- +EED260 Early Childhood Infant/Toddler Internship (l) OR +EED261 Early Childhood Preschool Internship (l)

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 course has prerequisites and/or corequisites.

Required Courses: 3 Credits

- WST100 Introduction to Women’s and Gender Studies 3

Restricted Electives: 12 Credits

Students must complete 12 credits from the list below:

- ASB211 Women in Other Cultures 3
- ENH/WST284 19th Century Women Writers 3
- ENH/WST285 Contemporary Women Writers 3
- HIS201 History of Women in America 3
- HLR/WST286 Women and Health: Body/Mind/Spirit/Connection 3
- HUM/WST209 Women and Films 3
- +PSY235 Psychology of Gender 3
- REL/WST290 Women and World Religion 3
- SOC212 Gender and Society 3
- WST120 Gender, Class, and Race 3
- WST128 Law and Violence Against Women 3
- WST160 Women and the Early American Experience 3
- WST161 American Women Since 1920 3
- WST200 Essential Feminist Writing 3

Women and Gender Studies

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 course has prerequisites and/or corequisites.
Special 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.

English as a Second Language
CGCC is committed to a partnership in learning with students who are non-native English speakers. The English as a Second Language (ESL) courses are designed to help foreign speakers from a variety of countries learn English by emphasizing four skill areas: listening, speaking, reading, and writing.

Students enrolling in ESL courses should be tested. Based on test scores, students are placed in the appropriate-level conversation, grammar, and writing courses. Call 480-732-7159 to schedule an appointment for ESL testing.

Call 480-857-5010 for more information about CGCC’s ESL program.

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) 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.

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 a 3.0 GPA 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.

**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, theater 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.
Course Descriptions

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

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

The intent of the Course Description section is to enable students to review courses that are available at CGCC.

How to Read Course Descriptions

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

1. Course Prefix: Three-letter subject code abbreviation indicating discipline or area of study (e.g., ENG for English).
2. Course Number: Three-digit number assigned to indicate sequence and academic level. Numbers range from 001-299. Courses numbered below 100 are offered for the purpose of strengthening skills and knowledge and cannot be applied toward degrees awarded by Maricopa Community Colleges. These courses cannot be transferred to four-year institutions. First-year courses are generally identified with 100-level numbers. Second-year courses are generally identified with 200-level numbers.
3. Course Title: Identifying name of the course. May also indicate course level (e.g., College Mathematics or Beginning Spanish Conversation I).
4. Course Description: Brief statement describing the content of the course. 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.

ENG 101 / 3 CREDITS / * 3 PERIODS

ENG 1101

ACC – Accounting

ACC105 / 3 CREDITS / 3 PERIODS

Payroll, Sales and Property Taxes

Tax reporting for payroll, sales, and personal property. Prerequisites: None.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
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<tr>
<td>ACC111</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
| Accounting Principles I  
Fundamental theory of accounting principles and procedures. Prerequisites: None. |
| ACC112      | 3       | 3       |
| Accounting Principles II  
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. |
| ACC115      | 3       | 3       |
| Computerized Accounting  
Understanding of fundamental accounting principles and mastery of an accounting information systems including the general ledger, accounts receivable, accounts payable and payroll. Prerequisites: None. |
| ACC121      | 3       | 3       |
| Income Tax Preparation  
Preparation of and practical experience in preparing individual federal income tax returns using computer software. Prerequisites: None. |
| ACC211      | 3       | 3       |
| Financial Accounting  
Introduction to theory and practice in the preparation and interpretation of general purpose financial statements. Prerequisites: None. |
| ACC212      | 3       | 3       |
| Managerial Accounting  
Development and analysis of accounting information for managerial planning and control. Prerequisites: A grade of “C” or better in ACC111 and ACC112, or ACC211, and CIS105 or permission of department or division. |
| ACC216      | 3       | 3       |
| Fraud Examination  
Fundamental theory of fraud examination methodology to detect and prevent accounting fraud. Prerequisites: A grade of C or better in (ACC230 or ACC112 or ACC211) or permission of Department or Division. |
| ACC219      | 3       | 3       |
| Intermediate Accounting I  
Theory and practice applicable to determination of asset values, liabilities, and related problems of income determination. Prerequisites: ACC212 or ACC240 with a grade of “C” or better, or permission of Department/Division. |
| ACC220      | 3       | 3       |
| Intermediate Accounting II  
Continuation of the theory and practice applicable to liabilities and owner’s equity; special problems and financial reporting. Prerequisites: ACC219 with a grade of “C” or better, or permission of Department/Division. |
| ACC230      | 3       | 3       |
| Uses of Accounting Information I  
Introduction to the uses of accounting information for internal and external purposes with emphasis on financial statement analysis. Prerequisites: A grade of C or better in (ACC111 or ACC211) or [[ENG101 or ENG107] and MAT151 and CRE101] or (appropriate District English, Reading, and Math placement). |
| ACC240      | 3       | 3       |
| Uses of Accounting Information II  
Introduction to the uses of accounting information for internal and external purposes with emphasis on analysis for use by management. Prerequisites: ACC230. |
| ACC296WA    | 1       | 5       |
| Cooperative Education  
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve |

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
AET – Aeronautics

AET107  /  5 CREDITS  /  5 PERIODS
Private Pilot Ground School
Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, airplane systems, airports, airspace, communications, Federal Air Regulations, navigation, airplane performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam. Prerequisites: None. Corequisite: AET110.

AET107HH  /  5 CREDITS  /  5 PERIODS
Private Pilot Ground School: Helicopter
Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, helicopter systems, airports, airspace, communications, Federal Air Regulations, navigation, helicopter performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam. Prerequisites: None. Corequisite: AET110HH.

AET110  /  1 CREDITS  /  5 PERIODS
Private Pilot Flight
Flight course in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate practical examination. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, night flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Approximately 50 hours airplane flight experience at student’s expense required. Requires passing check ride similar to the FAA Private Pilot check ride. Prerequisites: None. Corequisites: AET107.

AET112  /  2 CREDITS  /  5 PERIODS
Private Pilot Flight-Test Course
Flight course in preparation for transition into continued AET course work. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Requires passing check ride similar to the Federal Aviation Administration Private Pilot check ride. Prerequisites: FAA Private Pilot Airplane Single-Engine Land or advanced certification. Corequisites: AET107.

AET115  /  3 CREDITS  /  3 PERIODS
Aviation Meteorology
Meteorology for professional pilots. Includes atmosphere, air mass circulation, cloud type identification, weather hazards, and high altitude, Arctic, and tropical weather systems. Basic forecasting, use of Direct User Access Terminal (DUAT) systems and reading and interpreting weather charts. Prerequisites: None.

AET203  /  3 CREDITS  /  3 PERIODS
Basic Airplane Systems
Beginning commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examination. Discussions will include, but not be limited to reciprocating engines, engine systems, airplane systems, altitude systems, and commercial regulations. Prerequisites: AET207, AET217 and AET210 or permission of instructor. Corequisites: AET220 and AET213.

AET205  /  4 CREDITS  /  4 PERIODS
Aircraft Structures, Systems, and Maintenance
Survey of airframe structures, systems, and maintenance regulations for pilots. Includes aircraft and airfoil design and construction, and electrical, instrumentation, and automatic flight control systems. Maintenance privileges and limitations, and forms and records. Prerequisites: Private Pilot Certificate or permission of instructor.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
AET207 / 3 CREDITS / 3 PERIODS

Attitude Instruments and Navigation
Beginning instrument pilot ground course in preparation for the Federal Aviation Administration (FAA) Instrument Pilot Rating and Instrument rating written examinations. Includes preflight preparation, flight instruments, basic attitude instrument flying, radio navigation systems, and technically advanced aircraft systems. Prerequisites: AET110 or permission of instructor. Corequisites: AET217 and AET210.

AET208 / 3 CREDITS / 3 PERIODS

Aviation Safety
Introduction to aviation safety, including aviation safety programs, risk management, pilot psychology, physiology, human factors, and accident review and investigation. Prerequisites: A grade of C or better in AET107 or permission of Instructor.

AET210 / 1 CREDITS / 5 PERIODS

Instrument Commercial Flight I
Initial flight course in preparation for the Federal Aviation Administration (FAA) Instrument rating practical examination. Emphasis on night and instrument operations. Student must fly approximately 60 hours at own expense. Requires passing operational phase checks. Prerequisites: AET110 or permission of instructor. Corequisites: AET217 and AET207.

AET213 / 3 CREDITS / 3 PERIODS

Aerodynamics and Performance
Advance instrument and commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examinations. Includes discussion of aerodynamic factors including lift, weight, drag, and thrust. Discussions will include, but are not limited to aerodynamics, performance, safe and efficient airplane operations, airplane stability and control, stalls and spins. Prerequisites: AET207, AET217, and AET210. Corequisites: AET203 and AET220.

AET215 / 4 CREDITS / 4 PERIODS

Aircraft Powerplants
Survey of engines and engine systems for pilots. Includes theory and analysis of reciprocating and turbine aircraft engines. Lubrication, ignition, fuel control, cooling, exhaust, and propellers. Prerequisites: AET205 or permission of instructor.

AET217 / 3 CREDITS / 3 PERIODS

Instrument Procedures
Advance instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Include Federal Aviation Regulations, instrument approach procedures, and instrument enroute considerations. Requires passing written exam similar to the Instrument pilot rating and Instrument rating written exams. Prerequisites: AET110 or permission of instructor. Corequisites: AET210 and AET207.

AET220 / 1 CREDITS / 5 PERIODS

Instrument Commercial Flight II
Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial practical examinations. Emphasis on commercial and high performance operations. Student must fly approximately 60 hours at own expense. Requires passing instrument rating and commercial pilot stage checks similar to the FAA check rides. Prerequisites: AET210, AET207 and AET217. Corequisites: AET203 and AET213.

AET225 / 4 CREDITS / 4 PERIODS

Advanced Aircraft Systems
Survey of advanced aircraft systems to include electrical, automatic flight control, pressurization, cabin atmosphere, ice control, rain control, fire detection and extinguishing. Includes theory and analysis of turbine aircraft engines. Introduction to turbine engine systems to include lubrication, ignition, fuel control, cooling, exhaust, and propellers. Includes overview of maintenance publications, forms and records. Prerequisites: Private Pilot Certificate or permission of Instructor.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
AET227 / 5 CREDITS / 5 PERIODS
Certified Flight Instructor: Airplane, Single Engine Land Ground School

AET229 / 3 CREDITS / 3 PERIODS
Crew Resource Management
Crew communications, teamwork, leadership, “followership,” decision-making, and situational awareness; also the benefits of diversity, and the role diversity plays in the modern aerospace industry. Emphasis on utilization of all available resources in order to conduct a safe and efficient flight. Prerequisites: A grade of C or better in AET217 or permission of Instructor.

AET230 / 1 CREDIT / 3 PERIODS

AET237 / 2 CREDITS / 2 PERIODS
Multiengine Airplane Pilot Ground School
Aeronautical knowledge necessary to meet requirements for a multiengine airplane rating including orientation, aerodynamics, airplane systems, airplane performance, flight planning, and emergency procedures. Prerequisites: AET220 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET240.

AET240 / 1 CREDIT / 1.5 PERIODS
Multiengine Airplane Pilot Flight Flight course in preparation for the Federal Aviation Administration (FAA) Multiengine Airplane practical examination. Approximately 15 hours of flight experience at the student’s expense and passing check ride similar to the FAA Multiengine check ride are required. Prerequisites: AET220 or FAA Commercial Pilot Certificate with instrument rating. Corequisite: AET230.

AET257 / 3 CREDITS / 4 PERIODS
Readings in Aviation Critical inquiry of a particular aviation theme from a wide variety of sources. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. International data communication facilities and equipment made available for student use. Prerequisites: ENG102 or ENG111, and permission of instructor.

AET258 / 3 CREDITS / 3 PERIODS
Certified Flight Instructor: Instrument Airplane Ground School Aeronautical knowledge and practical teaching ability necessary to obtain an Instrument Flight Instructor Certificate with an Airplane-Single-Engine rating and necessary to satisfactorily pass the Flight Instructor Instrument knowledge test. Prerequisites: Valid FAA Commercial Pilot Certificate, or Airline Transport Pilot Certificate with instrument rating and the appropriate category and class of airplane used in the course; and Flight Instructor Certificate-Airplane. Corequisites: AET270.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
AFR – African American Studies

AFR110 / 3 CREDITS / 3 PERIODS
Introduction to African-American Studies
Introduction to the study of the African-American experience. Interdisciplinary approach includes historical underpinnings; population and cultural characteristics; social, economic, and political issues; and implications for the future. Prerequisites: None.

AFR202 / 3 CREDITS / 3 PERIODS
Ethnic Relations in the United States
Basic concepts and processes, including historic overview, of interethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to interethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world. Prerequisites: None. Cross-References: ASB202, CCS202.

AFR207 / 3 CREDITS / 3 PERIODS
Black Women
Analysis and discussion of critical issues for Black women in America today. Prerequisites: None. Cross-References: WST207.

AIM – Artificial Intelligence and Machine Learning

AIM100 / 3 CREDITS / 3 PERIODS
Introduction to Artificial Intelligence
Basic concepts and applications of artificial intelligence (AI), including AI project cycles. Focus on issues surrounding AI including ethics, bias, culture, regulations, and professional expectations. Prerequisites: None.

AIM110 / 3 CREDITS / 4 PERIODS
Introduction to Machine Learning
Introduction to machine learning concepts and Python applications, including data acquisition, supervised and unsupervised learning, and data modeling. Prerequisites: A grade of C or better in AIM100, CIS156, and MAT206.

AIM210 / 3 CREDITS / 4 PERIODS
Natural Language Processing
Fundamental concepts in Natural Language Processing (NLP) and text processing. Focus on knowledge and skills necessary to create a language recognition application. Prerequisites: A grade of C or better in AIM110.

AIM220 / 3 CREDITS / 4 PERIODS
Artificial Intelligence for Computer Vision
Understand and apply the basic techniques to process images using OpenCV and Python libraries. Prerequisites: A grade of C or better in AIM110.

AIM230 / 3 CREDITS / 4 PERIODS
Artificial Intelligence for Business Solutions
Fundamentals of artificial intelligence (AI) and machine learning to support business solutions. Prerequisites: A grade of C or better in AIM210 and AIM220.

AIM240 / 3 CREDITS / 4 PERIODS
Artificial Intelligence Capstone Project
Focus on how a social issue is explored, brought through the Artificial Intelligence (AI) Project cycle, and delivered as a solution using the different domains of AI, including computer vision and natural language processing. Prerequisites: A grade of C or better in AIM210 and AIM220.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
AIS – American Indian Studies

AIS105  /  3 CREDITS  /  3 PERIODS
Introduction to American Indian Studies
Introduction to political, economic, and social structures of American Indian Nations. Provides overview of American Indian tribal cultures prior to contact, the impact of European contact, and the influence of western social systems on tribal nations. Prerequisites: None.

AIS110  /  3 CREDITS  /  3 PERIODS
Navajo Government
Addresses and examines major historical developments of the Navajo People with a focus on government, law, society, livelihood, tradition, and culture. Includes the major components and operation of Navajo government and related tribal laws, such as Title II and Title VII of the Navajo Nation Code, as well as the significance of the Treaty of 1868. Federal Indian policies and their impact on Navajo society and government, the importance of federal and tribal citizenship and related federal and tribal laws, and the role of the Navajo clanship system and other relevant cultural concepts addressed. Prerequisites: None.

AJS – Administration of Justice Studies

AJS101  /  3 CREDITS  /  3 PERIODS
Introduction to Criminal Justice
An introduction to crime and society’s responses to it. Examines the nature and causes of crime, the criminal law, constitutional safeguards, and the organization and operation of the criminal justice system including the police, courts, jails, prisons, probation and parole departments, and community corrections agencies. Covers the history of the criminal justice system, terminology and career opportunities. Prerequisites: None.

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

AJS109  /  3 CREDITS  /  3 PERIODS
Substantive Criminal Law
Covers philosophy of legal sanctions and historical development from the common law to modern American criminal law, classifications of crimes, elements of and parties to crimes, general definition of crimes, common defenses utilized. Includes specific offenses and the essential elements of each offense. Prerequisites: None.

AJS113  /  3 CREDITS  /  3 PERIODS
Criminal Justice Crime Control Policies and Practices
Focus on changing the distribution of crime opportunities rather than offender motivation. Topics include application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, defensible space, and crime prevention through defensible space. Prerequisites: None.

AJS119  /  3 CREDITS  /  4 PERIODS
Computer Applications in Justice Studies
Provides literacy in microcomputer applications in major areas of the criminal justice system. Examines availability and uses of current software packages in criminal justice work. Provides hands-on experience with appropriate integrated software packages pertaining to justice studies. Prerequisites: None.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
AJS123  /  3 CREDITS  /  3 PERIODS
Ethics and the Administration of Justice
Description: 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.

AJS139  /  3 CREDITS  /  3 PERIODS
Emergency Response to Terrorism
Fundamentals of emergency response to suspected terrorist events. Historical perspective of terrorist activities and methods by which responders can identify and protect themselves and the public from these threats. Coordination of responding agencies. Prerequisites: None.

AJS195  /  3 CREDITS  /  3 PERIODS
International and Domestic Terrorism
An overview of the history, structure, goals, and activities of domestic and international terrorist groups. Explores theories explaining terrorism and reviews methods used to combat it. Prerequisites: None.

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

AJS201  /  3 CREDITS  /  3 PERIODS
Rules of Evidence
A practical insight into the rules of evidence to include how to recognize evidence: the general rules governing admissibility of evidence; the hearsay rule and its exceptions; the use of documentary evidence, written memoranda, photographs, recordings and electronic surveillance; corpus delicti; opinion evidence, circumstantial evidence, evidential privileges. Prerequisites: None.

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

AJS205  /  3 CREDITS  /  3 PERIODS
Effective Communication and Report Writing in Criminal Justice
Overview of effective communication for criminal justice agencies. Covers the communication process and flow. Written communication emphasized with report writing, including characteristics of reports and field notes, and the importance and uses of each. Form, style, and procedures for writing various reports, including elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property.

AJS212  /  3 CREDITS  /  3 PERIODS
Juvenile Justice Procedures
Examines the nature and extent of juvenile delinquency to the present. Including but not limited to the history, jurisdictions, terminology, procedures, and institutions of the juvenile justice system. Prerequisites: None.

AJS213  /  3 CREDITS  /  3 PERIODS
Evidence Technology/Fingerprints
Fundamental principles and processes of fingerprints to include identification, interpretation, and classification. In addition, students will apply fingerprinting latent fingerprint developing, preservation of evidence and the chain of custody. Prerequisites: None.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
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<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
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<tr>
<td><strong>AJS215</strong></td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
| Criminalistics: Physical Evidence  
The scientific analysis and examination of physical evidence with emphasis on scientific investigation, recognition, collection, and preservation of evidence. Topics include fingerprints, shoe prints, tool marks, firearms identification, paint chips and arson. Prerequisites: None. |
| **AJS216**  | 3       | 3       |
| Criminalistics: Biological Evidence  
The scientific analysis and examination of biological evidence with emphasis on collection and preservation of evidence. Topics discussed include blood, drugs, blood alcohol, hairs and fibers, and topics of special interest in criminalistics. Prerequisites: None. |
| **AJS225**  | 3       | 3       |
| Criminology  
Study of deviance, society’s role in defining behavior; theories of criminality and the economic, social, and psychological impact of crime; relationships between statistics and crime trends. Examines crime victimization and the various types of crime and categories of offenders. Required in the AJS curriculum. Prerequisites: None. |
| **AJS230**  | 3       | 3       |
| The Police Function  
Theories of procedures and methods of operations of public police with emphasis on discretionary powers available to the working police officer. Career opportunities and current trends in law enforcement presented. Prerequisites: None. |
| **AJS240**  | 3       | 3       |
| The Correction Function  
Examines the history and development of correctional theories and institutions. Prerequisites: None. |
| **AJS241**  | 3       | 3       |
| Police Photography  
Emphasis on proper procedure for photographing crime scenes, accident scenes, and laboratory specimens. Discussion of photographic techniques, equipment, lighting techniques, aerial photography, video and motion pictures, macro and micro photography, filters, and preparation for court presentation using selected simulations. Prerequisites: None. |
| **AJS258**  | 3       | 3       |
| Victimology and Crisis Management  
Victimology, the criminal justice system, techniques of crisis intervention, and the importance of a multicultural and global perspective. Includes sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, effective coping skills, appropriate community resources and the responsiveness of the justice system. Prerequisites: None. |
| **AJS260**  | 3       | 3       |
| Procedural Criminal Law  
Concerned with the understanding of procedural criminal law. Examines the rationale underlying major court holdings, the procedural requirements that stem from these holdings, and their effect on the daily operations of the criminal justice system. Prerequisites: None. |
| **AJS270**  | 3       | 3       |
| Community Relations  
Examination, recognition and understanding of community problems; community action programs; methods of coping with human behavior, victimology, conflict and communication; ethnic and minority cultures and environments; the community and relationships with the criminal justice system. Prerequisites: None. |
AJS275  /  3 CREDITS  /  3 PERIODS
Criminal Investigation I
Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, and basic investigative techniques. Prerequisites: None.

AMT – Aircraft Maintenance Technology

AMT124  /  5 CREDITS  /  9 PERIODS
Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations
Federal Aviation maintenance publications, forms and records. Overview of technician’s privileges and limitations. Perform aircraft weight and balance, aircraft ground operations and fuel servicing techniques. Drawings, symbols and schematic diagrams. Prerequisites: Admission to the Aircraft Maintenance Technology program.

AMT126  /  9 CREDITS  /  12 PERIODS
Fundamentals of Mathematics and Electricity
Mathematical computation of fundamental electrical circuit parameters. Basic definitions, laws, and concepts. Schematic, wiring, and parts placement diagrams. Test and troubleshoot electrical and electronic components and circuits. Prerequisites: Admission to the Aircraft Maintenance Technology program.

AMT128  /  5 CREDITS  /  9 PERIODS
Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittings
Basic concepts of motion, fluid dynamics, heat and sound, aerodynamics, aircraft structure and theory of flight. Fluid lines and fittings, component identification, function, inspection, and installation. Cleaning and corrosion control, materials and processes, non-destructive testing, and precision measurement techniques. Prerequisites: Admission to the Aircraft Maintenance Technology program.

AMT220  /  3 CREDITS  /  6 PERIODS
Fundamentals of Aircraft Wood Structures, Covering and Finishing, and Bonded Structures

AMT222  /  4 CREDITS  /  6 PERIODS
Atmosphere Control, Fire Detection, Ice and Rain Protection Systems
Operation and maintenance of aircraft auxiliary systems. Inspection, servicing, troubleshooting and repair of environmental control, ice and rain control, fire protection and warning systems. Prerequisites: Admission to the program.

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

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

AMT228  /  7 CREDITS  /  12 PERIODS
Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication and Navigation Systems

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
 Proper operation, inspection, servicing and troubleshooting of DC (Direct Current) and AC (Alternating Current) sources, systems, and components. Mechanical and electrical sensing and information display systems. Fuel indicator system inspections, repairs, and troubleshooting. Transmitter and receiver fundamentals. Avionics installation, inspection and testing. Prerequisites: Admission to the program.

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

**AMT270 / 5 CREDITS / 8 PERIODS**
**Engine Instruments, Fire Protection and Lubrication, Cooling and Exhaust Systems**
Operation, maintenance, servicing, inspection, repair, and troubleshooting of engine instruments, fire detection and extinguishing, engine lubrication, cooling, and exhaust systems. Prerequisites: Admission to the program.

**AMT272 / 4 CREDITS / 8 PERIODS**
**Propeller Systems and Engine Inspections**
Historical development, operation, disassembly, inspection, repair, and maintenance of propellers. Reciprocating and turbine engine inspection and documentation. Prerequisites: Admission to the program.

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**ARH – Art Humanities**

**ARH100 / 3 CREDITS / 3 PERIODS**
**Introduction to Art**
Understanding and enjoyment of art and visual culture through study of two-dimensional and three-dimensional works of art, design elements, media and processes, and cultural contexts. Emphasis on contemporary topics and cultural diversity in the arts. Prerequisites: None.
### ARH101 / 3 CREDITS / 3 PERIODS
**Prehistoric Through Gothic Art**

History of art from prehistoric through medieval period. Prerequisites: None.

### ARH102 / 3 CREDITS / 3 PERIODS
**Renaissance Through Contemporary Art**

History of art from around the world from the Renaissance through contemporary period. Prerequisites: None.

### ARH109 / 3 CREDITS / 3 PERIODS
**History of American Art**

Development and variety of American Art. Presentation of architecture, sculpture, painting and decorative objects. Prerequisites: None.

### ARH110 / 3 CREDITS / 3 PERIODS
**Art of Ancient Egypt**

The art and culture of ancient Egypt from prehistoric through the Greco-Roman period. Prerequisites: None.

### ARH112 / 3 CREDITS / 3 PERIODS
**Roman Art and Architecture**

Detailed examination of the art and architecture of ancient Rome from the monarchical period to the late empire, with emphasis on the visual culture and artifacts of the civilization. Prerequisites: None.

### ART – Art

### ART100 / 1 CREDIT / 2 PERIODS
**Introduction to Digital Arts**

Foundation course in digital arts and design, with emphasis in the production of art using the computer. Prerequisites: None.

### ART106 / 3 CREDITS / 6 PERIODS
**Gallery Operations**

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

### ART112 / 3 CREDITS / 6 PERIODS
**Two-Dimensional Design**

Study of fundamental elements and principles of two-dimensional design. Prerequisites: None.

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART113</td>
<td>3</td>
<td>6</td>
<td>Color</td>
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<td>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.</td>
</tr>
<tr>
<td>ART115</td>
<td>3</td>
<td>6</td>
<td>Three-Dimensional Design</td>
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<tr>
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<td>Fundamental principles of three-dimensional design. Prerequisites: None.</td>
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<tr>
<td>ART116</td>
<td>3</td>
<td>6</td>
<td>Life Drawing I</td>
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<td>Use of form, structure and anatomy of draped and undraped human figure to develop basic principles of sound draftsmanship. Prerequisites: None.</td>
</tr>
<tr>
<td>ART117</td>
<td>3</td>
<td>6</td>
<td>Life Drawing II</td>
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<tr>
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<td>Further study of form, structure, and anatomy of the draped and undraped human figure with emphasis on composition. Prerequisites: ART116.</td>
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<tr>
<td>ART119</td>
<td>3</td>
<td>6</td>
<td>Penciling for Sequential Art</td>
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<td>Development of observational skills as they apply to sequential art. Emphasis on techniques that showcase how characters interact with their environment and manipulate props and cartooning anatomy. Includes techniques on composing page layouts, adapting scripts and reference gathering. Prerequisites: A grade of C or better in ART100 or permission of Instructor.</td>
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<tr>
<td>ART120</td>
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<td>6</td>
<td>Inking for Sequential Art</td>
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<td>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.</td>
</tr>
<tr>
<td>ART122</td>
<td>3</td>
<td>6</td>
<td>Drawing and Composition II</td>
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<td>Emphasis on composition and exploration of drawing media. Prerequisites: ART111.</td>
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<tr>
<td>ART131</td>
<td>3</td>
<td>6</td>
<td>Photography I</td>
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<td>Basic photographic principles and techniques. Basic camera functions and controls. Experience in the image-making process by creating and editing photographs for various display environments. Introduction to the photographic aesthetic and photography’s role in society. Prerequisites: None. Course Note: Camera required.</td>
</tr>
<tr>
<td>ART132</td>
<td>3</td>
<td>6</td>
<td>Photography II</td>
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<td>Advanced camera and darkroom techniques. Aesthetic awareness with personal expression. Prerequisites: ART131 or permission of instructor.</td>
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<tr>
<td>ART133</td>
<td>3</td>
<td>6</td>
<td>Photography III</td>
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<td>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.</td>
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<tr>
<td>ART137</td>
<td>3</td>
<td>6</td>
<td>Alternative Photographic Processes</td>
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<td>Emphasis on development of alternative photographic processes including technique, aesthetics, and creative imagery. Exploration of various types of non-silver photographic processes including cyanotype, Van Dyke, Polaroid imaging, and others. Prerequisites: None.</td>
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<tr>
<td>ART142</td>
<td>3</td>
<td>6</td>
<td>Introduction to Digital Photography</td>
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<td>Fundamentals of digital photography. Includes camera operations, exposure techniques, introduction to digital output, and theory of digital photography. Prerequisites: None. Course Note: Digital camera required.</td>
</tr>
</tbody>
</table>

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
### ART143  /  3 CREDITS  /  6 PERIODS
**Intermediate Digital Photography**
Intermediate theory and techniques of digital photography. Aesthetic awareness and personal expression from image capture through intermediate techniques in the digital darkroom. Introduction to high-resolution digital output. Prerequisites: ART142 or permission of instructor.

### ART151  /  3 CREDITS  /  6 PERIODS
**Sculpture I**
Exploration of sculptural form and expression in clay, plaster, stone, wood and metal. Prerequisites: None.

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

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

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

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

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

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

### ART169  /  3 CREDITS  /  6 PERIODS
**2D Media Design**
Generation of two-dimensional (2D) images, designs, and media using digital and traditional methods of visual problem solving. Understanding digital and design-based techniques and workflows. Prerequisites: A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ART100 or permission of Instructor. Cross-References: ADA169.

### ART173  /  3 CREDITS  /  6 PERIODS
**Computer Art**
Introduction to the multiple elements of paint software programs using the microcomputer. Basic foundation in the use of computer techniques including color paint programs for the production of computer images. Use of electronic input and output devices. Prerequisites: ART100, or permission of instructor.

### ART177  /  3 CREDITS  /  6 PERIODS
**Digital Photographic Imaging I**
Introduction to multiple elements of digital imaging. Basic foundation in photographic manipulation of images, with special attention to aesthetic foundations underlying photographic composition. Prerequisites: A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ART100 or permission of Instructor. Cross-References: ADA177.

### ART178  /  3 CREDITS  /  6 PERIODS
**Digital Arts Studies**
Designed for broad overview of the digital arts. Experience in digital based media, creative problem solving, design and aesthetics. Prerequisites: A grade of C or better in ART100 or permission of Instructor.

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<table>
<thead>
<tr>
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<th>Credits</th>
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<th>Description</th>
</tr>
</thead>
</table>
| ART190      | 3       | 6       | Art of Web Site Design  
Introduction to design production for websites. Layout, typography and presentation style for HTML (Hyper Text Markup Language). Design of mock-ups using digital design software to produce artistic form and content for the Web using Hyper Text Markup Language (HTML), digital text, and graphics. Discussion of color, proportion, typography and Web-specific design principles. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability. Prerequisites: ART100, or permission of Instructor. |
| ART219      | 3       | 6       | Coloring, Toning and Lettering for Sequential Art  
Understanding of the digital rules and programs used in coloring, toning and lettering comics, and the problems presented therein within the sequential narrative. Emphasis on rules and guidelines within the industry, and digital coloring and lettering. Prerequisites: A grade of C or better in (ART100, ART119, and ART120) or permission of Instructor. |
| ART220      | 3       | 6       | Publishing for the Comic Industry  
Understanding of the comics industry. Includes researching, marketing, packaging, and distributing comics. Emphasis on selling and submitting to comic publishers, how to develop comics for self-publishing, promotional materials, and understanding contracts and copyrights involved in the process of publishing comics. Prerequisites: A grade of C or better in ART100 or permission of Instructor. |
| ART221      | 3       | 6       | Comics Creation  
Development of a complete sequential comic, using all comics skills from beginning to end. Process includes scripting, penciling, inking, coloring or toning, lettering, and printing for publication. Prerequisites: A grade of C or better in (ART100 and ART219) or permission of Instructor. |
| ART255AA    | 1       | 1       | Self Promotion  
Career goals, presentation of artist, communication skills, keeping files and records, developing self-promotional materials. Prerequisites: None. |
| ART255AB    | 1       | 1       | The Portfolio  
Choosing the right pieces to include, presenting art work, developing the portfolio. Prerequisites: None. |
| ART255AC    | 1       | 1       | Marketing Fine Art  
Exhibitions and galleries, establishing a studio, alternative markets. Prerequisites: ART255AB or permission of Instructor. |
| ART270      | 3       | 6       | Digital Photographic Imaging II  
Intermediate digital photographic imaging techniques. Refinement of aesthetic awareness and personal expression. Prerequisites: A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ADA/ART177. |
| ART274      | 3       | 6       | Digital Photographic Imaging III  
Advanced digital photographic imaging techniques. Advanced manipulation techniques of photographic images and time-based media. Continued development of aesthetic awareness and personal expression. Prerequisites: A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ART270. |
| ART289      | 3       | 6       | Computer Illustration  
Introduction to the multiple elements of commercial illustration using the microcomputer. Basic foundation in the use of computer techniques including color paint and draw programs for the production of commercial illustrations for publications and printed matter. Use of input and output devices. Prerequisites or Corequisites: ART100 or permission of instructor. |

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<td>ART290AC</td>
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<td>ART290BC</td>
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**Studio Art**

Studio course for art majors allowing continuation in a subject field. Prerequisites: Permission of instructor. Course Notes: ART290AC students must have completed advanced courses in the subject field.

**ART290MC** / 3 CREDITS / 6 PERIODS

**Studio Art: Digital Photography**

Studio course for art majors allowing continuation in a subject field. Prerequisites: ART143 or permission of Instructor. Course Notes: ART290MC may be repeated for credit.

**ART290PC** / 3 CREDITS / 6 PERIODS

**Studio Art: Painting**

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

**ART295EC** / 3 CREDITS / 6 PERIODS

**Art Workshop/Seminar: Painting**

Advanced level workshop seminar in art disciplines. Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.

**ART295GA** / 1 CREDIT / 2 PERIODS

**Art Workshop/Seminar: Ceramics**

Advanced level workshop seminar in art disciplines. Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.

**ART295GB** / 2 CREDITS / 4 PERIODS

**Art Workshop/Seminar: Ceramics**

Advanced level workshop seminar in art disciplines. Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.

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**ASB – Anthropology**

**ASB102  /  3 CREDITS  /  3 PERIODS**

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

**ASB211  /  3 CREDITS  /  3 PERIODS**

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

**ASB214  /  3 CREDITS  /  3 PERIODS**

*Magic, Witchcraft, and Healing: An Introduction to Comparative Religion*
Origins, elements, and forms of religion; a comparative survey of religious beliefs, myths, rituals and symbolism including magic, witchcraft and healing as practiced in selected regions of the world; the place of religion in the total culture. Prerequisites: None.

**ASB222  /  3 CREDITS  /  3 PERIODS**

*Buried Cities and Lost Tribes: Old World*
Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which tend to fragment societies. Examples drawn from Africa, Asia, Europe, the Pacific Islands, and Australia. Prerequisites: None.

**ASB223  /  3 CREDITS  /  3 PERIODS**

*Buried Cities and Lost Tribes: New World*
Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which tend to fragment societies. Examples drawn from North America, Central America, and South America. Prerequisites: None.
**ASL – American Sign Language**

**ASL101 / 4 CREDITS / 4 PERIODS**
American Sign Language I
Introduction of principles, methods, and techniques for communicating with deaf people who sign.
Development of expressive and receptive sign skills, manual alphabet, numbers, and sign vocabulary.
Overview of syntax, grammar, and culture related to American Sign Language (A.S.L.). Prerequisites: None. ASL103 suggested as a corequisite but not required.

**ASL102 / 4 CREDITS / 4 PERIODS**
American Sign Language II
Continued development of knowledge and language skills for communicating with deaf people who sign. Includes numbers, fingerspelling, and culture. Emphasis on enhancement of receptive sign skills and continued development of expressive sign skills. Application of rudimentary, syntactical, and grammatical structure stressed with continued development of sign vocabulary. Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.

**ASL103 / 1 CREDIT / 1 PERIOD**
Introduction to the Deaf Community
History and development of American Sign Language (ASL) and English codes. Overview of education for Deaf and Hard of Hearing children. Legal rights and common adaptive devices used by Deaf and Hard of Hearing individuals. Prerequisites: None.

**ASL110 / 3 CREDITS / 3 PERIODS**
Fingerspelling
Introduction to fingerspelling techniques. Focus on methods, theory, and applications on receptive and expressive skills including manual alphabet production and numbers. In addition, skill development in speed, dexterity, clarity, and lexicalized fingerspelling, numeric incorporation, prefixes, suffixes, and polysyllabic words. Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.

**ASL201 / 4 CREDITS / 4 PERIODS**
American Sign Language III
Linguistics of American Sign Language (A.S.L.) including non-manual behaviors and signing English idioms with conceptual accuracy. Emphasis on practical application of A.S.L. skills, expanded vocabulary, and cross-cultural communication. Prerequisites: A grade of C or better in ASL102 or permission of Department or Division. (ENG101 or ENG107) and (CRE101 or equivalent as indicated by assessment) suggested but not required. Completion of prerequisites within the last three years is required.

**ASL202 / 4 CREDITS / 4 PERIODS**
American Sign Language IV
Advanced American Sign Language skills including continued vocabulary. Emphasis on conversational techniques in a cross-cultural framework. Continued work on conceptual accurate signing of English idioms and words with multiple meanings. Prerequisites: A grade of C or better in ASL102 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.

**ASM – Anthropology**

**ASM104 / 4 CREDITS / 5 PERIODS**
Bones, Stones and Human Evolution
The 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.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
### AST – Astronomy

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Description</th>
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</thead>
</table>
| AST101      | 4       | 6       | **Survey of Astronomy**
Survey of astronomy for the nontechnical student. The history, content, and evolution of the solar system and the universe in general. Astronomical principles and instrumentation. The planets, moons, sun, comets, stars and star formation, galaxies, and cosmology. Prerequisites: None.

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<th>Description</th>
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</table>
| AST111      | 4       | 6       | **Introduction to Solar System Astronomy**
Introduction to astronomy for the non-science major. The scientific method, properties of light, astronomical instruments, our Solar System and solar systems around other stars. Includes hands-on astronomical observations and laboratory exercises. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory score on district placement exam.

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</table>
| AST112      | 4       | 6       | **Introduction to Stars, Galaxies, and Cosmology**
Introduction to astronomy for the non-science major. Structure and evolution of stars; supernovae, black holes, and quasars; nebulae; star clusters; galaxies; cosmology, including the birth and death of the universe. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory score on district placement exam. Course Notes: Note that AST111 is not a prerequisite for this course.

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<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Description</th>
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</thead>
</table>
| AST114      | 1       | 3       | **Introduction to Stars, Galaxies, and Cosmology Laboratory**
Hands-on astronomical observations and exercises to supplement AST112. Prerequisites: A grade of C or better in AST112 and permission of Instructor or Department or Division. AST114 is a legacy course intended for those students who have previously completed the corresponding lecture course. Current MCCCD students should enroll in AST112 only.

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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Description</th>
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</table>
| AST294      | 3       | 3       | **Special Topics in Astronomy**
Conceptual, experimental, and computational aspects of a special topic in astronomy. Prerequisites: Permission of Department or Division. Course Notes: AST294 may be repeated for credit.

<table>
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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Description</th>
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</table>
| AST294AA    | 2       | 2       | **Special Topics in Astronomy**
Conceptual, experimental, and computational aspects of a special topic in astronomy. Prerequisites: Permission of Department or Division. Course Notes: AST294AA may be repeated for credit.

<table>
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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Description</th>
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</thead>
</table>
| AST294AB    | 1       | 1       | **Special Topics in Astronomy**
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.

### BIO – Biology

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<th>Course Code</th>
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<th>Periods</th>
<th>Description</th>
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</table>
| BIO100      | 4       | 6       | **Biology Concepts**
Introductory course covering basic principles and concepts of biology. Methods of scientific inquiry and behavior of matter and energy in biological systems are explored. Prerequisites: None. Course Notes: Field trips may be required at students’ expense.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
BIO105 / 4 CREDITS / 6 PERIODS

Environmental Biology

Fundamentals of ecology and their relevance to human impact on natural ecosystems. Field trips may be required at students’ expense. Prerequisites: None.

BIO108 / 4 CREDITS / 6 PERIODS

Plants and Society

A global study of plants in relation to humans as a source of food, fiber, drugs, and other products; for aesthetic value, survival, and energy. Prerequisites: None.

BIO156 / 4 CREDITS / 6 PERIODS

Introductory Biology for Allied Health

An introductory biology course for allied health majors with emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics. Prerequisites: A grade of “C” or better in RDG091 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score. One year of high school or one semester of college level chemistry is strongly recommended.

BIO160 / 4 CREDITS / 6 PERIODS

Introduction to Human Anatomy and Physiology

Principles of scientific method. Structural organization, homeostasis and control mechanisms of the body. Specific chemistry concepts. Structure and function of the major systems of the body. Prerequisites: None.

BIO181 / 4 CREDITS / 6 PERIODS

General Biology (Majors) I

The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics. Prerequisites: A grade of C or better in RDG100 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score. One year of high school or one semester of college-level biology and chemistry is strongly recommended.

BIO182 / 4 CREDITS / 6 PERIODS

General Biology (Majors) II

The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology. Prerequisites: A grade of C or better in BIO181 or BIO181XT. Course Notes: BIO182 may require field trips.

BIO201 / 4 CREDITS / 6 PERIODS

Human Anatomy and Physiology I

Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Prerequisites: (A grade of C or better in BIO156 or BIO156XT or BIO181 or BIO181XT or one year of high school biology) and a grade of C or better in RDG100 or higher or eligibility for CRE101 as indicated by reading placement test score. CHM130 or higher or one year of high school chemistry suggested but not required.

BIO202 / 4 CREDITS / 6 PERIODS

Human Anatomy and Physiology II

Continuation of structure and function of the human body. Topics include endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems; and fluid and electrolyte balance. Prerequisites: A grade of C or better in BIO201 or BIO201XT.

BIO205 / 4 CREDITS / 6 PERIODS

Microbiology

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 a grade of C or better in RDG100 or higher or eligibility for CRE101 as indicated by reading placement test score. CHM130 or higher or one year of high school chemistry suggested but not required.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
### BIO220  /  4 CREDITS  /  6 PERIODS
Biology of Microorganisms
Detailed study of microbial cells, their structure, genetics, physiology and taxonomy. Prerequisites: BIO181 Corequisites: (CHM152 and CHM152LL) or (CHM154 and CHM154LL)

### BHS – Behavioral Health Sciences

#### BHS160  /  3 CREDIT  /  3 PERIODS
Ethical, Legal and Professional Issues in Behavioral Health and Social Service
Explores relevant ethical, legal, and professional issues inherent in the behavioral health and social services field, including expectations of and limitations on providers. Key areas of inquiry include boundaries and dual relationships, mandated reporting, confidentiality, scope of practice, beneficence and non-maleficence, rights and responsibilities, professional relationships, and credentialing/regulating agencies. Prerequisites: None.

### BPC – Business-Personal Computers

#### BPC110  /  3 CREDITS  /  4 PERIODS
Computer Usage and Applications
Introduction to business and personal computer operations and usage. Software applications for analyzing and solving business problems including word processing, spreadsheet, database, and presentation graphics. Prerequisites: None.

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

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

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

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

#### BPC170  /  3 CREDITS  /  4 PERIODS
A+ Exam Prep: Computer Hardware Configuration and Support
Explore technical aspects of personal computers, including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis placed on hardware installation, maintenance, mobile devices, and hardware

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
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**CHM – Chemistry**

**CHM107 / 3 CREDITS / 3 PERIODS**

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

**CHM107LL / 1 CREDIT / 3 PERIODS**

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

**CHM130 / 3 CREDITS / 3 PERIODS**

Fundamental Chemistry
A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Designed to meet needs of students in such diverse areas as agriculture, nursing, home economics, physical education and water technology. Prerequisites: A grade of C or better in [CHM090 or MAT090 or MAT091 or MAT092 or (MAT103AA and MAT103AB) or higher level mathematics course or satisfactory score on math placement exam] and [RDG100 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score], or permission of the Instructor, or Department or Division Chair.

**BPC171 / 1 CREDIT / 2 PERIODS**

Recycling Used Computer Technology
Use of hardware maintenance knowledge and skills to refurbish used computers. May be repeated for a total of three (3) credits. Prerequisites or Corequisites: BPC270 or permission of instructor.

**BPC270 / 3 CREDITS / 4 PERIODS**

A+ Exam Prep: Operating System Configuration and Support
Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on OS installation, maintenance, mobile devices, security, software troubleshooting, and on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations. Prerequisites: A grade of “C” or better in CIS105 or permission of Instructor.

**CCS – Chicana and Chicano Studies**

**CCS101 / 3 CREDITS / 3 PERIODS**

Chicana and Chicano Studies
Introduction to the wealth and diversity of Chicana and Chicano Studies research from a variety of disciplinary perspectives through the use of a series of historical and social scientific studies, novels, testimonies, and films. Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.

**CFS – Child/Family Studies**

**CFS176 / 3 CREDITS / 3 PERIODS**

Child Development
Study of the science of human development from conception through adolescence. Includes observation skills, parent and adult roles in the lives of children, and contemporary issues. Prerequisites: None.
the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Designed to meet needs of students in such diverse areas as agriculture, nursing, home economics, physical education and water technology. Prerequisites: A grade of C or better in [CHM090 or MAT090 or MAT091 or MAT092 or (MAT103AA and MAT103AB) or higher level mathematics course or satisfactory score on math placement exam] and [RDG100 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score], or permission of the Instructor, or Department or Division Chair. Course Notes: Student may receive credit for only one of the following: CHM150 and CHM150LL, or CHM150AA.

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<tr>
<td>CHM150LL</td>
<td>1</td>
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**Fundamental Chemistry Laboratory**

Laboratory experience in support of CHM150. Prerequisites or Corequisites: A grade of "C" or better in CHM150.

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<th>Course Code</th>
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<tr>
<td>CHM151</td>
<td>3</td>
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**General Chemistry I**

Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and [(a grade of C or better in MAT151 or higher level mathematics course, or satisfactory score on placement exam), 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.

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<tr>
<td>CHM151AA</td>
<td>4</td>
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**General Chemistry I Laboratory**

Laboratory experience in support of CHM151. 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 score on placement exam), 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.

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<tr>
<td>CHM151LL</td>
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**Chemistry for Allied Health**

Elements of fundamental and organic chemistry. Includes the general chemical behavior of inorganic matter and the structure of organic and biochemical systems. Course designed for specific allied health programs at MCCD. May not be applicable to other allied health programs or transferable. Prerequisites: A grade of C or better in [CHM090 or MAT090 or MAT091 or MAT092 or (MAT103AA and MAT103AB) or higher or satisfactory score on math placement exam], or one year of high school chemistry taken within the last five years with a grade of C or better, or permission of the Instructor, or Department or Division Chair.

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<tr>
<td>CHM138</td>
<td>3</td>
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**Chemistry for Allied Health Lab**

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

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<tr>
<td>CHM138LL</td>
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For the most current information regarding course descriptions, log on to [curriculum.maricopa.edu](http://curriculum.maricopa.edu).
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. 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.

**CHM152AA / 4 CREDIT / 6 PERIODS**

**General Chemistry II**

A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair. Completion of prerequisites within the last two years recommended. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.

**CHM152LL / 1 CREDIT / 3 PERIODS**

**General Chemistry II Laboratory**

Laboratory experience in support of CHM152. Prerequisites or Corequisites: A grade of "C" or better in CHM152. Course Notes: Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.

**CHM230 / 3 CREDITS / 3 PERIODS**

**Fundamental Organic Chemistry**

Chemistry of representative groups of organic compounds, emphasizing biological applications. Prerequisites: A grade of C or better in (CHM130 and CHM130LL) or (CHM150 or CHM151 and CHM151LL), or permission of the Instructor, or Department or Division Chair. Course Notes: 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.

**CHM230LL / 1 CREDIT / 3 PERIODS**

**Fundamental Organic Chemistry Laboratory**

Laboratory experience in support of CHM230. Prerequisites: CHM130LL, or CHM151LL, or equivalent. Prerequisites or Corequisites: CHM230.

**CHM235 / 3 CREDITS / 3 PERIODS**

**General Organic Chemistry I**

Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized. Prerequisites: A grade of C or better in (CHM152 and CHM152LL), or CHM152AA, or (CHM154 and CHM154LL), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended.

**CHM235LL / 1 CREDIT / 4 PERIODS**

**General Organic Chemistry I Laboratory**

Laboratory experience in support of CHM235. Prerequisites or Corequisites: A grade of "C" or better in CHM235. Completion of prerequisites within the last two years recommended.

**CHM236 / 3 CREDITS / 3 PERIODS**

**General Organic Chemistry II**

Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Prerequisites: A grade of C or better in CHM235 and CHM235LL, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended.
CHM236LL / 1 CREDIT / 4 PERIODS

CHM 2236
General Organic Chemistry IIA Laboratory
Laboratory experience in support of CHM236. Prerequisites or Corequisites: A grade of "C" or better in CHM236. Completion of prerequisites within the last two years recommended.

CHM260 / 3 CREDITS / 3 PERIODS
Fundamental Biochemistry
Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates and lipids; the utilization and synthesis of these materials by living systems and the relationship of the processes to energy production and utilization. Prerequisites: A grade of C or better in (CHM230 and CHM230LL) or (CHM235 and CHM235LL), 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.

CHM260LL / 1 CREDIT / 3 PERIODS
Fundamental Biochemistry Laboratory
Laboratory experience in support of CHM260. Prerequisites or Corequisites: A grade of "C" or better in CHM260. Completion of prerequisites within the last two years recommended.

CHM298AA / 1 CREDIT / 1 PERIOD
Special Projects
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.

CIS – Computer Information Systems

CIS102DA / 3 CREDIT / 4 PERIODS
Customer User Support
Examines skills, tools and strategies necessary for becoming a computer help-desk or end-user support professional. Prerequisites: None.

CIS103 / 3 CREDITS / 4 PERIODS
Introduction to Social Media
Identify and explain social media and Web 2.0 technologies for personal, academic, professional, and business applications. Create and maintain accounts on various sites to socialize, write, and share multimedia, while understanding the related ethics, privacy and security issues. Prerequisites: None.

CIS105 / 3 CREDITS / 4 PERIODS
Survey of Computer Information Systems
Overview of computer technology, concepts, terminology, and the role of computers in business and society. Discussion of social and ethical issues related to computers. Use of word processing, spreadsheet, database, and presentation software. Includes uses of application software and the Internet for efficient and effective problem solving. Exploration of relevant emerging technologies. Prerequisites: None.

CIS111 / 3 CREDITS / 3 PERIODS
Ethics in Information Technology
Ethical issues that arise as a result of increasing use of computers, and the responsibilities of those who work with computers, either as computer science professionals or end users. Critical inquiry and review of ethical challenges in information technology business, including professional and corporate responsibility, government regulation, fiduciary responsibilities of information, infringement of intellectual property, security risk assessment, Internet crime, identity theft,

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employee surveillance, privacy, compliance, social networking, and the ethics of IT corporations. Prerequisites: None.

**CIS126RH / 3 CREDITS / 4 PERIODS**

Red Hat System Administration I
Introduction to core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps prepare for the Red Hat certification exams using a hands-on, task-focused curriculum. Prerequisites: None.

**CIS131DO / 3 CREDITS / 4 PERIODS**

Microsoft Word: Word Processing
Using word processing software to create, name and manage files, edit text, format, apply themes and styles, create and modify tables, apply desktop publishing features, and print a variety of types of documents. Prerequisites: None.

**CIS131DE / 3 CREDITS / 4 PERIODS**

Excel Spreadsheet
Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, projections, macro programming, database searching, extraction, linking, statistics, and matrix manipulation. Production of graphs and reports. Project design using multiple, integrated spreadsheets. Prerequisites: None. Course Notes: CIS114DE may be repeated for a total of nine (9) credit hours.

**CIS117DM / 3 CREDITS / 4 PERIODS**

Microsoft Access: Database Management
Introduction to the basic elements, exploration of additional components and common database management problems related to the Microsoft Access program. Prerequisites: None. CIS117DM combines the contents of CIS117AM, CIS117BM and CIS117CM. Course Notes: CIS114DE may be repeated for a total of nine (9) credit hours.

**CIS118DB / 3 CREDITS / 5 PERIODS**

Desktop Presentation: PowerPoint
Use of PowerPoint to produce professional-quality presentation visuals with animation and sound. Prerequisites: None.

**CIS119DO / 3 CREDITS / 4 PERIODS**

Introduction to Oracle: SQL
Use of Oracle tools and methodologies to fulfill real-world business information requirements. Hands-on exercises for designing, creating, and maintaining database structures to store, retrieve, update, and display data in a relational database using the SQL programming language. Creating and maintaining database objects. Advanced retrieval techniques. Prerequisites: A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.

**CIS119DP / 3 CREDITS / 4 PERIODS**

Oracle: Database Administration
Basic administrative tasks performed by a database administrator (DBA). Conceptual understanding and hands-on applications of the Oracle database architecture and interaction of its components. Prerequisites: A grade of C or better in CIS119DO, or permission of Instructor. (CIS126++ or CIS121++ or MST152++) is recommended.

**CIS120DB / 3 CREDITS / 4 PERIODS**

Introduction to Adobe Illustrator
Provides students with the knowledge and skills to use Adobe Illustrator graphics software on a computer. Basic foundation course in the use of electronic techniques to create, manipulate, and edit images, text, abstract art, graphics design, color graphics and business charts; determine file formats appropriate for web and print; utilize tools to optimize graphics and create a PDF file. Prerequisites: None.

**CIS120DC / 3 CREDITS / 4 PERIODS**

Introduction to Adobe Animate
Focuses on entry-level skill expectations for digital
### For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.

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<tr>
<td><strong>CIS120DF</strong></td>
<td>3 credits</td>
<td>4 periods</td>
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<tr>
<td><strong>Introduction to Adobe Photoshop</strong></td>
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<tr>
<td>Focuses on entry-level skills and knowledge for digital imaging using Adobe Photoshop. Prepares students for the Adobe Certifications related to Photoshop.</td>
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<tr>
<td>Prerequisites: None.</td>
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<th>Periods</th>
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<tbody>
<tr>
<td><strong>CIS120DP</strong></td>
<td>3 credits</td>
<td>4 periods</td>
</tr>
<tr>
<td><strong>Adobe Acrobat Pro: Portable Document Format (PDF) Files</strong></td>
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<tr>
<td>Introduction to creating PDF (Portable Document Format) files using Adobe Acrobat for web viewing and printing. Addresses creation of interactive PDF documents including security settings, navigation links, and form fields.</td>
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<td>Prerequisites: None.</td>
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<tbody>
<tr>
<td><strong>CIS121AB</strong></td>
<td>1 credit</td>
<td>2 periods</td>
</tr>
<tr>
<td><strong>Microsoft Command Line Operations</strong></td>
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<tr>
<td>Use of the Microsoft command line interface: basic concepts, internal and external commands, subdirectories, and editor.</td>
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<tr>
<td>Prerequisites: None.</td>
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<tbody>
<tr>
<td><strong>CIS121AE</strong></td>
<td>1 credit</td>
<td>2 periods</td>
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<tr>
<td><strong>Windows Operating System: Level I</strong></td>
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<tr>
<td>Specific topics include booting and shutting down the computer, navigating the desktop, start button features, taskbar status, and receiving online help support. Exploring and managing folders and files, running programs, and learning about Wordpad and Paint application programs.</td>
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<tr>
<td>Prerequisites: None.</td>
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<tbody>
<tr>
<td><strong>CIS121AH</strong></td>
<td>3 credits</td>
<td>4 periods</td>
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<tr>
<td><strong>Microsoft PowerShell/Command Line Operations</strong></td>
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<tr>
<td>Day-to-day command line administration tasks of Microsoft Windows. PowerShell used to create scripts to administer Microsoft windows environment.</td>
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<tr>
<td>Prerequisites: None. MST150++ recommended but not required.</td>
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<tr>
<th>Course Code</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>CIS126DL</strong></td>
<td>3 credits</td>
<td>4 periods</td>
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<tr>
<td><strong>Linux Operating System</strong></td>
<td></td>
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<tr>
<td>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.</td>
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<tr>
<td>Prerequisites: A grade of C or better in CIS120DA or CIS120DK or permission of Instructor.</td>
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<tr>
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<tbody>
<tr>
<td><strong>CIS133DA</strong></td>
<td>3 credits</td>
<td>4 periods</td>
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<tr>
<td><strong>Internet/Web Development Level I</strong></td>
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<tr>
<td>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.</td>
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<tr>
<td>Prerequisites: None.</td>
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<tr>
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<tbody>
<tr>
<td><strong>CIS150AB</strong></td>
<td>3 credits</td>
<td>4 periods</td>
</tr>
<tr>
<td><strong>Object-Oriented Programming Fundamentals</strong></td>
<td></td>
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<tr>
<td>Structured and Object-Oriented design and logic tools. Use of computer problems to demonstrate and teach concepts using appropriate programming language.</td>
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<tr>
<td>Prerequisites: CIS105, or permission of instructor.</td>
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<tr>
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<tbody>
<tr>
<td><strong>CIS151</strong></td>
<td>3 credits</td>
<td>4 periods</td>
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<tr>
<td><strong>Computer Game Development – Level I</strong></td>
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<tr>
<td>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.</td>
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<tr>
<td>Prerequisites: CIS105 or permission of Instructor.</td>
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</table>
CIS154 / 3 CREDITS / 4 PERIODS

Database Modeling and Design
Top-down, systematic approach to defining a database design based on analysis of business information and requirements. Identifying and evaluating standard data model and design patterns. Developing an entity-relationship (ER) diagram that accurately reflects the business. Mapping the ER diagram to an initial database design and revising for complex entities, attributes, and relationships. Prerequisites: CIS105 or permission of Instructor.

CIS162AD / 3 CREDITS / 4 PERIODS

C#: Level I
Introduction to C# programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: CIS105, or permission of instructor.

CIS163AA / 3 CREDITS / 4 PERIODS

Java Programming: Level I
Introduction to Java programming. Includes features needed to construct Java Applets, Java Applications, control structures, methods, arrays, character and string manipulation, graphics, and object-oriented programming. Prerequisites: CIS105.

CIS164AB / 3 CREDITS / 4 PERIODS

Oracle: PL/SQL Programming
Writing PL/SQL procedures, functions, and packages. Creating and managing PL/SQL program units and database triggers in Oracle development environment. Managing dependencies and manipulating large objects. Prerequisites: CIS119DO, or permission of the instructor.

CIS165 / 3 CREDITS / 4 PERIODS

Introduction to IOS Application Development
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.

CIS156 / 3 CREDITS / 4 PERIODS

Python Programming: Level I
Use of the Python 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.

CIS159 / 3 CREDITS / 4 PERIODS

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

CIS156 / 3 CREDITS / 4 PERIODS

Python Programming: Level I
Use of the Python programming language to solve problems using suitable examples from business or other disciplines. Prerequisites: CIS105 or permission of Instructor.

CIS159 / 3 CREDITS / 4 PERIODS

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

CIS162 / 3 CREDITS / 4 PERIODS

C Programming I
Beginning C programming. Includes features needed to construct programs, functions, pointers, input and output options, data types, structures, and unions, and disk file operations. Prerequisites: A grade of C or better in CIS105 or permission of Instructor.

CIS162AB / 3 CREDITS / 4 PERIODS

C++: Level I
Introduction to C++ programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: CIS105, or permission of instructor.

CIS165DA / 3 CREDITS / 4 PERIODS

Android Mobile Device Programming
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 features and services, to debugging and publishing applications. Prerequisites: CIS163AA, or permission of Instructor.

**CIS166 / 3 CREDITS / 4 PERIODS**

**Web Scripting/Programming**

Software development for websites, including client-side script and Common Gateway Interface (CGI) scripting. Covers Web-based transaction processing and use of databases in conjunction with the Web. Includes security issues. Prerequisites: CIS133CA or CIS133DA or permission of instructor.

**CIS166AA / 3 CREDITS / 4 PERIODS**

**Introduction to JavaScript**

Introduction to basic JavaScript programming concepts including syntax. Covers Hypertext Markup Language (HTML), programming logic and debugging, as well as forms manipulation and animation. Prerequisites: CIS133CA or CIS133DA or permission of instructor.

**CIS190 / 3 CREDITS / 4 PERIODS**

**Introduction to Networks**

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.

**CIS213DE / 3 CREDITS / 4 PERIODS**

**Advanced Microsoft Word: Word Processing**

Using advanced word processing software features to perform tasks such as mail merge, collaboration, web pages, math functions, macros, photo enhancements, graphics, tables, forms and manage long documents. Prerequisites: CIS113DE or (CIS113AE and CIS113BE and CIS113CE) or permission of Instructor.

**CIS214DE / 3 CREDITS / 4 PERIODS**

**Advanced Excel Spreadsheet: Level II**

Advanced Excel spreadsheet features including formatting techniques, macros and Visual Basic for applications. Templates, built-in functions and lists as well as analysis tools including Pivot Tables and Goal Seek covered. Import and export data, workgroup collaboration and Internet features of Excel emphasized. Prerequisites: CIS114DE or permission of Instructor.

**CIS217AM / 3 CREDITS / 4 PERIODS**

**Advanced Microsoft Access: Database Management**

Advanced database concepts including database design, primary and secondary key selection and relationships between tables. Queries, sub forms, macros, events, Visual Basic modules and Access Internet features also covered. Prerequisites: CIS117CM or CIS117DM.

**CIS225AB / 3 CREDITS / 4 PERIODS**

**Object-Oriented Analysis and Design**

Methodologies and notations for fundamental object-oriented analysis and design including use cases, objects, classes, stereotypes, and relationships. Object-oriented iterative process for system development. A continuous application development exercise for applying the analysis and design concepts. Prerequisites: Any programming language or permission of Instructor.

**CIS233DA / 3 CREDITS / 4 PERIODS**

**Internet/Web Development Level II**

Design and create pages on the World Wide Web with a variety of markup languages, programming languages, scripts, and multimedia. Hands-on experience authoring and preparing sophisticated web documents. Exploration of best practices/issues for web design and publishing and careers in web development and e-commerce. Prerequisites: CIS133CA or CIS133DA or permission of instructor.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS235</td>
<td>3</td>
<td>4</td>
<td>e-Commerce</td>
<td>Introduction to Electronic Commerce on the Internet. Designing an electronic storefront including web page content and development, e-commerce site marketing, advertisement, legal and security considerations, credit card and other debit transaction covered. Also includes current issues in e-commerce. Prerequisites: CIS133CA, or CIS133DA, or permission of instructor.</td>
</tr>
<tr>
<td>CIS238DL</td>
<td>3</td>
<td>4</td>
<td>Linux System Administration</td>
<td>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’s Linux+, the Red Hat certified system administrator (RHCSA), the Red Hat Certified Engineer (RHCE), and the Linux Professional Institute (LPIC-I). Prerequisites: A grade of “C” or better in CIS236DL or CIS236RH or permission of instructor.</td>
</tr>
<tr>
<td>CIS238RH</td>
<td>3</td>
<td>4</td>
<td>Red Hat System Administration II</td>
<td>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 CIS236RH, or permission of instructor.</td>
</tr>
<tr>
<td>CIS240DL</td>
<td>3</td>
<td>4</td>
<td>Linux Network Administration</td>
<td>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’s Linux+, the Red Hat certified system administrator (RHCSA), the Red Hat Certified Engineer (RHCE), and the Linux Professional Institute (LPIC-I). Prerequisites: A grade of C or better in CIS238DL or permission of instructor.</td>
</tr>
<tr>
<td>CIS240RH</td>
<td>3</td>
<td>4</td>
<td>Red Hat System Administration III</td>
<td>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.</td>
</tr>
<tr>
<td>CIS250</td>
<td>3</td>
<td>4</td>
<td>Management of Information Systems</td>
<td>The study of business information systems and its management, communication, e-business strategies, emerging technologies, database concepts, and project management. Overview of systems analysis and design. Learn about the competitive and strategic uses of information systems and how they are transforming organizations and their management. Prerequisites: CIS105.</td>
</tr>
<tr>
<td>CIS259</td>
<td>3</td>
<td>4</td>
<td>Visual Basic Programming II</td>
<td>Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines. Prerequisites: CIS159 or permission of instructor.</td>
</tr>
</tbody>
</table>

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
**CIS263AA / 3 CREDITS / 4 PERIODS**  
**Java Programming: Level II**  
Intermediate Java programming. Includes features needed to construct object-oriented programming, multithreading, multimedia, files, streams and data structure. Prerequisites: CIS163AA or permission of the instructor.

**CIS265 / 3 CREDITS / 4 PERIODS**  
**Advanced iOS Application Development**  
Advanced iOS device programming utilizing the Swift/XCode application, and the programming languages Objective-C and/or Swift, utilizing various iOS frameworks. Understand iOS hardware and feature basics. Go through entire design process from concept to final product delivery. Prerequisites: A grade of C or better in CIS150++ and CIS165, or permission of Instructor.

**CIS271DL / 3 CREDITS / 4 PERIODS**  
**Linux Security**  
Implementing in-depth security methods and techniques in a Linux-based network environment. Utilize programs, utilities and configuration techniques to provide user-level, file system, and network security. Gain knowledge in a variety of security cracking techniques and how to guard against them. In all aspects of security, the standard of practicing professional ethics seriously emphasized. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS240DL or Permission of Instructor.

**CIS280 / 3 CREDITS / 4 PERIODS**

**CIS280AA / 1 CREDIT / 2 PERIODS**  
**Current Topics in Computing**  
Critical inquiry of current topics in computing. Application of industry trends to solve problems and/or investigate issues. Prerequisites: None.

**CIS290AA / 1 CREDIT / 6 PERIODS**

**CIS290AB / 2 CREDITS / 12 PERIODS**

**CIS290AC / 3 CREDITS / 18 PERIODS**

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

**CIS296WA / 1 CREDIT / 5 PERIODS**

**CIS296WB / 2 CREDITS / 10 PERIODS**

**CIS296WC / 3 CREDITS / 15 PERIODS**

**Cooperative Education**  
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student’s academic or career goals (student’s present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student’s major or career interest or with permission of the instructor.

**CNT – Cisco Network Technology**

**CNT140AA / 4 CREDITS / 6 PERIODS**  
**Introduction to Networks**  
Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamenats 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.
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<tr>
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<tr>
<td>CNT150AA</td>
<td>4</td>
<td>6</td>
<td>Cisco – Routing and Switching Essentials</td>
<td>Architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. Configuration and troubleshooting routers and switches and resolving common issues with RIPv1, RIPng, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Preparation for Cisco certification examination.</td>
<td>CNT140AA or permission of Instructor.</td>
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<tr>
<td>CNT160AA</td>
<td>4</td>
<td>6</td>
<td>Scaling Networks</td>
<td>Architecture, components, and operations of routers and switches in large and complex networks. Configuring routers and switches for advanced functionality. Configuring and troubleshooting routers and switches and resolving common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Developing the knowledge and skills needed to implement a WLAN in a small-to-medium network. Preparation for Cisco certification examination.</td>
<td>CNT150AA or permission of Instructor.</td>
</tr>
<tr>
<td>CNT170AA</td>
<td>4</td>
<td>6</td>
<td>Cisco – Connecting Networks</td>
<td>Wide Area Network (WAN) technologies and network services required by converged applications in a complex network. Criteria selection of network devices and WAN technologies to meet network requirements. Configuring and troubleshooting network devices, and resolving common issues with data link protocols issues, and developing the knowledge and skills needed to implement Internet Protocol Security (IPSec) and Virtual Private Network (VPN) operations. Preparation for Cisco certification examination.</td>
<td>CNT160AA or permission of Instructor.</td>
</tr>
<tr>
<td>CNT185</td>
<td>4</td>
<td>5</td>
<td>Cisco Network Security</td>
<td>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, firewall and secure router design, installation, configuration and maintenance, AAA (Authentication, Authorization, and Accounting) and VPN (Virtual Private Network) implementation using firewalls and routers. Preparation for the MCNS (Managing Cisco Network Security, security technologies, products and solutions, secure firewall design, installation, configuration and maintenance, Authentication, Authorization, and Accounting (AAA), Failover, and Virtual Private Network (VPN) implementation using firewalls. Prerequisites: CNT170 or permission of Instructor.</td>
<td>CNT170 or permission of Instructor.</td>
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Virtual Private Network (VPN) implementation using firewalls. Prerequisites: CNT170AA or permission of Instructor.

**CNT205 / 4 CREDITS / 6 PERIODS**

Cisco Certified Network Associate Security

Associate-level knowledge and skills required to secure Cisco networks. Development of a security infrastructure, identification of threats and vulnerabilities to networks. Mitigation of security threats. Core security technologies. Installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Competency in the technologies that Cisco uses in its security structure. Prerequisites: CNT170 or CNT170AA or Certified Cisco Networking Associate (CCNA) certification or permission of Instructor.

**CNT206 / 4 CREDITS / 6 PERIODS**

Cisco Certified Network Associate Wireless

Associate-level knowledge and skills required in Cisco wireless networks. Includes comprehensive hands-on labs to design, plan, implement, operate, secure, and troubleshoot wireless networks. Prerequisites: CNT170, or CNT170AA, or permission of instructor. Course Notes: Prepares students to earn Cisco Certified Network Associate Wireless (CCNA Wireless) designation by taking the Implementing Cisco Unified Wireless Networks Essentials (IUWNE) exam.

**CNT220 / 4 CREDITS / 6 PERIODS**

CCNP SWITCH: Implementing Cisco IP Switching

Development of knowledge and skills in building, monitoring, and maintaining switching in converged enterprise networks using advanced and multi-layer switching technologies. Planning, configuring, securing and verifying the implementation of complex enterprise switching solutions. Hands-on learning and practice to reinforce configuration skills. Prerequisites: A grade of C or better in CNT160AB, or CCNA industry certification, or permission of Instructor. Corequisites: CNT200. Course Notes: Preparation for Cisco Certified Network Professional (CCNP) exam.

**CNT231 / 4 CREDITS / 6 PERIODS**

CCNPT Shoot: Maintaining and Troubleshooting CISCO IP Networks

Development of knowledge and skills in monitoring and maintaining complex enterprise routed and switched Internet Protocol (IP) networks. Skills learned include the planning and execution of regular network maintenance, as well as support and troubleshooting using technology-based processes and best practices, in a systematic approach. Extensive labs emphasize hands-on learning and practice to reinforce configuration skills. Note: Preparation for Cisco Certified Network Professional (CCNP) exam. Prerequisites: A grade of C or better in CNT200 and CNT220, or permission of Instructor.

**COM – Communication**

**COM095 / 3 CREDITS / 3 PERIODS**

Basic Oral Communication Skills

Listening, speaking, and related academic performance skills, including note taking. Emphasis on activities designed to improve and synthesize these skills. Prerequisites: None.

**COM100 / 3 CREDITS / 3 PERIODS**

Introduction to Human Communication

Theory and practice of communication skills in public, small group, and interpersonal settings. Includes study of the speech communication process. Prerequisites: None.

**COM110 / 3 CREDITS / 3 PERIODS**

Interpersonal Communication

Theory and practice of communication skills which affect day-to-day interactions with other persons. Topics may include using verbal and nonverbal...
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<tr>
<td>COM207</td>
<td>3</td>
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</table>
| Introduction to Communication Inquiry
Overview of theory and methodological practice in communication with particular attention to scholarly writing skills. Emphasis on development of critical thinking skills through active participation in the research process. Prerequisites: ENG101 or ENG107 or equivalent, or COM100 or equivalent, or permission of instructor. Course Note: Recommended for the communication major.

| COM225      | 3       | 3       |
| Public Speaking
Designed to enhance the student’s ability to present public speeches confidently and competently. Also designed to improve information literacy and critical thinking skills. Prerequisites: ENG101 or ENG107, or equivalent.

| COM230      | 3       | 3       |
| Small Group Communication
Principles and processes of small groups and development of skills for participation and leadership in small group settings. Practice in problem solving, decision making, and information sharing. Prerequisites: None.

| COM250      | 3       | 3       |
| Introduction to Organizational Communication
Introduction to the study of communication in organizations including identification of variables, roles and patterns influencing communication in organizations. Prerequisites: None.

| COM259      | 3       | 3       |
| Communication in Business and Professions
Interpersonal, organizational, intercultural, group, and public communication in business and professional organizations. Emphasis on oral communication and the effective use of technology and new media. Prerequisites: ENG101, or ENG107, or equivalent.

| COM263      | 3       | 3       |
| Elements of Intercultural Communication
Basic concepts, principles, and skills for improving oral communication between persons from different minority, racial, ethnic, and cultural backgrounds. Prerequisites: None

| CPD101      | 2       | 2       |
| Personal Development
Designed to assist students in developing confidence in making personal, social, and educational decisions. Examination and assessment of individual needs, interests, abilities and values to develop and strengthen interpersonal communication, enhance transitional skills and identify realistic life planning goals. Prerequisites: None.

| CPD102AB    | 2       | 2       |
| Career Exploration
Designed to assist students make informed career decisions. Focuses on current occupational trends and outlook. Explores career-related interests, values, needs, preferences, skills, and strengths with the use of various assessments. Aids in the development of individualized educational/career goals and action plan. Prerequisites: None. Course Notes: CPD102AB may be repeated for a total of six (6) credit hours.

| CPD102AF    | 2       | 2       |
| Human Sexuality
Enables students to view gender and sexuality as dimensions of personal identity, and explores intersectionality between multiple identities. Examination of differences between identify

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
expression, behavior, and biological influences, tracing social evolution from masculine-feminine dichotomy to non-binary perspectives. Prerequisites: None.

**CPD102AH / 2 CREDITS / 2 PERIODS**

**Stress Management**
Reviews the sources of stress, the physiological effects and the psychological impact of stress on the individual. Provides strategies to manage and reduce stress. Helps students develop and understand behaviors to create a healthy balance in their lives by studying the biological, psychological, physiological, and social aspects of stress and wellness. Prerequisites: None.

**CPD103BA / 2 CREDITS / 2 PERIODS**

**Women in Transition**
Designed to assist and support women who are experiencing life transitions. Emphasis on assessing self-potential, increasing self-confidence, managing life change, and exploring education/career/life options in terms of the realities of roles for women today. Prerequisites: None.

**CPD104 / 3 CREDITS / 3 PERIODS**

**Career and Personal Development**
An overview of the holistic process of career/life planning through self-awareness and understanding of the world of work. Exploration and application of behavioral, social, and cultural factors leading to college, career, and personal success with emphasis on assessment, applied behavior management, motivation, self-care, and career development. Prerequisites: None.

**CPD115 / 1 CREDIT / 1 PERIOD**

**Creating College Success**
Strategies to create success in college. Methods for selecting and developing effective academic strategies, increasing self-awareness and developing self-management strategies. Elements of college resources and relationships with others explored in support of students’ educational experience. Prerequisites: None. Cross-References: AAA115.

**CPD120 / 3 CREDITS / 3 PERIODS**

**Introduction to Counseling**
Introduction to the field of counseling with a focus on skills and competencies needed as a mental health practitioner. Foundations of counseling including counseling theories, ethical considerations, prevention and intervention topics, and multicultural counseling practices. Prerequisites: None.

**CPD150 / 3 CREDITS / 3 PERIODS**

**Strategies for College Success**
Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning. Prerequisites: None.

**CPD150AA / 1 CREDIT / 1 PERIOD**

**College Orientation & Personal Growth**
Emphasis on increasing student success through college orientation, identification of learning style and the use of time management, goal-setting, and interpersonal communication strategies. Prerequisites: None.

**CPD150AB / 1 CREDIT / 1 PERIOD**

**Study Skills Development**
Emphasis on increasing student success through the use of study strategies including materials organization, note-taking, reading, test-taking, memory, and critical and creative thinking. Prerequisites: None.

**CPD150AC / 1 CREDIT / 1 PERIOD**

**Educational and Career Planning**
Emphasis on increasing student success through educational and career planning. Prerequisites: None.

**CPD160 / 3 CREDITS / 3 PERIODS**

**Introduction to Multiculturalism**
Examination of the multiple cultures and subcultures within the contemporary United States. Personal exploration of awareness and appreciation of
CRE101HS / 3 CREDITS / 3 PERIODS
College Critical Reading and Critical Thinking in Health Sciences
Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in health sciences. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks. Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095, or 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.
Also see Reading (RDG).

CRE – Critical Reading

CRE101 / 3 CREDITS / 3 PERIODS
College Critical Reading and Critical Thinking
Develop and apply critical thinking skills through critically reading varied and challenging materials. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks. Prerequisites: A grade of C or better in (ENG101 or ENG107) and (RDG095, or RDG100, or RDG100LL, or RDG111, or RDG112, or RDG113), or an appropriate district placement, or permission of Instructor.

CRW – Creative Writing

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

CRW160 / 3 CREDITS / 3 PERIODS
Introduction to Writing Poetry
Prewriting (invention and discovery); writing; analyzing and evaluating (in workshop); and revising to practice manipulating various elements of poetry, critique one’s own and the poetry of others, and produce a portfolio of finished, marketable poems. Prerequisites: None. CRW150 recommended but not required.

CRW170 / 3 CREDITS / 3 PERIODS
Introduction to Writing Fiction
Practice in writing fiction through a process of prewriting (invention and discovery), writing, analysis and evaluation (in workshop), and revision; practice in
CRW261 / 3 CREDITS / 3 PERIODS  
Topics in Writing: Poetry  
Analysis, writing, and revision of genre or element within poetry. Prerequisites: A grade of C or better in CRW150 or permission of Instructor.

CRW270 / 3 CREDITS / 3 PERIODS  
Intermediate Fiction Writing  
Writing original short stories; analysis of works of fiction; concentration on revising students' fiction through intensive workshopping. Prerequisites: CRW170.

CRW272 / 3 CREDITS / 3 PERIODS  
Planning and Structuring the Novel  
Focus on planning, structuring, and beginning a novel; prewriting, writing, analysis, evaluation, and revision of novel plans and excerpts. Prerequisites: CRW150 or permission of instructor.

CRW273 / 3 CREDITS / 3 PERIODS  
Writing the Novel  
Provides the beginning novelist with structure, support, and guidance vital to sustained writing; focus on establishing goals and using critique sessions with instructor and peers to draft a novel; open- and topic-focused in-class forums, novel writing, peer and instructor critiques. Prerequisites: CRW272 or permission of Instructor.

CRW274 / 3 CREDITS / 3 PERIODS  
Revising the Novel  
Studio course workshop format. Requires a complete novel finished, in manuscript, ready for revision and polishing. Prerequisites: CRW273 or permission of Instructor.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
# CSC – Computer Science

## CSC100AA / 3 CREDITS / 4 PERIODS

**Introduction to Computer Science (C++)**  
Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: MAT120, or MAT121, or MAT122.

## CSC180AB / 4 CREDITS / 4 PERIODS

**Computer Literacy**  
Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e-mail and text files, and use of Internet browsers. Prerequisites: None.

## CSC181AA / 3 CREDITS / 4 PERIODS

**Applied Problem Solving with Visual Basic**  
Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.

## CSC182AA / 3 CREDITS / 4 PERIODS

**Principles of Programming with C#.NET**  
Introduction to object-oriented program analysis, design, and development using Visual C#.NET. Includes general concepts, data types, expressions, flow control, methods, classes, arrays, event-driven models, Windows applications, and Web applications. Prerequisites: None.

## CSC205AA / 3 CREDITS / 4 PERIODS

**Object Oriented Programming and Data Structures**  
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: CSC110, or permission of Instructor.

## CSC220 / 4 CREDITS / 5 PERIODS

**Programming for Computer Engineering**  
Introduction to procedural programming (C/C++) and hardware description language (VHDL). Prerequisites:
For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
### Course Descriptions

For the most current information regarding course descriptions, log on to [curriculum.maricopa.edu](http://curriculum.maricopa.edu).

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Title</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Course Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN120AG</td>
<td>1</td>
<td>3</td>
<td>World Dance: East Indian Dance</td>
<td>Theory and practice of East Indian dance. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AG may be repeated for credit.</td>
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<tr>
<td>DAN120AH</td>
<td>1</td>
<td>3</td>
<td>World Dance: Native American Dance</td>
<td>Theory and practice of Native American dance. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AH may be repeated for credit.</td>
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<tr>
<td>DAN120AI</td>
<td>1</td>
<td>3</td>
<td>World Dance: European Folk Dance</td>
<td>Theory and practice of European Folk dance. Development of movement quality and performance skills individually or in a group setting. Prerequisites: None. Course Notes: DAN120AI may be repeated for credit.</td>
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<tr>
<td>DAN120AJ</td>
<td>1</td>
<td>3</td>
<td>World Dance: Asian Dance Forms</td>
<td>Theory and practice of Asian Dance Forms. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AJ may be repeated for credit.</td>
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<tr>
<td>DAN120AK</td>
<td>1</td>
<td>3</td>
<td>World Dance: Capoeira</td>
<td>Theory and practice of Capoeira. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AK may be repeated for credit.</td>
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<tr>
<td>DAN120AF</td>
<td>1</td>
<td>3</td>
<td>World Dance: African Dance</td>
<td>Theory and practice of African dance. Development of movement quality and performance skills, individually or in a group setting. May include African, Caribbean or Afro-fusion dance. Prerequisites: None. Course Note: DAN120AA may be repeated for credit.</td>
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<tr>
<td>DAN120AB</td>
<td>1</td>
<td>3</td>
<td>World Dance: Flamenco</td>
<td>Theory and practice of Flamenco. Development of movement quality and performance skills, individually or in a group setting. Prerequisites: None. Course Notes: DAN120AB may be repeated for credit.</td>
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<tr>
<td>DAN120AC</td>
<td>1</td>
<td>3</td>
<td>World Dance: Irish Dance</td>
<td>Theory and practice of Irish Dance. Development of movement quality and performance skills, individually or in a group setting. Prerequisites: None. Course Notes: DAN120AC may be repeated for credit.</td>
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<tr>
<td>DAN120AD</td>
<td>1</td>
<td>3</td>
<td>World Dance: Mexican Folkloric Dance</td>
<td>Theory and practice of Mexican Folkloric dance. Development of movement quality and performance skills, individually with a partner or in a group setting. Prerequisites: None. Course Notes: DAN120AD may be repeated for credit.</td>
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<tr>
<td>DAN120AE</td>
<td>1</td>
<td>3</td>
<td>World Dance: Middle Eastern Dance</td>
<td>Theory and practice of Middle Eastern dance. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AE may be repeated for credit.</td>
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<tr>
<td>DAN120AF</td>
<td>1</td>
<td>3</td>
<td>World Dance: Afro-Brazilian Dance</td>
<td>Theory and practice of Afro-Brazilian dance. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN120AF may be repeated for credit.</td>
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<tr>
<td>DAN129</td>
<td>1</td>
<td>3</td>
<td>Musical Theatre Dance I</td>
<td>Introduction to the theory and practice of musical theatre dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN129 may be repeated for credit.</td>
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<td>Course Code</td>
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<tr>
<td>Ballet I</td>
<td>Introduction to the theory and practice of ballet at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN131 may be repeated for credit.</td>
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<td>DAN132</td>
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<tr>
<td>Modern Dance I</td>
<td>Introduction to the theory and practice of modern dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN132 may be repeated for credit.</td>
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<tr>
<td>DAN132PA</td>
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<tr>
<td>Modern Dance Basic Level</td>
<td>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 for credit. Course is not intended for dance majors.</td>
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<td>DAN133</td>
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<tr>
<td>Jazz Dance I</td>
<td>Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Corequisites: DAN138 for dance majors. Course Notes: DAN133 may be repeated for credit.</td>
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<tr>
<td>DAN134</td>
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<tr>
<td>Ballet II</td>
<td>Theory and practice of ballet at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN131 or permission of Instructor. Course Notes: DAN134 may be repeated for credit.</td>
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<td>DAN135</td>
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<tr>
<td>Modern Dance II</td>
<td>Theory and practice of modern dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN132 or permission of Instructor. Course Notes: DAN135 may be repeated for credit.</td>
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<td>DAN136</td>
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<tr>
<td>Jazz Dance II</td>
<td>Theory and practice of jazz dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN133 or permission of Instructor. Course Notes: DAN136 may be repeated for credit.</td>
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<td>DAN140</td>
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<td>Tap Dance I</td>
<td>An introduction to the theory and practice of tap dance. Prerequisites: None. Course Notes: DAN140 may be repeated for credit.</td>
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<td>DAN141</td>
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<tr>
<td>Dance Workshop</td>
<td>An intensive experience in the process of choreography, performance, and production elements. Prerequisites: None. Course Notes: DAN141 may be repeated for credit.</td>
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<td>DAN150</td>
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<tr>
<td>Dance Performance I</td>
<td>An introduction to the process and practice of dance performance. Prerequisites: None. Course Notes: DAN150 may be repeated for credit.</td>
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<td>DAN155</td>
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<tr>
<td>Dance Performance II</td>
<td>Continued study of the process and practice of dance performance at a level II. Prerequisites: 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.</td>
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</table>

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<table>
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<tr>
<th>Course Code</th>
<th>Credits</th>
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<th>Course Title</th>
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<tbody>
<tr>
<td>DAN164</td>
<td>1</td>
<td>3</td>
<td>Improvisation</td>
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<td>An introduction to and an exploration of basic improvisational dance skills. Prerequisites: None. Course Notes: DAN164 may be repeated for credit.</td>
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<tr>
<td>DAN210</td>
<td>3</td>
<td>3</td>
<td>Dance Production I</td>
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<td>Introduction to the elements of light, sound, and scenery as they relate to the art of dance. Prerequisites: None.</td>
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<tr>
<td>DAN211</td>
<td>3</td>
<td>3</td>
<td>Dance Production II</td>
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<td>Introduction to the theory and practice of makeup and costuming as they relate to dance. Prerequisites: None.</td>
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<tr>
<td>DAN221</td>
<td>3</td>
<td>3</td>
<td>Rhythmic Awareness I</td>
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<td>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.</td>
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<tr>
<td>DAN222</td>
<td>3</td>
<td>3</td>
<td>Rhythmic Awareness II</td>
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<td>Study at the intermediate level of rhythm and how it can be applied in dance and choreography. Emphasis on awareness of rhythm in everyday life as well as creative practice in rhythm and movement. Prerequisites: DAN221 or permission of instructor.</td>
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<tr>
<td>DAN231</td>
<td>1</td>
<td>3</td>
<td>Ballet III</td>
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<td></td>
<td>Theory and practice of ballet at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN134 or permission of Instructor. Course Notes: DAN231 may be repeated for credit.</td>
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<tr>
<td>DAN232</td>
<td>1</td>
<td>3</td>
<td>Modern Dance III</td>
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<td></td>
<td>Theory and practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN135 or permission of Instructor. Course Notes: DAN232 may be repeated for credit.</td>
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<tr>
<td>DAN232AA</td>
<td>2</td>
<td>5</td>
<td>Modern Dance III: Intensive</td>
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<td>Theory and intensive practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN135 or permission of Instructor. Course Note: DAN232AA may be repeated for credit.</td>
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<tr>
<td>DAN233</td>
<td>1</td>
<td>3</td>
<td>Jazz Dance III</td>
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<td>Theory and practice of jazz dance at the beginning intermediate level. Development of movement quality and performance skills. Prerequisites: DAN136 or permission of Instructor. Course Notes: DAN233 may be repeated for credit.</td>
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<tr>
<td>DAN234</td>
<td>1</td>
<td>3</td>
<td>Ballet IV</td>
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<td>Theory and practice of ballet at the intermediate level. Development of movement quality and performance skills. Prerequisites: DAN231 or permission of Instructor. Course Notes: DAN234 may be repeated for credit.</td>
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<tr>
<td>DAN235</td>
<td>1</td>
<td>3</td>
<td>Modern Dance IV</td>
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<td></td>
<td>Theory and practice of modern dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: DAN232 or permission of Instructor. Course Note: DAN235 may be repeated for credit.</td>
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<tr>
<td>DAN235AA</td>
<td>2</td>
<td>5</td>
<td>Modern Dance IV: Intensive</td>
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<td></td>
<td>Theory and intensive practice of modern dance at the advanced intermediate level. Development of</td>
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movement quality and performance skills.
Prerequisites: DAN232AA or permission of Instructor.
Course Notes: DAN236 may be repeated for credit.

DAN236  /  1 CREDIT  /  3 PERIODS

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

DAN264  /  3 CREDITS  /  3 PERIODS

Choreography I
Study of basic dance choreography to include construction of a phrase, structure and form in a composition, and the basic elements of time, space and energy. Prerequisites: None.

DAN265  /  3 CREDITS  /  3 PERIODS

Choreography II
Exploration of choreography at the intermediate level. Experimentation with the various approaches to creative practice as established by 20th and 21st century artists. Prerequisites: DAN264 or permission of Instructor.

DAN280  /  2 CREDITS  /  6 PERIODS

Dance Practicum
A culmination of coursework for the dance major requiring completion of an extended choreographic work from conception to performance. Also requires a final evaluative paper on the successes and challenges encountered throughout the project. Prerequisites: Permission of instructor.

DAN290AA  /  1 CREDIT  /  3 PERIODS
DAN290AB  /  2 CREDITS  /  6 PERIODS
DAN290AC  /  3 CREDITS  /  9 PERIODS

Dance Conservatory I
An intensive course focusing on the theory and practice of dance technique including, but not limited to, ballet, modern dance, modern jazz, pilates, yoga and dance performance at the beginning level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills. Prerequisites: None. Course Notes: DAN290AA may be repeated for a total of three (3) credit hours; DAN290AB may be repeated for a total of six (6) credit hours; DAN290AC may be repeated for a total of nine (9) credit hours.

DAN291AA  /  1 CREDIT  /  3 PERIODS
DAN291AB  /  2 CREDITS  /  6 PERIODS
DAN291AC  /  3 CREDITS  /  9 PERIODS

Dance Conservatory II
An intensive course focusing on the theory and practice of dance technique including, but not limited to, ballet, modern dance, modern jazz, pilates, yoga and dance performance at the intermediate level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills. Prerequisites: (DAN131 and DAN132) or permission of instructor. Course Notes: DAN291AA may be repeated for a total of three (3) credit hours; DAN291AB may be repeated for a total of six (6) credit hours; DAN291AC may be repeated for a total of nine (9) credit hours.

DAN292AA  /  1 CREDIT  /  3 PERIODS
DAN292AB  /  2 CREDITS  /  6 PERIODS
DAN292AC  /  3 CREDITS  /  9 PERIODS

Dance Conservatory III
An intensive course focusing on the theory and practice of dance technique including, but not limited to, ballet, modern dance, modern jazz, pilates, yoga and dance performance at the advanced level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills. Prerequisites: (DAN134 and DAN135) or permission of instructor. Course Notes: DAN292AA may be repeated for a total of three (3) credit hours; DAN292AB may be repeated for a total of six (6) credit hours; DAN292AC may be repeated for a total of nine (9) credit hours.
ECE – Engineering Science

**ECE102 / 2 CREDITS / 4 PERIODS**
- **EGR 1102**
  Engineering Analysis Tools and Techniques
  Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design. Prerequisites: A grade of C or better is required in all Prerequisites. Prerequisites or Corequisites: MAT182, or higher level mathematics course, or permission of Instructor or Department or Division Chair.

**ECE102AA / 2 CREDITS / 4 PERIODS**
- **EGR 1102**
  Engineering Analysis Tools and Techniques
  Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design. Prerequisites: Two years of high school algebra or MAT122 or departmental approval. Corequisites: MAT151 or MAT182 or MAT187.

**ECE103 / 2 CREDITS / 4 PERIODS**
- **EGR 1102**
  Engineering Problem Solving and Design
  Fundamentals of the design process: engineering modeling, communication and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession. Prerequisites: A grade of C or better in ECE102 OR permission of instructor.

**ECE103AB / 2 CREDITS / 4 PERIODS**
- **EGR 1102**
  Engineering Problem Solving and Design
  Fundamentals of the design process: engineering modeling, communication and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession. Prerequisites: (ECE102 or ECE102AA) and (high school physics, or PHY111, or PHY111AA).

**ECE105 / 1 CREDIT / 2 PERIODS**
- **MATLAB Programming**
  Use MATLAB to solve engineering problems. An overview of programming, including matrices, structures, strings, functions, control flow, file management, data analysis, graphing capabilities, and mathematical calculations. Prerequisites: [(MAT150 or MAT151 or MAT152) and MAT182] or MAT187 or higher level mathematics course.

**ECE111 / 3 CREDITS / 5 PERIODS**
- **Bioengineering Systems**
  Introduction to biological concepts and application of engineering to biological and earth systems. Analysis of materials, structures, fluid mechanics, bioelectricity, and dynamics as applied to biological and environmental systems. Prerequisites: None.

**ECE211 / 3 CREDITS / 5 PERIODS**
- **Engineering Mechanics-Statics**
  Mathematical treatment of the basic physical principles of statics. Methods of vector algebra and vector calculus. Prerequisites: A grade of C or better in PHY115 or PHY121 or permission of Instructor or Division or Department Chair. Corequisites: MAT230 or MAT231 or permission of Instructor or Division or Department Chair.

**ECE212 / 3 CREDITS / 5 PERIODS**
- **Engineering Mechanics-Dynamics**
  Kinematics and kinetics of particles, translating and

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rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles. Prerequisites: A grade of C or better required in all Prerequisites. Prerequisites: [ECE211 and (PHY115 or 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.

**ECE214 / 4 CREDITS / 6 PERIODS**

**Engineering Mechanics**

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

**ECE215 / 3 CREDITS / 5 PERIODS**

**Mechanics of Materials**

Designed to provide students with a strong fundamental foundation in the mechanics of solids. Includes the concepts of stress and strain applied to the analysis and design of members subjected to axial and torsional loads and members subjected to shear and bending, applications and transformation of plane stress and plane strain, deformation of beams, and elastic buckling of columns. Prerequisites: A grade of C or better in ECE211 or ECE214 or permission of Instructor or Division or Department Chair.

**ECE216 / 2 CREDITS / 2 PERIODS**

**Computer-Aided Engineering**

Introduction to engineering graphics, including tolerancing and fasteners, as well as creation and use of engineering drawings. Prerequisites: A grade of C or better in (ECE103 or ECE103EP) OR permission of instructor. Co-Requisites: ECE216LL.

**ECE216LL / 1 CREDITS / 2 PERIODS**

**Computer-Aided Engineering Laboratory**

Laboratory experience in support of ECE216. Prerequisites: A grade of C or better in (ECE103 or ECE103EP) OR permission of instructor. Co-Requisites: ECE216.

**ECE294 / 3 CREDITS / 3 PERIODS**

**Special Topics in Engineering**

Exploration and investigation of a focused topic in engineering. Prerequisites: Permission of Instructor, or Department or Division Chair. Course Notes: ECE294 may be repeated for credit.

**ECE294AA / 2 CREDITS / 2 PERIODS**

**Special Topics in Engineering**

Exploration and investigation of a focused topic in engineering. Prerequisites: Permission of Instructor, or Department or Division Chair. Course Notes: ECE294AA may be repeated for credit.

**ECE294AB / 1 CREDIT / 1 PERIOD**

**Special Topics in Engineering**

Exploration and investigation of a focused topic in engineering. Prerequisites: Permission of Instructor, or Department or Division Chair. Course Notes: ECE294AB may be repeated for credit.

**ECE294AC / .50 CREDITS / .50 PERIODS**

**Special Topics in Engineering**

Exploration and investigation of a focused topic in engineering. Prerequisites: Permission of Instructor, or Department or Division Chair. Course Notes: ECE294AC may be repeated for credit.

**ECH – Early Childhood Education**

**ECH128 / 3 CREDITS / 3 PERIODS**

**Early Learning: Play and the Arts**

Examines theory, research and practices relating to
play and the creative arts in early childhood. Considers practical constraints and alternative perspectives. Prerequisites: None.

**ECH253**  /  **3 CREDITS**  /  **3 PERIODS**

National Credential Portfolio Development

Portfolio or resource file development, completion, and presentation. Self-assessment and credentialing planning, professional development, writing, and critical learning included. Prerequisites: Permission of Program Director.

**ECN – Economics**

**ECN211**  /  **3 CREDITS**  /  **3 PERIODS**

Macroeconomic Principles

A descriptive analysis of the structure and functioning of the American economy. Emphasis on basic economic institutions and factors that determine national income and employment levels. Consideration given to the macroeconomic topics of national income, unemployment, inflation and monetary and fiscal policies. Prerequisites: None.

**ECN212**  /  **3 CREDITS**  /  **3 PERIODS**

Microeconomic Principles

Microeconomic analysis including the theory of consumer choice, price determination, resource allocation and income distribution. Includes non-competitive market structures such as monopoly and oligopoly; and the effects of government regulation. Prerequisites: None.

**EDU – Education**

**EDU220**  /  **3 CREDITS**  /  **3 PERIODS**

Introduction to Serving English Language Learners (ELL)

Rationale for and current educational and legal issues for serving English Language Learners (ELL).

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
EED212 / 3 CREDITS / 3 PERIODS
Guidance, Management and the Environment
Principles for guiding young children in early care and education environments. Exploration of guidance, management, and how the environment impacts the lives of young children. Includes observation of classrooms of children ages birth to age eight. Prerequisites: None.

EED215 / 3 CREDITS / 3 PERIODS
Early Learning: Health, Safety, Nutrition and Fitness
Consideration of public health issues and safety procedures within early childhood settings, serving young children birth to age eight. Overview of nutritional needs and issues of physical fitness and well-being in young children. Includes field experiences. Prerequisites: None.

EED220 / 3 CREDITS / 3 PERIODS
Child, Family Community and Culture
Examines family, community and cultural influences on development of the young child (birth to age eight). Considers trends and threats to attachment, relationships and cultural identity. Includes social and emotional experiences and their impact on the developing brain. Prerequisites: None.

EED261 / 1 CREDIT / 1 PERIOD
Early Childhood Preschool Internship
Work experience with preschoolers in early care and education settings. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: EED261 may be repeated for a total of six (6) credit hours.

EDU236 / 3 CREDITS / 3 PERIODS
Classroom Relationships
Analysis of K-12 classroom interactions, classroom environment, and classroom management skills from a teacher’s point of view. Focus on classroom as a multidimensional environment in which principles of classroom design, communication, management, and resources determine effectiveness. Prerequisites: None. EDU221 suggested but not required. Course Note: Requires a 20-hour field experience in a K-12 classroom.

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

EDU291 / 3 CREDITS / 3 PERIODS
Children’s Literature
Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children. Prerequisites: None.

EDU292 / 3 CREDITS / 3 PERIODS
The Art Of Storytelling
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None. Cross-References: HUM292, STO292.

EDU297 / 1 CREDIT / 1 PERIOD
Children’s Literature
Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children. Prerequisites: None.

EDU298 / 1 CREDIT / 1 PERIOD
The Art Of Storytelling
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None. Cross-References: HUM292, STO292.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
### EEE – Electrical Engineering

**EEE120  /  4 CREDITS  /  6 PERIODS**

**Digital Design Fundamentals**
Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, ROMs, PLDs, synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: None. Corequisites: CSC100 or CSC110 or permission of Instructor.

**EEE202  /  5 CREDITS  /  7 PERIODS**

**Circuits and Devices**
Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks. Prerequisites: A grade of C or better in PHY116 or PHY131. Corequisites: MAT276 or permission of Instructor.

**EEE220  /  4 CREDITS  /  5 PERIODS**

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

**EEE230  /  4 CREDITS  /  5 PERIODS**

**Computer Organization and Assembly Language**
Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: [(CSC100 or CSC110) and CSC/EEE120], or permission of instructor.

### ELE – Electronics

**ELE111  /  4 CREDITS  /  6 PERIODS**

**Circuit Analysis I**
Direct current (DC) and Alternating current (AC) electric circuits. Ohm’s law, Kirchoff’s laws, series, parallel and series-parallel circuits, fundamentals of inductance and capacitance, and the transient behavior of circuits containing resistance and capacitance or resistance and inductance. Prerequisites: None. Corequisites: MAT120, or MAT121, or MAT122, or equivalent.

### ELT – Electronics Technology

**ELT100  /  3 CREDITS  /  3 PERIODS**

**Survey of Electronics**
An introduction to the field of electronics for those who may not intend to specialize in electronics. Essentially nonmathematical in nature; includes familiarization with a wide range of electronic components. Application to electronic systems, such as radio transmitters and receivers – both AM (amplitude modulation) and FM (frequency modulation), television transmitters and receivers, logic control, and computers. Application also to automotive electronics. Prerequisites: None.

### EMT – Emergency Medical Technology

**EMT101  /  .5 CREDITS  / .5 PERIODS**

**Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers**
Designed to provide the allied healthcare provider with the knowledge and skills to perform Basic Life Support (BLS) according to current guidelines for emergency cardiovascular care (ECC). Prerequisites: None. Course Notes: EMT101 may be repeated for credit.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
EMT104 / 10 CREDITS / 10 PERIODS
Emergency Medical Technology
Designed as the Emergency Medical Technician (EMT) lecture to prepare students for scope of practice and standard of care with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies and non-emergencies. Prerequisites: Appropriate score on Reading placement test to demonstrate minimum tenth grade level reading, or completion of an Associate’s degree or higher from an accredited institution. Course Notes: Students must meet National Registry of EMT requirements for certification. Additional information available at nremt.org. EMT104 may be repeated for credit.

EMT104LL / 2 CREDITS / 3.5 PERIODS
Emergency Medical Technology Practicum
Designed as the simulated Emergency Medical Technician (EMT) practicum in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies. Provides scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum. Prerequisites: A grade of C or better in EMT104 or permission of Instructor or Corequisites: EMT104. Course Notes: EMT104LL may be repeated for credit. Students must meet National Registry of EMT requirements for certification. Additional information available at nremt.org

ENG – English

ENG101 / 3 CREDITS / 3 PERIODS
First-Year Composition
Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. Prerequisites: Appropriate district placement, or a grade of B or better in ALT100, or a grade of C or better in ENG091 or ESL097 or WAC101 OR (Prerequisites: ALT100. Corequisites: ENG100A+ or ENG101LL or ENG107LL or WAC101).

ENG102 / 3 CREDITS / 3 PERIODS
First-Year Composition
Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total. Prerequisites: Grade of C or better in ENG101.

ENG107 / 3 CREDITS / 3 PERIODS
First-Year Composition for ESL
Equivalent of ENG 101 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on expository writing and

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
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<tr>
<th>Course Code</th>
<th>Credits</th>
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<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>ENG107</td>
<td>3</td>
<td>3</td>
<td>Personal and Exploratory Writing</td>
<td>Using writing to explore one’s self and the world one lives in; emphasis on journal writing as a source and inspiration for public writing. Prerequisites: ENG101 or ENG107 or equivalent.</td>
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<tr>
<td>ENG270</td>
<td>3</td>
<td>3</td>
<td>Workplace Writing</td>
<td>Emphasizes rhetoric and composition with a focus on adapting writing to meet the needs of very specific workplace objectives and audiences. Uses primary and secondary research practices to investigate a variety of workplace discourse communities. Prerequisites: Grade of C or better in ENG102 or ENG108. Course Notes: Develop advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total.</td>
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<tr>
<td>ENH110</td>
<td>3</td>
<td>3</td>
<td>Introduction to Literature</td>
<td>Introduction to international literature through various forms of literary expression; e.g., poetry, drama, essay, biography, autobiography, short story, and novel. Provides a global overview of literature with special emphasis on diverse cultural contributions of women, African Americans, Asian Americans, Hispanic Americans, and Native Americans. Prerequisites: None.</td>
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<tr>
<td>ENH114</td>
<td>3</td>
<td>3</td>
<td>African-American Literature</td>
<td>Survey of major African-American writers from Colonial period through the present; analysis of trends and movements within African-American literary history; analysis of literary types and selected works. Prerequisites: None.</td>
</tr>
</tbody>
</table>
ENH206 / 3 CREDITS / 3 PERIODS
Nature and Environmental Literature
Investigates major themes in nature and environmental writing. Explores relationship between humanity and the environment as expressed through fiction, non-fiction, and poetry. Examines how literature drives attitudes and policies. Prerequisites: None.

ENH221 / 3 CREDITS / 3 PERIODS
Survey of English Literature Before 1800
Emphasizes the social and political backgrounds as well as the form and content of English literature from Anglo-Saxon times to the end of the eighteenth century. Prerequisites: (ENG101 or ENG107) or equivalent.

ENH222 / 3 CREDITS / 3 PERIODS
Survey of English Literature After 1800
Emphasizes the social and political backgrounds as well as the form and content of English literature in the nineteenth and twentieth centuries. Prerequisites: (ENG101 or ENG107) or equivalent.

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

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

ENH251 / 3 CREDITS / 3 PERIODS
Mythology
Deals with the myths and legends of civilizations with the greatest influence upon the development of the literature and culture of the English speaking people, and compares those myths with myths from other cultures. Prerequisites: None.

ENH253 / 3 CREDITS / 3 PERIODS
Contemporary Global Literature and Film
Characteristics of literary and cinematic mediums. Challenges of adapting literature to film. Global examination of historical, religious, socio-economic, political, and colonial/post colonial themes depicted in Western and non-Western literature and film (e.g., Africa, Asia, and Latin America) outside the United States. Use of narrative in each medium and how it translates various global/international perspectives and cultural assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film. Prerequisites: ENG101.

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

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

ENH259 / 3 CREDITS / 3 PERIODS
American Indian Literature
Contemporary American Indian forms of literary expression. Selected oral traditions of American Indians. Trends and movements within American Indian literary history. Prerequisites: None.

ENH260 / 3 CREDITS / 3 PERIODS
Literature of the Southwest
Investigates major themes in Southwestern American literature including the Western myth, minority roles in
the region’s literature, control of nature versus primacy of nature, and growth. Both prose and poetry are examined with an emphasis on contemporary Southwestern writing. Prerequisites: None.

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<th>Course Code</th>
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<tr>
<td>ENH284</td>
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<tr>
<td>19th Century Women Writers</td>
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<td>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.</td>
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<tr>
<td>ENH285</td>
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<tr>
<td>Contemporary Women Writers</td>
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<tr>
<td>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.</td>
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<tr>
<td>ENH291</td>
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<tr>
<td>Children’s Literature</td>
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<tr>
<td>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.</td>
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<tr>
<td>ENH295</td>
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<tr>
<td>Banned Books and Censorship</td>
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**ESL – English as a Second Language**

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<th>Course Code</th>
<th>Credits</th>
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<tr>
<td>ESL001BB</td>
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<tr>
<td>Basic ESL I: Services &amp; Employment</td>
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<tr>
<td>Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to services and employment when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: ESL001BA or permission of instructor.</td>
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<tr>
<td>ESL001BC</td>
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<tr>
<td>Basic ESL I: Shopping &amp; Everyday Life</td>
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<tr>
<td>Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to shopping and everyday life when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: ESL001BB or permission of instructor.</td>
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<td>ESL010</td>
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<tr>
<td>English as a Second Language I: Grammar</td>
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<tr>
<td>First level of English as a Second Language (ESL). Emphasis on basic conversational skills, pronunciation, vocabulary building and grammar. Some reading and sentence level writing. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score.</td>
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<tr>
<td>ESL011</td>
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<tr>
<td>English as a Second Language I: Listening and Speaking</td>
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<tr>
<td>Emphasis on listening and speaking skills involving survival skills. Asking and answering questions related to work, shopping, and personal safety. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score or ESL002.</td>
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<th>Course Code</th>
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<tr>
<td>ESL013</td>
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<tr>
<td>Vocabulary for ESL I</td>
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<tr>
<td>Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities. Prerequisites: Appropriate ESL placement test score or permission of Instructor. Course Notes: ESL013 may be repeated for a maximum of two (2) credits.</td>
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<td>ESL016</td>
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<td>ESL020</td>
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<td>ESL021</td>
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<td>ESL022</td>
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<td>ESL026</td>
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<td>ESL030</td>
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<td>ESL031</td>
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<tr>
<td>ESL032</td>
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For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
ESL036 / 3 CREDITS / 3 PERIODS

Reading English as a Second Language III

Designed for students who are learning English as a second language. Instruction for more advanced vocabulary and reading comprehension skills.
Prerequisites: Appropriate ESL placement test score, or grade of “C” or better in ESL/RDG026, or permission of Instructor.

ESL040 / 3 CREDITS / 3 PERIODS

English as a Second Language IV: Grammar

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

ESL041 / 3 CREDITS / 3 PERIODS

English as a Second Language IV: Listening and Speaking

Emphasis on academic skills. Listening to lectures, notetaking, peer interaction, accessing and using media resources, formal oral presentations.
Prerequisites: Appropriate ESL placement test score or ESL030 or ESL031 or ESL032 or RDG/ESL036. Course Notes: ESL041 may be repeated for a maximum of six (6) credits.

ESL042 / 3 CREDITS / 3 PERIODS

ESL IV-Writing with Oral Practice

Emphasis on paragraph writing and oral recitation of complex sentences and paragraphs. Introduction to the prewriting and writing process for short essays. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL032, or permission of instructor.

ESL046 / 3 CREDITS / 3 PERIODS

Reading English as a Second Language IV

Developed for students of English as a second language. Development of advanced vocabulary, comprehension skills, and culture awareness.
Prerequisites: Appropriate ESL placement test score, or grade of “C” or better in ESL/RDG036, or permission of Instructor.

ESL050 / 3 CREDITS / 3 PERIODS

Review Grammar For ESL

Review of grammatical concepts for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English. May be repeated for a total of six (6) credits.
Prerequisites: Appropriate ESL course placement score, or a grade of “C” or better in ESL040, or permission of instructor.

ESL051 / 3 CREDITS / 3 PERIODS

Pronunciation Improvement for ESL Speakers

Individualized pronunciation practice and drills for English as a Second Language (ESL) speakers.
Prerequisites: Appropriate ESL course placement score, or a grade of C or better in (ESL020 or ESL021 or ESL022 or RDG/ESL026), or permission of instructor. Course Notes: ESL051 may be repeated for a total of six (6) credits.

ESL071 / 3 CREDITS / 3 PERIODS

Advanced Pronunciation and Oral Reading for ESL

Pronunciation practice and review, spelling of English sounds, and oral reading for stress and intonation patterns in English. Prerequisites: A grade of C or better in ESL051, or permission of instructor.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
**ESL087** / 3 CREDITS / 3 PERIODS

**Preparatory Academic Writing II for ESL**
Emphasizes preparation for college-level composition and related reading tasks with a focus on critical writing, reading, and thinking skills and processes. Prerequisites: Appropriate writing placement test score, or grade of C or better in ESL077 or ENGO71, or permission of Department or Division.

**ETL – Excellence/Teaching/Learning**

**ETL220** / 3 CREDITS / 3 PERIODS

**Online Teaching and Learning I**
Application of and experience using an online teaching and learning environment from a student’s perspective to inform the design and support of an online course environment. Application and evaluation of online learning principles and tools for teaching and learning. Identification and development of online facilitation knowledge and skills. Introduction to the best practices in content building, course design and delivery. Prerequisites: Permission of Instructor.

**ETL221** / 3 CREDITS / 3 PERIODS

**Online Teaching and Learning II**
Experience with creating an online or hybrid duplicative course module structure in an online teaching and learning environment using evidence-based practices in course design. Develop learning objectives and module map based on curricular principles. Using instructional design techniques develop and align materials, activities, assignments and assessments to learning objectives. Discuss and develop active learning strategies for presenting content, facilitating discussions, creating assignments and administering assessments in the online environment. Prerequisites: A grade of C or better in ETL220 or permission or Instructor.

**EUT – Electric Utility Technology**

**EUT03** / 2 CREDITS / 2 PERIODS

**Introduction to Rigging**
Basic fundamentals of overhead rigging. Topics covered include elements of safe rigging, rope, knots and knot tying, use of a handline, and use of blocks and tackle. Exploration of variety approaches to basic rigging tasks. Prerequisites: [A grade of B or better in (MAT055, MAT056, and MAT057), or a grade of B or better in MAT09+, or appropriate district placement into MAT122], and a grade of C or better in ENGO91, or ESL097, or appropriate district placement into ENG101.

**EUT04** / 2 CREDITS / 2 PERIODS

**Equipment Safety and Operation**
Operation and maintenance of equipment used in the utility industry. Identification and inspection of the major mechanical operations of equipment, as well as performance of pre-trip inspections on utility equipment. Emphasis on safety operations. Prerequisites: None.

**EUT05** / 1 CREDIT / 1 CREDIT

**Introduction to Pole Climbing**
Proper climbing techniques for new climbers. Inspection and maintenance of pole climbing equipment, the equipment used in pole climbing, and how to maintain it. Prerequisites: None.

**EUT105** / 2 CREDITS / 2 PERIODS

**Line Work I**
Overview of line work industry including its history, technological developments and current practices. Examines industry equipment and tools. Focuses on safety practices and procedures used in utility line work industry. Prerequisites: None.
EUT112 / 4 CREDITS / 4 PERIODS

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

EUT115 / 4 CREDITS / 12 PERIODS

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

EUT210 / 2 CREDITS / 2 PERIODS

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

EUT211 / 4 CREDITS / 4 PERIODS

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

EUT215 / 4 CREDITS / 12 PERIODS

Field Training II
Practice in the installation of electrical lines including transformers, reclosers, and service loops. Teaches rubber gloving, hot sticking techniques, and trenching of underground lines. Practice in the safe set-up and operation of equipment used in the line industry with a focus on the development of entry-level skills as drivers and operators. Includes procedures and practice in pole-top and bucket-truck rescues. Prerequisites: EUT110, EUT112, and EUT115. Corequisites: EUT211.

EXS – Exercise Science

EXS101 / 3 CREDITS / 3 PERIODS

Introduction to Exercise Science
Introductory course that will provide the student with a general overview of the key theories and concepts, professions, and research areas associated with the field of Exercise Science. Educational pathways and career options will also be examined. Prerequisites: None.

EXS112 / 3 CREDITS / 3 PERIODS

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

EXS125 / 3 CREDITS / 3 PERIODS

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

EXS130 / 3 CREDITS / 3 PERIODS

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

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
EXS132 / 3 CREDITS / 3 PERIODS
Cardiovascular Fitness: Physiological Principles and Training Techniques
Covers principles and techniques of aerobic training and the application of these to the development of aerobic training programs. Includes instructional techniques and safety, and stresses injury prevention. Prerequisites: None.

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

EXS210 / 2 CREDITS / 3 PERIODS
Assessment and Program Design: Muscular Fitness
Principles of muscular fitness training including evaluation of movement patterns, selection and interpretation of assessment techniques and evidence-based program design for healthy and special populations. Prerequisites: A grade of C or better in EXS125.

EXS211 / 2 CREDITS / 3 PERIODS
Assessment and Program Design: Flexibility and Balance
Principles of flexibility and balance including evaluation of movement patterns, selection and interpretation of assessment techniques and evidence-based program design for healthy and special populations. Prerequisites: A grade of C or better in EXS125.

EXS213 / 2 CREDITS / 3 PERIODS
Assessment and Program Design: Weight Management and Motivation
Principles of weight management including evidence-based program design and interpretation of assessments for various populations as well as explanation of theories of motivation and behavior modification. Prerequisites: A grade of C or better in EXS125.

EXS214 / 2 CREDITS / 3 PERIODS
Instructional Competency: Flexibility and Mind-Body Exercises
Fundamental methods of instructing and leading fitness activities including flexibility activities. Core competencies identified by professional certification agencies. Prerequisites: A grade of C or better required in all Prerequisites. Prerequisites: (RDG100, or RDG111, or RDG112, or RDG113, or satisfactory score on District reading placement exam) and (EXS125 and HES100) or permission of Instructor.

EXS215 / 3 CREDITS / 3 PERIODS
Fitness for Life
Lifetime health and skill-related components of fitness to achieve total wellness. Topics include health and skill-related components of fitness, guidelines for health and fitness assessment, exercise safety and precautions, nutrition, weight control, cardiovascular risk reduction, psychology of fitness and wellness, consumerism, and overall self-management of personal health and lifestyle habits to achieve the highest potential for well-being. Prerequisites: None.

EXS216 / 2 CREDITS / 3 PERIODS
Instructional Competency: Muscular Strength and Conditioning
Fundamental methods of instructing and leading fitness activities including strength and conditioning activities. Core competencies identified by professional certification agencies. Prerequisites: A grade of C or better required in all Prerequisites. Prerequisites: (RDG100, or RDG111, or RDG112, or RDG113, or satisfactory score on District reading placement exam) and (MAT120 or satisfactory score on District math placement exam) and (EXS125 and HES100) or permission of Instructor.
### EXS218  /  2 CREDITS  /  3 PERIODS

**Instructional Competency: Cardiorespiratory Exercises and Activities**

Fundamental methods of instructing and leading fitness activities including cardiorespiratory exercises and activities. Core competencies identified by professional certification agencies. Prerequisites: A grade of C or better required in all Prerequisites. Prerequisites: (RDG100, or RDG111, or RDG112, or RDG113, or satisfactory score on District reading placement exam) and (MAT120 or satisfactory score on District math placement exam) and (EXS125 and HES100) or permission of Instructor.

### EXS285  /  3 CREDITS  /  3 PERIODS

**Exercise Program Design and Instruction**

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

### EXS230  /  3 CREDITS  /  3 PERIODS

**Introduction to Research Methods in Health and Exercise Science**

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

### EXS239  /  3 CREDITS  /  5.4 PERIODS

**Practical Applications of Personal Training Skills and Techniques Internship**

Work experience in a fitness or health related facility. Eighty (80) hours of designated work per credit. Prerequisites: Completion of nine (9) credits of EXS courses required for the (AAS in Exercise Science and Personal Training, or CCL in Personal Training Specialist, or CCL in Personal Trainer), current CPR card, and permission of Department or Division. Course Notes: CPR certification must be current through the duration of the internship. EXS239 may be repeated for a maximum of six (6) credits.

### EXS290  /  3 CREDITS  /  3 PERIODS

**Introduction to Evidence-Based Practice**

Introduction to best practices in the acquisition, analysis, synthesis, and potential application of research in the discipline of exercise science. Specific emphasis on the application of research-based evidence for applied problem solving in exercise science. Prerequisites: A grade of C or better in [(RDG100, or RDG100LL, or RDG111, or RDG112, or RDG113 or satisfactory District reading placement) and (MAT090, or MAT091, or MAT092, or satisfactory District math placement) and (ENG101 or ENG107)] or permission of Instructor. EXS101 recommended.

### FON – Food and Nutrition

#### FON100  /  3 CREDITS  /  3 PERIODS

**Introductory Nutrition**

Introduction to the science of food and human nutrition. Current sustainable dietary recommendations and applications for maximizing well-being and minimizing risk of chronic disease throughout the life cycle. An overview of the nutrients, emphasizing the importance of energy and fluid balance, and optimal functioning of the digestive system. Understanding factors that influence food intake in different cultures. Methods for evaluating credibility of nutrition claims, a focus on modern food

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Preparation and serving of foods from many cultures. Prerequisites: None.

FON207 / 3 CREDITS / 3 PERIODS
Introduction to Nutrition Services Management
Principles, knowledge, and techniques required for effective nutrition services management. Includes nutrition service issues in relation to health care trends, leadership skills, management theories and styles, food service manager responsibilities, and laws which pertain to nutrition service operations. Prerequisites: MAT092 or equivalent, or satisfactory score on district placement exam.

FON225 / 3 CREDITS / 3 PERIODS
Research in Complementary and Alternative Nutrition Therapies
Introduction to basic research methods and statistics as applied to complementary and alternative nutrition therapies. Emphasis on the analysis and interpretation of health-related research. Prerequisites: MAT092 or equivalent, or satisfactory score on district placement exam.

FON241 / 3 CREDITS / 3 PERIODS
Principles of Human Nutrition
Scientific principles of human nutrition. Emphasis on scientific literacy and the study of nutrients for disease prevention. Includes micro and macro nutrients, human nutrient metabolism and nutrition's role in the health of the human body throughout the life cycle. Addresses nutrition principles for prevention of nutrition-related health conditions. Prerequisites: None.

FON241LL / 1 CREDIT / 3 PERIODS
Principles of Human Nutrition Laboratory
Self-evaluative laboratory experience to complement FON241, Principles of Human Nutrition using anthropometric, biochemical, and dietary analysis. Includes the use of qualitative and quantitative methodology to determine nutritional status and

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evaluate methodological applications. Prerequisites or
Corequisites: A grade of C or better in FON241 and
BIO160.

FON242  /  3 CREDITS  /  3 PERIODS
Introduction to Medical Nutrition Therapy
Introduction to fundamental principles of medical nutrition therapy. Emphasis on development and analysis of diets that fit an individual's personal and therapeutic needs. Includes strategies to promote dietary adherence and the development of educational programs for a diverse adult population. Prerequisites: A grade of C or better in FON241 and BIO160.

FON244AA / 2 CREDITS / 2 PERIODS
Food Service Management Practicum
Classroom preparation and training, under the instruction and supervision of a registered dietitian. Understanding of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Comprehension of nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention. Competencies in the classroom met prior to their application in supervised practice settings during the practicum lab (FON245AB). Prerequisites: A grade of C or better in FON104, FON125, FON142AB, FON207 and FON242. Students must be in compliance with the Maricopa Community Colleges Allied Health Program Student Policies. Permission of Program Director required. Corequisites: FON244AB.

FON244AB / 2.5 CREDITS / 10 PERIODS
Food Service Management Practicum Laboratory
Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge, and skills required in the delivery of nutrition services for food service management including food service operations, quantity food production, procurement, organizing and management principles, facility design and equipment, financial management, food safety and sanitation, menu planning, and marketing. Prerequisites: A grade of C or better in FON125, FON242, HCC145AA, and MAT092 or equivalent, or satisfactory score on district placement exam. Students must be in compliance with the Maricopa Community Colleges Allied Health Program Student Policies. Permission of Program Director required. Corequisite: FON245AB.

FON245AA / 2 CREDITS / 2 PERIODS
Medical Nutrition Therapy Practicum
Classroom preparation and training, under the instruction and supervision of a registered dietitian. Understanding of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Comprehension of nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention. Prerequisites: FON125, FON242, HCE103 or equivalent, and MAT092 or equivalent, or satisfactory score on district placement exam. Corequisites: FON245AB.

FON245AB / 2.5 CREDITS / 10 PERIODS
Medical Nutrition Therapy Practicum Laboratory
Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Perform nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention. Prerequisites: A grade of C or better in FON125, FON242, HCC145AA, and MAT092 or equivalent, or satisfactory score on district placement exam. Students must be in compliance with the Maricopa Community Colleges Allied Health Program Student Policies. Permission of Program Director required. Corequisite: FON245AA.

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**GBS – General Business**

**GBS120** / 3 CREDITS / 3 PERIODS

**Workplace Communication Skills**
Reviews planning, organization, development, and evaluation of written and oral communication in business settings, including informative and persuasive messages. Prerequisites: None.

**GBS131** / 3 CREDITS / 3 PERIODS

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

**GBS132** / 3 CREDITS / 3 PERIODS

**Personal and Family Financial Security**
Principles and practices of personal and family financial planning, includes savings, budgeting, credit, buying versus renting and general principles of consumerism. Prerequisites: None.

**GBS151** / 3 CREDITS / 3 PERIODS

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

**GBS205** / 3 CREDITS / 3 PERIODS

**Legal, Ethical, and Regulatory Issues in Business**
Legal theories, ethical issues and regulatory climate affecting business policies and decisions. Prerequisites: None.
### GER – German

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| GER101      | 4       | 4       | Elementary German I  
Basic grammar, pronunciation and vocabulary of the German language. Includes the study of German culture, practice of listening, speaking, reading and writing skills. Prerequisites: None. |
| GER102      | 4       | 4       | Elementary German II  
Continued study of grammar and vocabulary of the German language along with the study of German culture. Emphasis on German language skills. Prerequisites: GER101, or GER101AA, or permission of Department or Division. Completion of prerequisites within the last three years is required. |

### GLG – Geology

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| GLG101      | 3       | 3       | Introduction to Geology I – Physical Lecture  
Introduction to Earth’s materials, surface and internal geologic processes, plate tectonics and geologic time. Prerequisites: None. |
| GLG102      | 3       | 3       | Introduction to Geology II – Historical 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. |
| GLG103      | 1       | 3       | Introduction to Geology I – Physical Lab  
May accompany GLG101. Includes practical experience in rock and mineral identification, topographic maps, and applied problems in geology. Prerequisites: None. |
| GLG104      | 1       | 3       | Introduction to Geology II – Historical Lab  
May accompany GLG102. The study of minerals, rocks, fossils, geologic maps and structures. Prerequisites: None. |

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
### GLG110 / 3 CREDITS / 3 PERIODS
**Geologic Disasters and the Environment**
Acquaints students with the use and importance of geological studies as they apply to the interactions between people and the earth. Includes geological processes and hazards such as earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources. Prerequisites: None. GLG103 suggested but not required. Course Notes: GLG230AA may be repeated for a total of four (4) credit hours.

### GLG110IN / 4 CREDITS / 6 PERIODS
**Geologic Disasters and the Environment**
Acquaints students with the use and importance of geological studies as they apply to the interactions between people and the Earth. Includes geological processes and hazards such as earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources. Prerequisites: None. Course Notes: Enrollment in both a GLG110IN lecture section and a GLG110IN laboratory section is required.

### GLG111 / 1 CREDIT / 3 PERIODS
**Geological Disasters and the Environment Lab**
Introduction to geological processes and concepts. Application of basic geologic knowledge to evaluate, interpret and propose solutions for a variety of current and past geology-related environmental disasters and hazards. Prerequisites: None. Course Notes: May accompany GLG110.

### GLG229AA / 1 CREDIT / 5 PERIODS
**Field Studies for Educators**
Field trips to selected geological areas in Arizona in order to collect and/or observe geological phenomena. Designed for pre-college teachers. Prerequisites: None.

### GLG230AA / 1 CREDIT / 5 PERIODS
**Field Geology of the Southwest**
Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena.
HCC145AB / 1 CREDIT / 1 PERIOD
Medical Terminology for Health Care Professionals II
Selected medical terms used in health care. Body systems approach to more detailed terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using standard word parts. Selected abbreviations and symbols and term spelling.

HCR – Health Care Related

HCR210 / 3 CREDITS / 3 PERIODS
Clinical Health Care Ethics
An introduction to health care ethics with emphasis on analysis and ethical decision making at both the clinical and health policy levels for health care professionals. Theoretical foundation of bioethics reviewed within historical and contemporary contexts. Prerequisites: ENG102 or ENG108 or permission of Instructor.

HCR220 / 3 CREDITS / 3 PERIODS
Introduction to Nursing and Health Care Systems
Introduction to the social, political, and economic contexts of the nursing profession and health care systems in the United States. Prerequisites: Grade of “C” or better in ENG102 or ENG108.

HCR230 / 3 CREDITS / 3 PERIODS
Culture and Health
Relation between cultures of diverse groups and health/illness. Emphasis on cross-cultural communication, including awareness of own cultural influences and indigenous and complementary healing practices. Prerequisites: None.

HCR240 / 4 CREDITS / 4 PERIODS
Human Pathophysiology
Chemical, biological, biochemical, and psychological processes as a foundation for the understanding of...
alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered. Prerequisites: BIO202 or BIO205, or permission of Instructor.

**HES – Health Science**

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**Healthful Living**

Health and wellness and their application to an optimal life style. Explores current topics of interest such as stress management, nutrition, fitness, and environmental health. Evaluates common risk factors associated with modern lifestyles. Prerequisites: None.

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**Cultural Aspects of Health and Illness**

Examines how culture influences health and illness, health care practices, barriers to health care, interactions with health care professionals, and health disparities in the U.S. Prerequisites: None.

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**Sports Medicine Foundations**

Introduction to sports medicine knowledge, techniques, and careers. Exploration of current trends in athletic injury prevention, management and rehabilitation including wound care, taping, wrapping, bracing, splinting and protective equipment. Prerequisites: None.

**HIS – History**

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**United States History to 1865**

The political, economic, and social development of the United States from the Pre-Columbian period through the end of the Civil War (1865). Prerequisites: None.

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**United States History 1865 to Present**

The political, economic, and social development of the United States from 1865 to the present time. Prerequisites: None.

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**Southwest History**

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

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**Mexican-American History and Culture**

Examination of origins and development of Spanish-American and Mexican-American peoples and their contribution to culture, history and development of United States. Emphasis on Mexican-American War and its impact on educational, social, and economic conditions of the Mexican-Americans of the southwest. Prerequisites: None.
**HIS110 / 3 CREDITS / 3 PERIODS**

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

**HIS111 / 3 CREDITS / 3 PERIODS**

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

**HIS113 / 3 CREDITS / 3 PERIODS**

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

**HIS140 / 3 CREDITS / 3 PERIODS**

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

**HIS203 / 3 CREDITS / 3 PERIODS**

**African-American History to 1865**
History and cultural heritage of African-Americans from their beginnings in Ancient Africa through the experience of chattel slavery in the Americas to their eventual emancipation and participation in the American Civil War. Prerequisites: None.

**HIS204 / 3 CREDITS / 3 PERIODS**

**African-American History 1865 to Present**
Multifaceted experiences of African-American people from the post-Civil War period (1865) to the present, including the collective struggle for freedom, equality, and self-determination in the United States. Prerequisites: None.

**HUM – Humanities**

**HUM107 / 3 CREDITS / 3 PERIODS**

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

**HUM108 / 3 CREDITS / 3 PERIODS**

**Contemporary Humanities**
An exploration of human expression in contemporary arts and sciences. Prerequisites: None.

**HUM201 / 3 CREDITS / 3 PERIODS**

**Humanities: Universal Themes**
Study of worldviews in a variety of historical and contemporary world cultures, including analysis of origin and creation myths, artistic expression, spirituality, and the natural environment. Prerequisites: None.

**HUM205 / 3 CREDITS / 3 PERIODS**

**Introduction to Cinema**
Survey of the history and development of the art of

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motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.

**HUM209 / 3 CREDITS / 3 PERIODS**

**Women and Films**
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.

**HUM213 / 3 CREDITS / 3 PERIODS**

**Hispanic Film**
Analysis of Hispanic film as art form and as social commentary. Prerequisites: None.

**HUM245 / 3 CREDITS / 3 PERIODS**

**Introduction to Holocaust Studies**
Introduction to essential information about the Holocaust. Provides theological, social and political background to establish contexts of anti-Semitism, especially in 19th and 20th centuries, with particular attention to National Socialist ideologies. Ghetto and camp life, including resistance, are explored. Emphasis is on texts of the Holocaust, including historical documents, participant testimonies, fiction, creative non-fiction, and poetry, much of which involves theological and moral debate. Includes analysis of supplementary visual material and some performing arts. Prerequisites: None. CRE101, or equivalent as indicated by appropriate reading placement test score recommended but not required.

**HUM250 / 3 CREDITS / 3 PERIODS**

**Ideas and Values in the Humanities**
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the early civilizations to the Renaissance, including western and non-western cultures. Prerequisites: ENG101.

**HUM251 / 3 CREDITS / 3 PERIODS**

**Ideas and Values in the Humanities**
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the Renaissance to modern period, including Western and Non-Western cultures. Prerequisites: ENG101.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.

**IBS – International Business**

**IBS101 / 3 CREDITS / 3 PERIODS**

**Introduction to International Business**
A basic overview of international business to introduce students to international trade concepts. Focus of the course is on international business environment issues that influence global business practices, decisions and applications. Prerequisites: None.

**IFS – Information Studies**

**IFS201 / 3 CREDITS / 3 PERIODS**

**Information in a Post-Truth World**
Development of critical thinking skills in using information. Exploration of how information can be used as a tool or a weapon. Explanation of the role of information as a consumer and creator. Recognition of the impact of culture and worldview on how information is understood, created, and disseminated. Prerequisites: A grade of “C” or better in ENG101 or ENG107.

**IFS210 / 3 CREDITS / 3 PERIODS**

**Information Without Borders: Research in a Global Society**
A comparative study focused on access to digital information in a global environment. Explore the global culture developing around the Internet and the impact of local, national and global cultures as well as economic and social factors related to the flow of information in a global society. Examine emerging technologies to produce and distribute information across cultures in a global society in an ethical manner. Prerequisites: None. Course Notes: IFS210 may be repeated for a total of six (6) credit hours.
### ITS – Information Technology Security

**ITS100  /  1 CREDIT  /  2 PERIODS**

**Information Security Awareness**

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

**ITS110  /  3 CREDITS  /  4 PERIODS**

**Information Security Fundamentals**

Fundamental concepts of information technology security. Topics include authentication methods, access control, cryptography, Public Key Infrastructure (PKI), network attack and defense methods, hardening of operating systems and network devices, securing remote access and wireless technologies and securing infrastructures and topologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: A grade of C or better in CIS126DL, or CIS126RH, or permission of Program Director. Corequisites: BPC270 or MST150++.

**ITS120  /  3 CREDITS  /  3 PERIODS**

**Legal, Ethical and Regulatory Issues**

Exploration of legal and ethical issues unique to information security. Analysis of professional ethical codes and their application to information security practitioners. Federal and state laws as they relate to information security. Prerequisites: ITS110 or permission of instructor.

**ITS130  /  3 CREDITS  /  4 PERIODS**

**Operating System Security**

In-depth examination of operating system security including Transmission Control Protocol/Data Encryption Standard (DES), Triple Data Encryption Standard (3DES), Advanced Encryption Standard (AES), Pretty Good Privacy (PGP), and other encryption technologies (TCP/IP), Internet Protocol Security (IPSec) and Cisco Internetwork Operating System (IOS), Microsoft Windows, Linux and Mac OS X Security. Procedures to defend networks against attacks and recovery from network disasters. Web server security. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: ITS110 or permission of instructor.

**ITS140  /  3 CREDITS  /  4 PERIODS**

**Network Security**

Examination of techniques used to defend network security. Design and implementation of devices including firewalls and Intrusion Detection Systems (IDSs) and Virtual Private Networks (VPNs). Risk analysis and security policies methodologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: (ITS110 and ITS130) or permission of instructor.

**ITS150  /  3 CREDITS  /  4 PERIODS**

**Building Trusted Networks in the Enterprise**

Design of a trusted network to secure electronic transactions. Techniques to secure electronic transactions to include cryptography, digital signatures, digital certificates and strong authentication. Computer forensics techniques and legislative issues. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: ITS110, ITS130 and ITS140, or permission of instructor.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
JRN – Journalism

JRN201  /  3 CREDITS  /  3 PERIODS

News Writing
Writing and producing news for the media. Associated Press (AP) editing style, writing skills, and organizational structure for news. Prerequisites: A grade of C or better in ENG101 or ENG107.

MAT – Mathematics

MAT051  /  1 CREDIT  /  1 PERIOD

Number Sense I
Primary emphasis on conceptual understanding of whole numbers, integers and mathematical operations. Use systems of measure and Pythagorean Theorem. Focus on mathematical language, connections, patterns and reasoning. Prerequisites: None.

MAT051  /  1 CREDIT  /  1 PERIOD

Number Sense II
Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction addition and subtraction. Solving problems involving decimals and fractions. Focus on mathematical language, connections, patterns and reasoning. Prerequisites: A grade of C or better in MAT051, or an appropriate district placement.

MAT053  /  1 CREDIT  /  1 PERIOD

Multiplicative and Proportional Reasoning
Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction multiplication and division. Solving problems involving decimals, fractions, and percentages. Focus on additive and multiplicative reasoning including proportionality and similarity. Prerequisites: A grade of C or better in each of the following courses: (MAT051 and MAT052), or an appropriate district placement.

MAT054  /  1 CREDIT  /  1 PERIOD

Geometry
Primary emphasis on conceptual understanding of and solving problems involving angles and geometric figures. Use of systems of measure, similarity, proportionality and the Pythagorean theorem. Prerequisites: A grade of “C” or better, or satisfactory Math Diagnostic Assessment Score for MAT051, MAT052 and MAT053. Corequisites: MAT055, or MAT056, or MAT057.

MAT055  /  1 CREDIT  /  1 PERIOD

Algebraic Structures
Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Prerequisites: A grade of C or better in each of the following courses: (MAT051, MAT052, and MAT053), or a grade of C or better for MAT08+, or an appropriate district placement.

MAT056  /  1 CREDIT  /  1 PERIOD

Functions I
Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Prerequisites: A grade of C or better in each of the following courses: (MAT051, MAT052, MAT053, and MAT055), OR a grade of C or better in (MAT055 and MAT08+), OR an appropriate district placement.

MAT057  /  1 CREDIT  /  1 PERIOD

Functions II
Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant
rate of change. Prerequisites: A grade of C or better in each of the following courses: (MAT051, MAT052, MAT053, MAT055, and MAT056), OR a grade of C or better in (MAT055, MAT056, and MAT057). Course Notes: Students may receive credit for only one of the following: MAT120, MAT121, or MAT122.

MAT121  /  3 CREDITS  /  3 PERIODS
Intermediate Algebra
Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions. Prerequisites: An appropriate mathematics placement score, OR a grade of “B” or better for MAT090, or MAT091, OR (an appropriate diagnostic score, or a grade of “B” or better in each of the following courses: MAT055, MAT056, and MAT057). Course Notes: Students may receive credit for only one of the following: MAT120, MAT121, or MAT122.

MAT141  /  4 CREDITS  /  4 PERIODS
College Mathematics
Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include 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 MAT085, or MAT09+, or MAT103 or MAT114 or MAT115. Course Notes: MAT141 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146.

MAT142  /  3 CREDITS  /  3 PERIODS
College Mathematics
Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include 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 MAT085, or MAT09+, or MAT103 or MAT114 or MAT115. Course Notes:
MAT142 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146.

**MAT151 / 4 CREDITS / 4 PERIODS**

**College Algebra/Functions**

Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair. Course Notes: MAT151 students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156, OR MAT187.

**MAT152 / 3 CREDITS / 3 PERIODS**

**College Algebra/Functions**

Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair. Course Notes: MAT152 students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156, OR MAT187.

**MAT182 / 3 CREDITS / 3 PERIODS**

**Plane Trigonometry**

A study of measures of angles, properties of graphs of trigonometric functions, fundamental identities, addition and half-angle formulas, inverse trigonometric functions, solutions of trigonometric equations, complex numbers and properties of triangle solution. May receive credit for only one of the following: MAT182 or MAT187. Prerequisites: Grade of “C” or better in MAT150, or MAT151, or MAT152, or equivalent, or concurrent registration in MAT150, or MAT151, MAT152, or satisfactory score on District placement exam.

**MAT187 / 5 CREDITS / 5 PERIODS**

**Precalculus**

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

**MAT206 / 3 CREDITS / 3 PERIODS**

**Elements of Statistics**

Basic concepts and applications of statistics, including data description, estimation and hypothesis tests. Prerequisites: A grade of C or better in MAT14+, or MAT15+, or MAT187, or equivalent, or satisfactory District placement, or permission of Department or Division Chair.

**MAT212 / 3 CREDITS / 3 PERIODS**

**Brief Calculus**

Introduction to the theory, techniques and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences. Prerequisites: Grade of “C” or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.

**MAT213 / 4 CREDITS / 4 PERIODS**

**Brief Calculus**

Introduction to the theory, techniques, and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences. Prerequisites: Grade of “C” or better in MAT150, or MAT151, or MAT152, or MAT187, or equivalent, or concurrent registration in MAT150, or MAT151, MAT152, or satisfactory score on District placement exam.
For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
functions, partial differentiation, multiple integration and an introduction to vector fields. Prerequisites:
Grade of "C" or better in MAT230 or MAT231. Course Note: Student may receive credit for only one of the following: MAT240 or MAT241.

**MAT277 / 3 CREDITS / 3 PERIODS**

Modern Differential Equations
Introduces differential equations, theoretical and practical solution techniques with applications.
Problem solving using MATLAB. Prerequisites: Grade of C or better in MAT230 or MAT231 or permission of Department or Division.

**MAT282AA / 1 CREDIT / 1 PERIOD**

Service-Learning Experience in Mathematics
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 available according to procedures outlined in catalog.

**MAT290 / 1 CREDIT / 1 PERIOD**

Mathematics Professional Development
Expand subject matter content knowledge and pedagogical content knowledge of the mathematics taught at the community college and beyond through an in-depth study of at least one mathematical concept; e.g. positional numeration system or mathematical properties, and the progression of the selected concept(s) through the courses offered at the community college level and beyond. Use of a variety of instructional strategies including student-centered lesson design, inquiry-based learning, problem-based learning, review of relevant literature and so forth as well as classroom observations during which the concept is taught. Prerequisites: None. Course Notes: MAT290 may be repeated for credit.

**MAT295 / 1 CREDIT / 1 PERIOD**

Special Topics in Mathematics
Conceptual and computational aspects of a special topic in modern mathematics. Prerequisites: Permission of Instructor.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
**MCO – Mass Communications**

**MCO120 / 3 CREDITS / 3 PERIODS**

**Media and Society**

Study of historical and contemporary roles of media and its pervasiveness in society as it relates to culture, politics and education. Prerequisites: ENG101 or ENG107.

**MGT – Management**

**MGT101 / 3 CREDITS / 3 PERIODS**

**Techniques of Supervision**

Overview of the foundations of supervision and how to get things done within an organization through other people. The functions of planning, organizing, staffing, motivating and controlling presented. Prerequisites: None.

**MGT175 / 3 CREDITS / 3 PERIODS**

**Business Organization and Management**

Covers basic principles of managing quality and performance in organizations. Covers management functions: planning, organizing, leading, and controlling. Emphasizes continual improvement, ethics, and social responsibility. Prerequisites: None.

**MGT229 / 3 CREDITS / 3 PERIODS**

**Management and Leadership I**

Covers management concepts and applications for business, industry, and government organizations. Prerequisites: None.

**MGT251 / 3 CREDITS / 3 PERIODS**

**Human Relations in Business**

Analysis of motivation, leadership, communications, and other human factors. Cultural differences that may create conflict and affect morale individually and within organizations. Prerequisites: None. MGT101 or MGT175 or MGT229 suggested, but not required.

**MGT253 / 3 CREDITS / 3 PERIODS**

**Owning and Operating a Small Business**

Starting, organizing, and operating a small business, including location, finance management processes, advertisement and promotion, credit, inventory control and ethics. Prerequisites: None.

**MGT276 / 3 CREDITS / 3 PERIODS**

**Personnel/Human Resources Management**

Human resource planning, staffing, training, compensating, and appraising employees in labor management relationships. Prerequisites: None. MGT101, or MGT175, or MGT229 suggested but not required.

**MHL – Music: History/Literature**

**MHL140 / 3 CREDITS / 3 PERIODS**

**Survey of Music History**

Study of composers, compositions, styles, and periods in music history. Prerequisites: None.

**MHL143 / 3 CREDITS / 3 PERIODS**

**Music in World Cultures**

Non-European musical traditions including the study of music in rituals, musical instruments and the impact of cultures on musical styles. Prerequisites: None.

**MHL145 / 3 CREDITS / 3 PERIODS**

**American Jazz and Popular Music**

The study of cultural and social contributions to the evolution of American jazz and popular music from the mid-1800's to present. Prerequisites: None.
MHL146  /  3 CREDITS  /  3 PERIODS
Survey of Broadway Musicals
Survey of Broadway musicals traced from their origins to the present viewed in their cultural, political, and socio-economic contexts. Emphasis on stylistic periods, composers, lyricists, directors, and choreographers. Prerequisites: None.

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

MHL155  /  3 CREDITS  /  3 PERIODS
Survey of American Music
History of the music of North America from the earliest American Indian music to the present. Introduction to the musical trends, composers, socioeconomic developments and trends, musical forms and styles that influence our modern American musical sense. Prerequisites: None.

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

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

MKT – Marketing

MKT101  /  3 CREDITS  /  3 PERIODS
Introduction to Public Relations
Emphasizes public relations techniques used both within and outside the business organization, including operation of a PR counseling firm. Prerequisites: None

MKT110  /  3 CREDITS  /  3 PERIODS
Marketing and Social Networking
Theory and practice in the use of social media in marketing. Topics may include a history of social media, preparation for social marketing, the power of collective influence, and how to engage with social media. Reviews social mediums, social networks, platforms and other marketing tools used to create a social media campaigns. Prerequisites: None.

MKT111  /  3 CREDITS  /  3 PERIODS
Applied Marketing and Social Networking
Examination of the strategic use of digital and social media marketing platforms and tools for global communication and networking, including analysis of various digital and social media platforms and tools for developing brands, creating professional networks and creating engaging content. Hands-on use of social media platforms and tools to conduct research, develop strategies for creating, integrating, and evaluating social media marketing campaigns, and development of metrics to measure effectiveness. Prerequisites: MKT110.

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

MKT268  /  3 CREDITS  /  3 PERIODS
Merchandising
Surveys structure and operation of retail organizations. Emphasizes merchandising to include price, location, time promotion and quantity. Prerequisites: None. MKT271 suggested but not required.
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<td>MSP205</td>
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**MSP210 / 2 CREDITS / 2 PERIODS**

**Counseling for Funeral Service**
Knowledge for facilitating the mourning process after the death of a loved one and for referring bereaved persons to other sources of professional assistance. Prerequisites: Admission to the Mortuary Science Program.

**MSP211 / 2 CREDITS / 2 PERIODS**

**Compendium for Funeral Service**
Analysis of tasks performed on a more-or-less day-to-day basis by funeral service personnel. Capstone experience based on all previous course work. Prerequisites: Admission to the Mortuary Science Program.

**MST – Microsoft Technology**

**MST141 / 3 CREDITS / 4 PERIODS**

**Enterprise Desktop Support Technician**
Troubleshooting and repairing problems with Microsoft Windows desktop operating systems. Basic knowledge of system architecture and security as needed to provide skills required to support users. Prerequisites: (CIS102 or any CIS102++ course) and CIS105, or permission of Instructor. Prerequisites or Corequisites: MST150, or any MST150++ course, or permission of Instructor. Course Notes: Preparation for Microsoft Certified IT Professional: Enterprise Desktop Support Technician 7 (MCITP) certification examination, 70-685.

**MST150WT / 3 CREDITS / 4 PERIODS**

**Installing and Configuring Microsoft Windows 10**
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.

**MST155 / 3 CREDITS / 4 PERIODS**

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

**MST155DB / 4 CREDITS / 5 PERIODS**

**Configuring Advanced Windows Server Services**
In-depth exploration of how to effectively install and configure Windows Server. Designed to prepare students for the Microsoft Configuring Advanced Windows Server Services examination (70-412). Prerequisites: MST158++ or permission of Instructor. Course Notes: Recommend that prerequisite course completed was for the same version of Windows server as will be taught in this course.

**MST157 / 3 CREDITS / 4 PERIODS**

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

**MST157DB / 4 CREDITS / 5 PERIODS**

**Administering Windows Server**
In-depth exploration of how to effectively manage Windows Server. Designed to prepare students for the Administering Microsoft Windows Server examination (70-411). Prerequisite: MST158++ or permission of Instructor. Course Notes: Recommend that prerequisite course completed was for the same version of Windows server as will be taught in this course.
MST158DB / 4 CREDITS / 5 PERIODS
Installing and Configuring Windows Server
In-depth exploration of how to effectively install and configure Windows Server. Includes roles and features of Server, virtualization with Hyper-V, core network services, Active Directory, and Group Policy. Designed to prepare students for the corresponding Microsoft Windows Server Installation and Configuration examination (70-410). Prerequisites: (MST140 or CNT140++) and MST150++, or permission of Instructor.

MTC – Music: Theory/Composition

MTC101 / 3 CREDITS / 3 PERIODS
Introduction to Music Theory
Designed to develop written and aural skills necessary for advanced study of music theory and skills. Recommended for music majors. Prerequisites: None.

MTC103 / 1 CREDIT / 2 PERIODS
Introduction to Aural Perception
An introduction to the aural skills necessary to hear relationships of intervals, rhythms, melody, and harmony in music. Prerequisites: None. Course Notes: MTC103 may be repeated for a total of two (2) credit hours.

MTC105 / 3 CREDITS / 3 PERIODS
Music Theory I
The chronological study of music theory including: harmony, melody, texture, structure and timbre through analysis, original compositions and basic exercises to demonstrate musical concepts. Prerequisites: MTC100, or MTC101, or permission of instructor. Corequisites: MTC106.

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

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

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

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

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

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

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

**MUC111 / 3 CREDITS / 5 PERIODS**

Digital Audio Workstation I (DAW I)
Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: MUC195, or MUC195AA, or TCM/VPT105, or permission of Instructor.

**MUC112 / 3 CREDITS / 5 PERIODS**

Digital Audio Workstation II (DAW II)
Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: MUC111, and (MUC195 or MUC195AA).

**MUC195 / 3 CREDITS / 5 PERIODS**

Studio Music Recording I
Basic principles of studio sound recording. Emphasis on musical acoustics, operation of recording equipment, studio setups, and multitrack recording. Includes studio session process and musical production decisions. Prerequisites: None.

**MUC196 / 3 CREDITS / 5 PERIODS**

Studio Music Recording II
Emphasis on signal-processing equipment, mixing consoles, and advanced musical recording session procedures, production, and engineering. Includes mix-down and resultant master tape of a musical recording session. Prerequisites: MUC195 or MUC195AA.

**MUC290AA / 1 CREDIT / 1 PERIOD**

Music Business Internship
Music Business Internship work experience. Perform a variety of activities, to fulfill the routines and responsibilities of the department or business where the internship is served. Eighty (80) hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: MUC290AA may be repeated for a total of twelve (12) credit hours.

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For the most current information regarding course descriptions, log on to [curriculum.maricopa.edu](http://curriculum.maricopa.edu).
For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
major scales, transposition, and harmonizations including the I, IV, V7 chords. Prerequisites: None.

**MUP132** / 1 CREDIT / 3 PERIODS

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

**MUP133** / 1 CREDIT / 3 PERIODS

**Class Voice I**
Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and performances in class of solo vocal literature. Prerequisites: None.

**MUP134** / 1 CREDIT / 3 PERIODS

**Class Voice II**
Continuation of Class Voice I including the elements of stage presence and diction. Prerequisites: MUP133 or permission of instructor.

**MUP150** / 1 CREDIT / 3 PERIODS

**Community Chorus**
A mixed chorus with emphasis on college/community participation and preparation of a variety of choral literature for public performance. Auditions may be required. May be repeated for credit. Prerequisites: None.

**MUP153** / 1 CREDIT / 5 PERIODS

**Concert Choir**
A mixed choir designed to emphasize choral techniques and performance of all styles of choral literature. Public performances are scheduled each semester. Prerequisites: None. Course Notes: Auditions may be required. MUP153 may be repeated for credit.

**MUP154AA** / 1 CREDIT/3 PERIODS

**Jazz Vocal Ensemble**
Practical and performing experience in vocal jazz. Includes music from the 1920’s through the present. Prerequisites: Auditions required or permission of instructor. Course Note: May be repeated for up to three (3) credits.

**MUP159** / 1 CREDIT / 3 PERIODS

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

**MUP161** / 1 CREDIT / 3 PERIODS

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

**MUP162** / 1 CREDIT / 5 PERIODS

**Band**
A class designed to emphasize instrumental techniques and the preparation of all styles of band literature. Public performances are scheduled during the year. Auditions may be required. Prerequisites: None. Course Notes: MUP162 may be repeated for credit.

**MUP163** / 1 CREDIT / 3 PERIODS

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

**MUP164** / 2 CREDITS / 3 PERIODS

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

**MUP181** / 1 CREDIT / 2 PERIODS

**Chamber Music Ensembles**
Practical and performance experience in instrumental, vocal, and mixed ensembles. May be repeated for credit. Prerequisites: None.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
### MUP182 / 1 CREDIT / 3 PERIODS
**Chamber Singers**
Practical and performance experience in various styles of vocal music. Open to all students on the basis of auditions. May be repeated for credit. Prerequisites: None.

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

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

### MUP227 / 1 CREDIT / 3 PERIODS
**Class Guitar III**
Additional fingerboard positions. Ensemble techniques and performance. Prerequisites: A grade of C or better in MUP218 or permission of Instructor.

### MUP228 / 1 CREDIT / 3 PERIODS
**Class Guitar IV**
Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques. Prerequisites: MUP227 or permission of instructor.

### MUP231 / 1 CREDIT / 3 PERIODS
**Class Piano III**
Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants. Prerequisites: MUP132 or permission of instructor.

### MUP232 / 1 CREDIT / 3 PERIODS
**Class Piano IV**
Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature. Prerequisites: A grade of C or better in MUP231 or permission of Instructor. Course Notes: MUP232 may be repeated for credit.

### MUP233 / 1 CREDIT / 3 PERIODS
**Class Voice III**
Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications. Prerequisites: MUP134.

### MUP234 / 1 CREDIT / 3 PERIODS
**Class Voice IV**
Emphasis on the preparation of solo vocal literature for the purpose of evaluation and the integration of the music with the drama of the music. Prerequisites: MUP233 or permission of instructor.

### MUP270 / 2 CREDITS / 5 PERIODS
**Musical Theatre Workshop**
Workshop in the study and performance of Musical Theatre repertoire. 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/THP270 may be repeated for credit. Cross-References: THP270.

### NAV – Navajo

### NAV115 / 3 CREDITS / 3 PERIODS
**Beginning Navajo Conversation I**
Beginning conversational Navajo with emphasis on basic listening and speaking skills, including basic pronunciation, vocabulary, sentence structure, and cultural awareness. Prerequisites: None.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
**NCE – Nursing Continuing Education**

**NCE214MI / 0.5 CREDITS / 0.5 PERIODS**

Math and Medications for Intermediate Nursing Students

Focus on basic mathematical concepts to calculate metric-apothecary conversion, dosage problems, intravenous flow rates using the ratio/proportion and dimensional analysis methods. These calculations will focus application to acute care, long-term care, and pediatric specialty areas. Prerequisites: Current student in Nursing program or permission of Department or Division.

**NUR – Nursing Science: Basic**

**NUR104AB / 1 CREDIT / 1 PERIOD**

Structured Nursing Review

Structured nursing tutorial assistance and nursing study skills to help students achieve success in their respective block of nursing courses. Nursing process and critical thinking application skills emphasized. Prerequisites: None. Corequisites: Concurrent enrollment in the Nursing program or permission of Department Chair. Course Notes: Course offered as Credit (P) No credit (Z) basis. NUR104AB may be repeated for a total of eight (8) credits.

**NUR152 / 9 CREDITS / 19 PERIODS**

Nursing Theory and Science I

Introduction of Nurse of the Future competencies as a foundational framework for development of the professional nurse. Basic care concepts and the nursing process are utilized to meet the needs of adult and older adult patients. Prerequisites: Admission into the Nursing Program.

**NUR172 / 9 CREDITS / 16 PERIODS**

Nursing Theory and Science II

Utilization of Nurse of the Future competencies to develop knowledge, skills, and attitudes to provide safe, quality patient care across the wellness-illness continuum in selected medical-surgical and mental health patients. Prerequisites: (BIO202 and NUR152) or permission of Nursing Department Chair.

**NUR252 / 9 CREDITS / 16 PERIODS**

Nursing Theory and Science III

Application of critical thinking strategies 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: (CRE101 and NUR172 and PSY101) or permission of Nursing Department Chair.

**NUR283 / 9 CREDITS / 16 PERIODS**

Nursing Theory and Science IV

Applies Nurse of the Future competencies 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: (BIO205 and NUR252) or permission of Nursing Department Chair.

**OAS – Office Automation Systems**

**OAS108 / 3 CREDITS / 3 PERIODS**

Business English

Comprehensive coverage of correct use of English grammar including spelling, punctuation, capitalization, and number style mechanics in a business context. Prerequisites: None.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
**PAD – Public Administration**

**PAD100 / 3 CREDIT / 3 PERIODS**

21st Century Public Policy and Service
Introduction to topics pertaining to public policy and public service in the 21st century. Includes formation, implementation, and evaluation procedures for public policy, as well as roles and agendas of policy makers and public administrators. Also covers careers in public service/administration and an evaluation of essential skills necessary for a career in public service.
Prerequisites: None.

**PED – Physical Education**

**PED101 / 1 CREDIT / 2 PERIODS**

Physical Activities: Basic
Individual, dual, or team sports activities at the basic level. Prerequisites: None. Course Notes: PED101 may be repeated for credit.

**PED102 / 1 CREDIT / 2 PERIODS**

Physical Activities: Intermediate
Individual, dual, or team sports activities at the intermediate level. Prerequisites: None. Prior experience recommended.

**PED103 / .5 CREDIT / 1 PERIOD**

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

**PED115 / 2 CREDITS / 4 PERIODS**

Lifetime Fitness
Increase personal fitness, strength, and vitality. Current principles of cardiovascular exercise, weight training, flexibility, and balance exercises applicable to lifetime fitness goals. Personalized fitness plans developed and implemented with support of highly trained fitness professionals. Techniques to make sessions more effective and enjoyable. Prerequisites: None. Course Note: PED115 may be repeated for a total of eight (8) credit hours.

**PED117 / 2 CREDITS / 4 PERIODS**

Weight Training for Wellness
Strength training and muscular fitness activity to help develop a lifetime of regular exercise and muscular strength maintenance. Development of full body strength and stability of the body’s core musculature, translating to increased power, balance, and functional movement ability including assessment of current strength and goal-specific program design to increase strength and muscular fitness. Prerequisites: None. Course Notes: PED117 may be repeated for a maximum of eight (8) credits.

**PED120AF / 2 CREDITS / 4 PERIODS**

Special Emphasis Activities: Weight Training
Intensive experience in weight training. May be repeated for a total of 8 credits. Prerequisites: None.

**PED121 / 1 CREDIT / 2 PERIODS**

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

**PED124 / 2 CREDITS / 4 PERIODS**

Strength and Conditioning for Sport Performance: Basic
Introduction to the principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on beginning instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity. Prerequisites: None. Course Notes: PED124 may be repeated for a total of eight (8) credit hours.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
PED125 / 2 CREDITS / 4 PERIODS
Strength and Conditioning for Sport Performance: Intermediate
Principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity. Prerequisites: PED124. Course Notes: PED125 may be repeated for a total of eight (8) credit hours.

PED133 / 2 CREDITS / 4 PERIODS
Olympic Style Weight Lifting
Advanced study of the science, strategy, and techniques of Olympic Style Weightlifting. For the fitness professional who is interested in competing, or is seeking to incorporate advanced strength and conditioning modalities. Addresses current topics, theories and techniques. Prerequisites: None.

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

PED224 / 2 CREDITS / 4 PERIODS
Strength and Conditioning for Sport Performance: Advanced
Principles and training techniques of strength and conditioning for sport performance. Emphasis placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity; and injury prevention. Prerequisites: PED124 and PED125. Course Notes: PED224 may be repeated for a total of eight (8) credit hours.

PED225 / 2 CREDITS / 4 PERIODS
Strength and Conditioning for Sport Performance: Elite
Principles and training techniques of strength and conditioning for sport performance. Emphasis placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity; injury prevention; and assessment techniques. Prerequisites: PED124, PED125, and PED224. Course Notes: PED225 may be repeated for a total of eight (8) credit hours.

PHI– Philosophy

PHI101 / 3 CREDITS / 3 PERIODS
Introduction to Philosophy
General consideration of human nature and the nature of the universe. Knowledge, perception, freedom and determinism, and the existence of God. Prerequisites: None.

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

PHI104 / 3 CREDITS / 3 PERIODS
World Philosophy
Examination of questions such as the meaning of life and death, social justice, appearance and reality, human nature, the identity of the self freedom and destiny, the ethical life, and the relationship of science and religion. Comparative analysis of diverse Eastern and Western viewpoints. Prerequisites: None.

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

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
PHI214 / 3 CREDITS / 3 PERIODS

Business Ethics
Philosophical consideration of moral problems arising in business practice, including corporate responsibility, government regulation, hiring practices, and advertising. Application to both the United States and other countries. Prerequisites: ENG101, or ENG107, or equivalent.

PHI216 / 3 CREDITS / 3 PERIODS

Environmental Ethics
Philosophical consideration of diverse theories and perspectives on the environment, and application of these theories to global moral issues such as animal rights, preservation of wilderness and species, population, world hunger and poverty, and air and water pollution. Prerequisites: None.

PHI218 / 3 CREDITS / 3 PERIODS

Philosophy of Sexuality
Philosophical examination of sexuality in human life. Historical and critical survey of philosophical and theological views. Comparison and evaluation of contemporary theories about the nature of sexual desire and sexual acts. Implications of theories for contemporary moral problems. Prerequisites: ENG101, or ENG107, or permission of Instructor. Student must be 18 years or older.

PHY– Physics

PHY101 / 4 CREDITS / 6 PERIODS

Introduction to Physics
A survey of physics emphasizing applications of physics to modern life. Prerequisites: Grade of "C" or better in MAT090, or MAT091, or MAT092, or MAT093, or equivalent, or satisfactory score on Math Placement exam.

PHY111 / 4 CREDITS / 6 PERIODS

General Physics I
Includes motion, energy, and properties of matter.

PHY112 / 4 CREDITS / 6 PERIODS

General Physics II
Includes electricity, electromagnetism, and modern physics. Prerequisites: PHY105 or PHY111.

PHY121 / 4 CREDITS / 6 PERIODS

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

PHY131 / 4 CREDITS / 6 PERIODS

University Physics II: Electricity and Magnetism
Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Prerequisites: MAT230 or MAT231 or permission of Department or Division and PHY121. Corequisites: MAT241 or permission of Department or Division.

PHY294 / 3 CREDIT / 3 PERIODS

Special Topics in Physics
Conceptual, experimental, and computational aspects of a special topic in physics. Prerequisites: Permission of Department or Division. Course Notes: PHY294 may be repeated for credit.

PHY294AA / 2 CREDIT / 2 PERIODS

Special Topics in Physics
Conceptual, experimental, and computational aspects
of a special topic in physics. Prerequisites: Permission of Department or Division. Course Notes: PHY294AA may be repeated for credit.

**PHY294AB / 1 CREDIT / 1 PERIOD**

**Special Topics in Physics**
Conceptual, experimental, and computational aspects of a special topic in physics. Prerequisites: Permission of Department or Division. Course Notes: PHY294AB may be repeated for credit.

**PHY294AC / 0.5 CREDIT / 0.5 PERIODS**

**Special Topics in Physics**
Conceptual, experimental, and computational aspects of a special topic in physics. Prerequisites: Permission of Department or Division. Course Notes: PHY294AC may be repeated for credit

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**POS – Political Science**

**POS100 / 3 CREDITS / 3 PERIODS**

**Introduction to Political Science**
Introduction to the discipline of political science and its relation to other disciplines with emphasis on the major philosophies and institutions of government. Prerequisites: None.

**POS110 / 3 CREDITS / 3 PERIODS**

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

**POS120 / 3 CREDITS / 3 PERIODS**

**World Politics**
Introduction to the principles and issues relating to the study of international relations. Evaluation of the political, economic, national, and transnational rationale for international interactions. Prerequisites: None.

**POS180 / 3 CREDITS / 3 PERIODS**

**United Nations Studies**
Historical origins, structural makeup, political and operational characteristics, and legal activities of the United Nations. Analysis of the overall institution's ongoing utility, productivity and creativity. Prerequisites: None.

**POS210 / 3 CREDITS / 3 PERIODS**

**Political Ideologies**
Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures. Prerequisites: None.

**POS220 / 3 CREDITS / 3 PERIODS**

**U.S. and Arizona Constitution**
Examination of the United States Constitution and the constitution and government of the state of Arizona. Prerequisites: None.

**POS221 / 1 CREDIT / 1 PERIOD**

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

**POS222 / 2 CREDITS / 2 PERIODS**

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

**POS223 / 3 CREDITS / 3 PERIODS**

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

For the most current information regarding course descriptions, log on to [curriculum.maricopa.edu](http://curriculum.maricopa.edu).
POS285  /  3 CREDITS  /  3 PERIODS

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

PPT – Power Plant Technology

PPT120  /  3 CREDITS  /  3 PERIODS

Energy Industry Fundamentals
Various types of energy and their conversion to usable energy such as electrical power. How generated electrical power is transmitted and distributed to the point of use. Prerequisites: None.

PSY – Psychology

PSY101  /  3 CREDITS  /  3 PERIODS

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

PSY123  /  3 CREDITS  /  3 PERIODS

Psychology of Parenting
The demonstration and application of psychological principles to the development and guidance of children and adolescents. Prerequisites: None.

PSY132  /  3 CREDITS  /  3 PERIODS

Psychology and Culture
Presents current knowledge about human diversity in behavior and culture using examples from a variety of contexts 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.

PSY210  /  3 CREDITS  /  3 PERIODS

Educational Psychology
Scientific research and psychological principles as they apply to teaching and learning. The role of psychology in educational settings, human diversity, theories of learning, intelligence, memory, creativity, assessment, and factors influencing effective instruction and learning. Prerequisites: PSY101 with a grade of “C” or better or permission of instructor.

PSY215  /  3 CREDITS  /  3 PERIODS

Introduction to Sport Psychology
Application of the physiological, behavioral, social, cognitive, and humanistic perspectives in psychology to sport. Includes topics such as optimal performance, correlation, motivation, co-action effect, self-actualization, psycho-behavioral techniques, self-efficacy, and the general health benefits of sport participation. Prerequisites: PSY101 with a grade of “C” or better or permission of instructor.

PSY230  /  3 CREDITS  /  3 PERIODS

Introduction to Statistics
An introduction to basic concepts in descriptive and inferential statistics, with emphasis upon application to psychology. Consideration given to the methods of data collection, sampling techniques, graphing of data, and the statistical evaluation of data collected through experimentation. Required of psychology majors. Prerequisites: (A grade of “C” or better in PSY101 and MAT092 or higher MAT course) or (a grade of “C” or better in PSY101 and eligibility for MAT112 or higher as indicated by appropriate mathematics placement test score) or permission of Instructor.

PSY231  /  1 CREDIT  /  2 PERIODS

Laboratory for Statistics
Applications of inferential and descriptive statistics to
For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
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<tbody>
<tr>
<td><strong>PSY235</strong></td>
<td>3</td>
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<tr>
<td>Psychology of Gender</td>
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<tr>
<td>To assess historical and psychological perspectives on women and men and to evaluate contemporary viewpoints regarding the psychology of women and men. Prerequisites: PSY101 with a grade of “C” or better or permission of instructor.</td>
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<tr>
<td><strong>PSY240</strong></td>
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<tr>
<td>Developmental Psychology</td>
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<td>Human development from conception through adulthood. Includes: physical, cognitive, emotional and social capacities that develop at various ages. Recommended for students majoring in nursing, education, pre-med, and psychology. Prerequisites: PSY101 with a grade of “C” or better or permission of the instructor.</td>
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<tr>
<td><strong>PSY241</strong></td>
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<tr>
<td>Understanding and Changing Behavior</td>
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<tr>
<td>Theory and methods for observing, analyzing, and modifying behavior. Prerequisite or Corequisites: PSY101 or permission of Instructor. Course Note: Taking PSY101 as a prerequisite is recommended.</td>
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<tr>
<td><strong>PSY242</strong></td>
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<tr>
<td>Understanding and Changing Behavior Lab</td>
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<tr>
<td>Advanced course designed to enable students to apply the principles of applied behavior analysis (ABA) in a supervised lab setting. Incorporates case studies and hands-on employment of best practices. Also includes practice with behavioral research design and implementation. Reviews current research in areas including, but not limited to, schedules of reinforcement, functional behavior assessment, stimulus discrimination and generalization. Course should be taken if applying for certification as a Registered Behavior Technician (RBT). Prerequisites: PSY241. Course Notes: Supervision hours by a Board Certified Behavior Analyst required for certification will be available in this course.</td>
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<tr>
<td><strong>PSY266</strong></td>
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<tr>
<td>Abnormal Psychology</td>
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<td>Distinguishes between normal behavior and psychological disorders. Subjects may include stress disorders, problems with anxiety and depression, unusual and abnormal sexual behavior, schizophrenia and addictive behaviors. Causes and treatments of psychological problems and disorders are discussed. Prerequisites: PSY101 with a grade of “C” or better, or permission of instructor.</td>
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<tr>
<td><strong>PSY267</strong></td>
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<tr>
<td>Introduction to Forensic Psychology</td>
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<td>Overview of the practice of psychology in the law, by the law, and of the law. Focuses on the complementary functions and distinctions between psychology and the legal justice system. Topics include, but are not limited to, criminal investigations, risk and level of danger, competency, interrogations, confessions, assessment, eyewitness testimony, child custody, and domestic violence. Prerequisites: PSY101.</td>
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<tr>
<td><strong>PSY270</strong></td>
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<tr>
<td>Personal &amp; Social Adjustment</td>
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<td>Surveys the basic mental health principles as they relate to coping with stress, interpersonal relationships, sex, marriage, and working. Emphasis on learning to become a more competent and effective person. Prerequisites: PSY101 with a grade of “C” or better or permission of the instructor.</td>
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<tr>
<td><strong>PSY290AB</strong></td>
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<tr>
<td>Research Methods</td>
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<td>Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Surveys the literature, procedures, and instruments in representative areas of psychological research. Prerequisites: A grade of “C” or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 or permission of Instructor.</td>
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For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.

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**PSY290AC / 3 CREDITS / 3 PERIODS**

**Research Methods**
Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Surveys the literature, procedures, and instruments in representative areas of psychological research. Prerequisites: A grade of “C” or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 or permission of Instructor.

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**REC – Recreation**

**REC120 / 3 CREDITS / 3 PERIODS**

**Leisure and the Quality of Life**
Overview of the historical, psychological, social, and cultural aspects of play, leisure, and recreation and their role in contemporary society. Nature of play and leisure behavior in human development within different cultures and the contribution play, recreation, and leisure make to the quality of life for individuals in today’s society. Prerequisites: None.

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**RDG – Reading**

**RDG100 / 3 CREDITS / 3 PERIODS**

**Successful College Reading**
Emphasis on reading study strategies for any introductory class in any subject area. Introduction to Learning Management System (LMS), how to successfully read course textbooks and assessments, how to navigate information technology and development of academic vocabulary. Prerequisites: A grade of C or better in RDG081 or appropriate reading placement score 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. Also See Critical Reading (CRE).

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**RDG100LL / 1 CREDIT / 3 PERIODS**

**Disciplinary Literacy Lab**
Supplemental instruction for college-level discipline courses. Focus on developing effective reading processes to address a range of literacy needs including reading, writing, digital, numerical, financial and informational literacies. Prerequisites: None. Corequisites: Any 100-level course in another content area or permission of Instructor.

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**REC150AA / 1 CREDIT / 2 PERIODS**

**Outdoor Living Skills Field Experience**
Practical application of camping and outdoor skills including camping, equipment selection and use, cooking, fire building, camp programs, backpacking, and safety. Prerequisites: None. Course Note: Course may be repeated for a total of four (4) credits.

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**REC150AB / 3 CREDITS / 3 PERIODS**

**Outdoor Adventure Skills**
Camping and outdoor skills including types of camping, equipment selection and use, cooking and fire building, camp programs, backpacking, and safety. Prerequisites: None.

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**REC250 / 3 CREDITS / 3 PERIODS**

**Recreation Leadership**
An examination of roles and methods of leadership in leisure services settings. Overview of theories and models of leadership, group dynamics, participant motivation, communication, and face-to-face leadership. Exploration of leadership contexts, including coaching and officiating sports, leading community groups and volunteers, working with persons in various life stages and with varying abilities, and leading different recreation activity areas. Prerequisites: None.
REL – Religious Studies

REL100  /  3 CREDITS  /  3 PERIODS
World Religions
The development of various religions from the prehistoric to modern times. Political, economic, social and geographic relationships among world religions. Consideration of both Eastern and Western religions. Prerequisites: None.

REL203  /  3 CREDITS  /  3 PERIODS
American Indian Religions
An examination of the historical and cultural background of diverse lifeways and worldviews belonging to the peoples indigenous to the North American continent over time, including a study of modern day American Indian beliefs and practices. Prerequisites: ENG101 or ENG107 or equivalent.

REL205  /  3 CREDITS  /  3 PERIODS
Religion and the Modern World
Introduction to the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world. Prerequisites: ENG101, or ENG107, or equivalent.

REL206  /  3 CREDITS  /  3 PERIODS
Religion in America
Introduction of the rich tapestry of religious traditions and movements that have helped to shape the United States of America. Investigate how religion has impacted American culture and institutions, and how the United States has in turn transformed long-standing religious traditions. Prerequisites: None.

REL207  /  3 CREDITS  /  3 PERIODS
Ritual, Symbol, and Myth
Introduction to the academic study of religion through the study of myths, symbols, and rituals. Includes methods and theories used by scholars to study the complex subject of religion. Attention to literate and nonliterate cultures. Prerequisites: Grade of C or better in ENG101, or ENG107, or permission of Department or Division.

REL270  /  3 CREDITS  /  3 PERIODS
Introduction to Christianity
The nature and content of the Christian tradition developed over time, with overview of the New Testament, major historical trends and figures, major Christian ideas and practices, and survey of denominations. Prerequisites: None.

REL290  /  3 CREDITS  /  3 PERIODS
Women and World Religion
Focus on the role of women in several organized religions and/or religious sects. Study of myth and symbols as they are used to establish, maintain, and enforce sex-roles within specific cultural contexts around the world. Prerequisites: None.

SBS – Small Business Management

SBS213  /  1 CREDITS  /  1 PERIODS
Hiring and Managing Employees
Methods and techniques for managing employees in a small business. Includes supervisor’s role, leadership styles, interpersonal communications, staff planning, employee work styles, techniques for handling problem employees, and employee motivation. Focuses on real life situations to enable the business owner to gain high performance from their employee team. Includes segment on hiring, new employee orientation, training, benefits, and developing future staffing needs assessment. Prerequisites: None.

SBS214  /  1 CREDITS  /  1 PERIODS
Small Business Customer Relations
Developing and improving customer relations for the small business. Planning and delivering quality customer service. Includes topics on attitude of employees, customer perceptions and motivations, handling customer dissatisfaction, and developing customer, supplier, vendor, and distributor loyalty. Prerequisites: None.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
Internet Marketing for Small Business
Focuses on "e-Commerce"—doing business on the Internet and planning a website. Topics include: how the Internet can help growth and success of business; examples of successful marketing on the Internet; availability of Internet services; necessary hardware and software for marketing on the Internet; determining products/services appropriate for Internet marketing; budget constraints and on-going operations of the Internet site. Prerequisites: None.

Sociology of Families and Relationships
Systemic analysis of socio-cultural and historical origins of modern families in the U.S. and their importance, major challenges and changing trends. Explores being single, dating and attraction, love, cohabitation and marriage, family planning and parenthood, conflict and crisis within the family, and divorce. Prerequisites: None.

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

Gender and Society
A sociological analysis of the way culture shapes and defines the positions and roles of both men and women in society. Major emphasis on social conditions which may lead to a broadening of gender roles and a reduction of gender role stereotypes and the implications of these changes. Prerequisites: None.
### SPA – Spanish

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
<th>Description</th>
</tr>
</thead>
</table>
| **SPA101**  | 4       | 4       | Elementary Spanish I  
  Basic grammar, pronunciation and vocabulary of the Spanish language. Includes the study of the Spanish-speaking cultures. Practice of listening, speaking, reading, and writing skills. Prerequisites: None. |
| **SPA102**  | 4       | 4       | Elementary Spanish II  
  Continued study of grammar and vocabulary of the Spanish language and study of the Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills. Prerequisites: (A grade of "C" or better in SPA101 or SPA101AA), or permission of Department or Division. Completion of prerequisites within the last three years is required. |
| **SPA109**  | 3       | 3       | Law Enforcement Spanish I  
  Conversational and written Spanish for law enforcement personnel. Emphasis on basic sentence structure, pronunciation and vocabulary used in common job-related situations. Prerequisites: None. |
| **SPA115**  | 3       | 3       | Beginning Spanish Conversation I  
  Conversational Spanish. Basic sentence structure, pronunciation and vocabulary necessary to develop speaking ability in Spanish. Designed for students seeking speaking and listening abilities with little emphasis on grammar. Prerequisites: None. |
| **SPA116**  | 3       | 3       | Beginning Spanish Conversation II  
  Continued study of basic pronunciation, vocabulary, sentence structures, and a cultural awareness necessary to develop speaking and listening skills in Spanish. Prerequisites: SPA115, or SPA115AA, or permission of Department or Division. Completion of prerequisites within the last three years is required. |
| **SPA117**  | 3       | 3       | Health Care Spanish I  
  Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings. Prerequisites: None. |
| **SPA201**  | 4       | 4       | Intermediate Spanish I  
  Continued study of essential Spanish grammar and Spanish-speaking cultures. Continued practice and development of reading, writing, and speaking skills in Spanish. Emphasis on fluency and accuracy in spoken language. |

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
Spanish. Prerequisites: A grade of “C” or better in SPA102, or SPA102AA, or SPA111, or permission of Department or Division. Completion of prerequisites within the last three years is required.

SPA202 / 4 CREDITS / 4 PERIODS

Intermediate Spanish II
Review of grammar, continued development of Spanish language skills with continued study of the Spanish-speaking cultures. Prerequisites: A grade of “C” or better in SPA201, or permission of Department or Division. Completion of prerequisites within the last three years is required.

SUS – Sustainability/Natural Sciences

SUS110 / 3 CREDITS / 3 PERIODS

Sustainable World
Introduction to the field of sustainability and exploration of the interaction between human and natural global systems. Framework for analyzing and investigating the global challenges such as land use change, competition for water and other natural resources, and renewable energy concerns and crises. Prerequisites: None.

SPH – Spanish Humanities

SPH245 / 3 CREDITS / 3 PERIODS

Hispanic Heritage in the Southwest
A survey of Hispanic heritage in the Southwest. Cultural and social institutions and their contribution to the development of the region and its heritage. Prerequisites: None

SSH – Sustainability/Social Sciences and Humanities

SSH111 / 3 CREDITS / 3 PERIODS

Sustainable Cities
Introduction to the field of sustainability and exploration of the practices leading to the development of sustainable cities. Explores the concept of sustainable development of cities within local, regional, and global contexts. Prerequisites: None.

STO – Storytelling

STO292 / 3 CREDITS / 3 PERIODS

The Art of Storytelling
Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom. Prerequisites: None. Cross-References: EDU292, HUM292.

THE – Theatre

THE111 / 3 CREDITS / 3 PERIODS

Introduction to Theatre
A survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism. Prerequisites: None.

THE118 / 3 CREDITS / 3 PERIODS

Playwriting
Practice and study of theories and techniques of writing for the stage; creating characters, dialogue, and plot for monodramas, scenes, and plays. Prerequisites: None.

THE220 / 3 CREDITS / 3 PERIODS

Modern Drama
Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright’s structure and style. Prerequisites: ENG101 or ENG107 or equivalent.

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
### THE260 / 3 CREDITS / 3 PERIODS
**Film Analysis**
Understanding and enjoyment of film and its correlation to literature, art, music, and other disciplines. Prerequisites: None.

### THF – Theatre and Film

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>THF115  / 3 CREDITS / 4 PERIODS</td>
<td>Makeup for Stage and Screen</td>
<td>Purposes, materials, and techniques of makeup for stage and screen. Prerequisites: None.</td>
</tr>
<tr>
<td>THF205  / 3 CREDITS / 3 PERIODS</td>
<td>Introduction to Cinema</td>
<td>Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.</td>
</tr>
<tr>
<td>THF209  / 3 CREDITS / 4 PERIODS</td>
<td>Acting for the Camera</td>
<td>Special technical aspects of acting before a camera. Prerequisites: THP112 or permission of Instructor.</td>
</tr>
<tr>
<td>THF210  / 3 CREDITS / 3 PERIODS</td>
<td>Contemporary Cinema</td>
<td>A study of contemporary films, directors and critics with emphasis on evaluating film as an art form. Prerequisites: None.</td>
</tr>
<tr>
<td>THF219  / 3 CREDITS / 4 PERIODS</td>
<td>Advanced Acting for the Camera</td>
<td>Focuses on special technical aspects of advanced acting before a camera. Prerequisites: THF209 or permission of Instructor.</td>
</tr>
</tbody>
</table>

### THF260  / 3 CREDITS  / 3 PERIODS
**Film Analysis**
Understanding and enjoyment of film and its correlation to literature, art, music, and other disciplines. Prerequisites: None.

### THP – Theatre Performance/Production

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>THP112  / 3 CREDITS  / 4 PERIODS</td>
<td>Acting I</td>
<td>Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization. Prerequisites: None.</td>
</tr>
<tr>
<td>THP201AA  / 1 CREDIT / 2 PERIODS</td>
<td>Theatre Production I</td>
<td>Designed to give college credit to the cast and technical production crews of college theatre productions. May be repeated for up to a maximum of four (4) credits. Prerequisites: None.</td>
</tr>
<tr>
<td>THP201AB  / 2 CREDITS  / 4 PERIODS</td>
<td>Theatre Production II</td>
<td>Designed to give college credit to the cast and technical production crews of college theatre productions. May be repeated for up to a maximum of four (4) credits. Prerequisites: None.</td>
</tr>
<tr>
<td>THP212  / 3 CREDITS  / 4 PERIODS</td>
<td>Acting II</td>
<td>Fundamental techniques of acting through script analysis, rehearsal, and performance. Prerequisites: THP112 or departmental approval.</td>
</tr>
<tr>
<td>THP213  / 4 CREDITS / 6 PERIODS</td>
<td>Introduction to Technical Theatre</td>
<td>Procedures of technical theatre production and demonstration. Topics include design and construction of scenery; lighting and properties. Prerequisites: None.</td>
</tr>
</tbody>
</table>
| THP217  / 3 CREDITS / 4 PERIODS | Introduction to Design Scenography | The role of the theatre designer in creating scenic, lighting, costume, sound, and multimedia effects for stage productions. Elements of the design process and

For the most current information regarding course descriptions, log on to curriculum.maricopa.edu.
communication of dramatic themes and visions to the audience. Prerequisites: None.

**THP250 / 3 CREDITS / 4 PERIODS**

**Stage Properties**
Introduction to stage properties including design, construction and maintenance features. Provides skills in property design and construction using an assortment of standard materials. Prerequisites: None.

**THP267 / 3 CREDITS / 4 PERIODS**

**Painting Techniques for Film, TV and Theatre**
Theory and skills in scenic artistry. Techniques of painting two-dimensional and three-dimensional scenery, tools, and the use of color. Prerequisites: THP213.

**THP270 / 2 CREDITS / 5 PERIODS**

**Musical Theatre Workshop**
Workshop in the study and performance of Musical Theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance. Prerequisites: None. Course Notes: MUP/THP270 may be repeated for credit. Cross-References: MUP270.

**UAS – Unmanned Aircraft Systems**

**UAS101 / 3 CREDITS / 3 PERIODS**

**Introduction to Unmanned Aircraft Systems Operation**
Introduction to Unmanned Aircraft Systems (UAS) history, flight, avionics, sensors, communication systems, and an introduction to data analysis and applications, such as first responders, Geographic Information Systems, and Precision Agriculture. Prerequisites: None.

**UAS107 / 3 CREDITS / 3 PERIODS**

**Unmanned Aircraft Systems Operator Certification**
Develop knowledge and skills needed to manage and operate small Unmanned Aircraft Systems (sUAS). Includes Federal Aviation Regulations, radio communications, weather, airspace and airport authorization criteria, loading and performance, aeronautical decision making, sUAS flight operations, and maintenance. Operational skills acquired through both classroom and hands-on flight activities. Prerequisites: None. Course Notes: Students must complete the appropriate flight lessons to satisfactorily complete the course.

**WAC – Writing Across Curriculum**

**WAC101 / 3 CREDITS / 3 PERIODS**

**Writing Across the Curriculum**
Expressive, expository, and academic writing experiences to develop students’ rhetoric and composition foundation. Experience planning and drafting multi-paragraph essays through a writing process with emphasis on essay and paragraph structure and the elements of sentence structure. Participation in writing workshop, group work, reading to support writing tasks, and writing from sources. A minimum of three multi-paragraph essays and a final reflection paper. Prerequisites: None.

**WED – Wellness Education**

**WED151 / 3 CREDITS / 3 PERIODS**

**Introduction to Alternative Medicine**
Definition of health; exploration of mind-body-spirit connection in health; various therapeutic modalities; identification of strengths and limitations of alternative therapies. Also includes development of ability to critically review written material in the alternative therapy area. Prerequisites: None.
## WED165 / 2 CREDITS / 2 PERIODS
**Overview of Massage Therapy**
History of massage; overview of bodywork systems; benefits and indications of massage; legal requirements for practice in Arizona. Prerequisites: None.

## WED209 / 3 CREDITS / 3 PERIODS
**Women and Films**
Analysis of images of women in films from both historical and contemporary perspectives. Prerequisites: None.

*Cross reference with HUM209*

## WST200 / 3 CREDITS / 3 PERIODS
**Essential Feminist Writing**
Literary tracing of feminism from 18th century to present. Explores major issues related to women in the 20th century. Prerequisites: A grade of “C” or better in ENG101 or permission of instructor.

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

## WST285 / 3 CREDITS / 3 PERIODS
**Contemporary Women Writers**
Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women’s lives regardless of age, creed, or ethnic background. Prerequisites: None.

## Info regarding special courses not listed in the college catalog

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### Cooperative Education (courses numbered 296)
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Permission of Program Director or instructor. Corequisites: Must be concurrently enrolled in at least one class related to job/co-op subject area; must maintain an enrollment ratio of two (2) hours of credit in other courses for every one (1) hour of Cooperative Education credit (excluding radio and television); a maximum of sixteen (16) hours of Cooperative Education credit is allowable in a college program.

### Special Projects (courses numbered 298)
Organized and tailored around the interests and needs of the individual student. Structured to provide an
atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. 

Prerequisites: Permission of Program Director or instructor.

Shared Unique Number (SUN) System

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

Additional information about SUN System can be found at www.aztransfer.com/sun/
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

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Current term expires December 31, 2022

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Member District 5  
Current term expires December 31, 2020

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Current term expires December 31, 2020

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Current term expires December 31, 2020

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Current term expires December 31, 2020

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Member District 4  
Current term expires December 31, 2022

MS. ALEJANDRA MAYA  
Student Member  
Current term expires June 30, 2020

District Administration

480-731-8000

DR. STEVEN GONZALES  
Interim Chancellor

DARCY RENFRO  
Chief Workforce & Economic Development Officer

DR. KARLA FISHER  
Provost

BRIAN SPICKER  
President and Chief Executive Officer  
Maricopa Community Colleges Foundation

DR. JAMES MOORE  
Interim Chief Operating Officer

LESLIE COOPER  
General Counsel

GEORGETTA KELLY  
Chief Human Resources Officer

DR. MARK KOAN  
Chief Information Officer (Interim)
Chandler-Gilbert Community College  
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• M.Ed., Arizona State University

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Associate Vice President, Business Operations  
• B.A., George Mason University  
• M.A., University of Phoenix  
• MAOM, PHR, SHRM-CP  
• Ed.D., Grand Canyon University

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• B.S., University of Puerto Rico-Mayaguez Campus  
• M.S., Arizona State University

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• M.S., Duquesne University

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Faculty

ADAMS, RYAN  
Counseling  
• B.S., University of Illinois  
• M.Ed., Ph.D., Arizona State University

ADAMSON, SCOTT  
Mathematics  
• A.A., Itasca Community College  
• B.S., M.Ed., Northern Arizona University  
• Ph.D., Arizona State University

ANDERSON, JILL  
Clinical Nursing  
• 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

BACKHAUS, DONNA  
Mortuary Science  
• A.A.S., Mesa Community College  
• B.S., University of Phoenix  
• M.A., University of Phoenix
BADER, SHERRICK
Emergency Medical Technology
- G.S., Mesa Community College
- Certified Emergency Paramedic, Mesa Community College

BAKER, PATRICIA
Computer Science & Computer Information Systems
- B.S., University of Michigan
- M.C.S., Arizona State University

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Counseling
- A.A., Arizona Western College
- B.A., M.Ed., University of Arizona
- Ed.D., Arizona State University

BATES, BRADFORD J.
Chemistry
- B.S., M.Ed., Arizona State University

BEYER, ALISA
Psychology
- B.A., University of Arizona
- M.A., Ph.D., University of Kansas

BILKA, MONIKA
History
- B.S., University of Oregon
- M.S., University of Montana
- Ph.D., Arizona State University

BISHOP, SHANNON
Mathematics
- B.A., M.A., Arizona State University

BOURKE, KATRINA
Massage Therapy
- A.A.S., Royal Melbourne Institute of Technology
- A.A.S., Mesa Community College
- B.S., M.Ed., Northern Arizona University
- M.S., California University of Pennsylvania

BOWLES, JOACHIM
Chemistry
- B.S., Oregon State
- M.S., University of Oregon

BRAATEN, ANTHONY
Communication
- B.S., M.Ed., Northern Arizona University

BURGOYNE, MARY BETH
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- B.A., Arizona State University
- M.L.S., University of Arizona

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- B.S., M.Ed., Ph.D., University of North Dakota

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CESCHIAT, MICHAEL
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- B.F.A., Columbus College of Art and Design
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DEAN, JOHN  
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• B.A., Herbert H. Lehman College of the City  
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FIELDS, GREGG  
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• A.B., Brown University  
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• D.V.M., Cornell University

GAUMONT, SUSAN A.  
Nutrition  
• B.S., M.S., Arizona State University; RD

GERAGHTY, DIANA  
Nursing  
• B.S., University of Virginia  
• M.A., Grand Canyon University
GODDARD, THEODORE
Music
  • B.M., M.A., Arizona State University

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Accounting/Business
  • B.B.A., University of New Mexico
  • M.B.A., Regis University
  • CPA

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

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  • M.A., Jacksonville University
  • MCSE, MCT, MCSD

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  • B.S., Elmhurst College
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  • M.A., University of Arizona

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  • B.B.A., Texas Christian University
  • M.N.S., Arizona State University

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  • A.A.S., Eastern New Mexico University

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

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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
A 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
Also known as extracurricular. Activities, clubs, or organizations students may participate in above and beyond their academic courses.

Commencement
Also known as graduation. A ceremony during which colleges award certificates of completion and degrees to graduating students.

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 at the same time 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).

Course Placement Testing
Evaluation of students' present skills in English, reading, and mathematics using course placement tests. Scores are used as a guide for proper course placement so students can choose courses that match their skills. Such matches lead to greater success.

Course Prefix
A three-letter code that identifies the subject area of a course (e.g., ENG in ENG101 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).

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 is included in the Class Schedule.

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.

**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 that Pass/Fail grades will transfer to another college or university.

**Placement Test**
See Course Placement Testing.

**Prerequisite**
Specified conditions, requirements, or classes that must be completed before enrolling in a class. For example, ENG102 has a prerequisite of ENG101.

**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 hour unless approved by 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. CGCC students have been performing meaningful service at community agencies to learn experientially during one-day events, class projects, and individual placements for over 10 years.
Syllabus
One or more pages of course requirements that instructors give to students on the first day of class. The syllabus may include detailed information about a course, such as an instructor's grading system, attendance policies, and testing and assignment dates.

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.
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Chandler, AZ 85225-2499
480-732-7000

Estrella Mountain Community College
3000 North Dysart Road
Avondale, AZ 85323-1000
(623) 935-8000

Gateway Community College
108 North 40th Street
Phoenix, AZ 85034-1795
(602) 286-8000

Glendale Community College
6000 West Olive Avenue
Glendale, AZ 85302-3090
(623) 845-3000

Mesa Community College
1833 West Southern Avenue
Mesa, AZ 85202-4868
480-461-7000

Paradise Valley Community College
18401 North 32nd Street
Phoenix, AZ 85032-1200
(602) 787-6500

Phoenix College
1202 West Thomas Road
Phoenix, AZ 85013-4234
(602) 285-7800

Rio Salado College
2323 West 14th Street
Tempe, AZ 85281-6950
480-517-8000

Scottsdale Community College
9000 East Chaparral Road
Scottsdale, AZ 85256-2626
480-423-6000

South Mountain Community College
7050 South 24th Street
Phoenix, AZ 85042-5806
(602) 243-8000

District Support Services Center
2411 West 14th Street
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CONTACT
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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.