



**CHANDLER-GILBERT  
COMMUNITY COLLEGE**

A MARICOPA COMMUNITY COLLEGE

## **CATALOG & STUDENT HANDBOOK 2017-2018 EDITION**



**MARICOPA**  
COMMUNITY COLLEGES

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## WELCOME TO CHANDLER-GILBERT COMMUNITY COLLEGE

**DR. WILLIAM GUERRIERO, ED.D.**  
INTERIM PRESIDENT

Thank you for considering Chandler-Gilbert Community College as your partner in achieving your educational and career goals. Since 1985, thousands have chosen CGCC for its high academic standards, welcoming environment, and faculty and staff who truly care about student success.

We offer a broad range of courses and programs supplemented by a wide array of student support services, special events, clubs and athletics to enrich students' lives and to provide opportunities for service and learning beyond the classroom.

The Catalog & Student Handbook contains all the information you will need to begin your college experience. I encourage you to refer to it often throughout your stay at CGCC. A good place to start is the [Student Development Philosophy](#). These sections of the Catalog will give you a clear picture of the unique aspects that make CGCC a great place to learn and grow.

On behalf of the entire CGCC team, I invite you to take the next step toward a promising and sustainable future by enrolling today!

William Guerriero, Ed.D.

A handwritten signature in black ink that reads "William Guerriero". The signature is written in a cursive, flowing style.

Interim President

## 2017-2018 ACADEMIC CALENDAR

Colleges/Centers 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. Some courses may be offered over time periods for which these dates are not applicable.

### SUMMER SEMESTER – 2017 NOTE: SUBJECT TO THE 2017-20178 CATALOG

Tues	May 30	Summer Semester Begins
Tues	Jul 4	Observance of Independence Day
Thurs	Aug 3	Summer Semester Ends

### FALL SEMESTER – 2017 NOTE: SUBJECT TO THE 2017-20178 CATALOG

Sat	Aug 19	Classes Begin
Mon	Sep 4	Observance of Labor Day
Mon	Oct 2	Spring 2018 Priority Registration for Currently Enrolled Students
Mon	Oct 9	Spring 2018 Open Registration Begins
		* Application for December 2017 Graduation* + Last Day for Withdrawal without Instructor's Signature
Fri	Nov 10	Observance of Veterans Day
Thurs-Sun	Nov 23-26	Thanksgiving Holiday ++ Last Day Student Initiated Withdrawal Accepted
Sun	Dec 10	Last Day of Classes
Mon-Thurs	Dec 11-14	Final Exams**
Fri	Dec 15	Mid-Year Recess Begins for Students
Fri	Dec 15	Fall Semester Ends [Last day of Faculty Accountability] Sat, Dec 9 Mid-Year Recess (Campus Closed) Dec 25 through Jan 1

### SPRING SEMESTER – 2018 NOTE: SUBJECT TO THE 2017-20178 CATALOG

Mon	Jan 1	New Year's Day
Sat	Jan 13	Classes Begin
Mon	Jan 15	Observance of Martin Luther King, Jr. Holiday
Mon	Feb 19	Observance of Presidents' Day
Mon	Mar 5	Fall 2018 Priority Registration for Currently Enrolled Students
		* Application for May 2018 Graduation* + Last Day for Withdrawal without Instructor's Signature
Mon-Sun	Mar 12-18	Spring Break
Mon	Mar 19	Fall 2018 Open Registration Begins ++ Last Day Student Initiated Withdrawal Accepted
Sun	May 6	Last Day of Classes
Mon-Thurs	May 7-10	Final Exams**
Fri	May 11	Commencement
Fri	May 11	Spring Semester Ends [Last day of Faculty Accountability]
Mon	May 28	Observance of Memorial Day

### SUMMER SEMESTER – 2018 NOTE: SUBJECT TO THE 2017-20178 CATALOG

Tues	May 29	Summer Semester Begins
Wed	Jul 4	Observance of Independence Day
Thurs	Aug 2	Summer Semester Ends

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

\*\*Classes meeting on Friday evening only, Saturday only, or Sunday only will have final examinations during their last regular class meeting.

+See your student schedule in <https://my.maricopa.edu/> for the Last Day to Withdraw without an Instructor Signature for each class in which you are enrolled.

++Refer to the Important Deadlines for Students section of the student handbook to determine the last day for student initiated withdrawal.





## GENERAL INFORMATION

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

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

## Vision

Our students are prepared to lead us into a promising and sustainable future.

## Mission

We are a student-centered college that creates learning experiences and growth opportunities designed for our diverse communities.

## Values

- Innovation through exploration
- Learning through experiences
- Growth through service
- Sustainability through engagement
- Inclusiveness through awareness

## 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 insure student success:

1. To provide programs that assure student competence in specified academic and skill areas;
2. To provide a full range and schedule of services to permit students to benefit from college programs;
3. To provide simplified and clearly defined processes for admitting students, monitoring their progress and maintaining accurate academic records;
4. To provide activities that encourage students to effectively interrelate with others in their college and communities;
5. To provide opportunities for the development of self-esteem, personal identity, independence and self-direction;

6. To provide coordination with secondary and postsecondary schools, and business and industry;
7. To provide delivery of instructional services through alternative systems which prepare students to function in an increasingly technological and informational-based society; and
8. To develop and implement a comprehensive staff development program to educate the staff in student development philosophy and practices.

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

## 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 forty 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](http://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.

### ACCREDITATION COUNCIL FOR EDUCATION IN NUTRITION & DIETETICS

The Dietetic Technology Program is a consortium program with locations at Chandler-Gilbert Community College and Paradise Valley Community College and is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics. Upon successful completion of the program, the graduate will be eligible to take the Commission on Dietetic Registration (CDR) examination in order to become a Dietetic Technician, Registered (DTR).





### **AMERICAN BOARD OF FUNERAL SERVICE EDUCATION (ABFSE)**

The Associate of Applied Science degree in Mortuary Science at Chandler-Gilbert Community College is accredited by the American Board of Funeral Service Education (ABFSE), 992 Mantua Pike, Suite 108, Woodbury Heights, NJ 08097, (816) 233-3747, [www.abfse.org](http://www.abfse.org)

### **HIGHER LEARNING COMMISSION, NORTH CENTRAL ASSOCIATION**

Chandler-Gilbert Community College is accredited by The Higher Learning Commission and is a member of the North Central Association; [www.ncahlc.org](http://www.ncahlc.org); (800) 621-7440 or (312) 263-0456.

### **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 degree, university transfer, general studies, occupational, and special interest courses and programs.

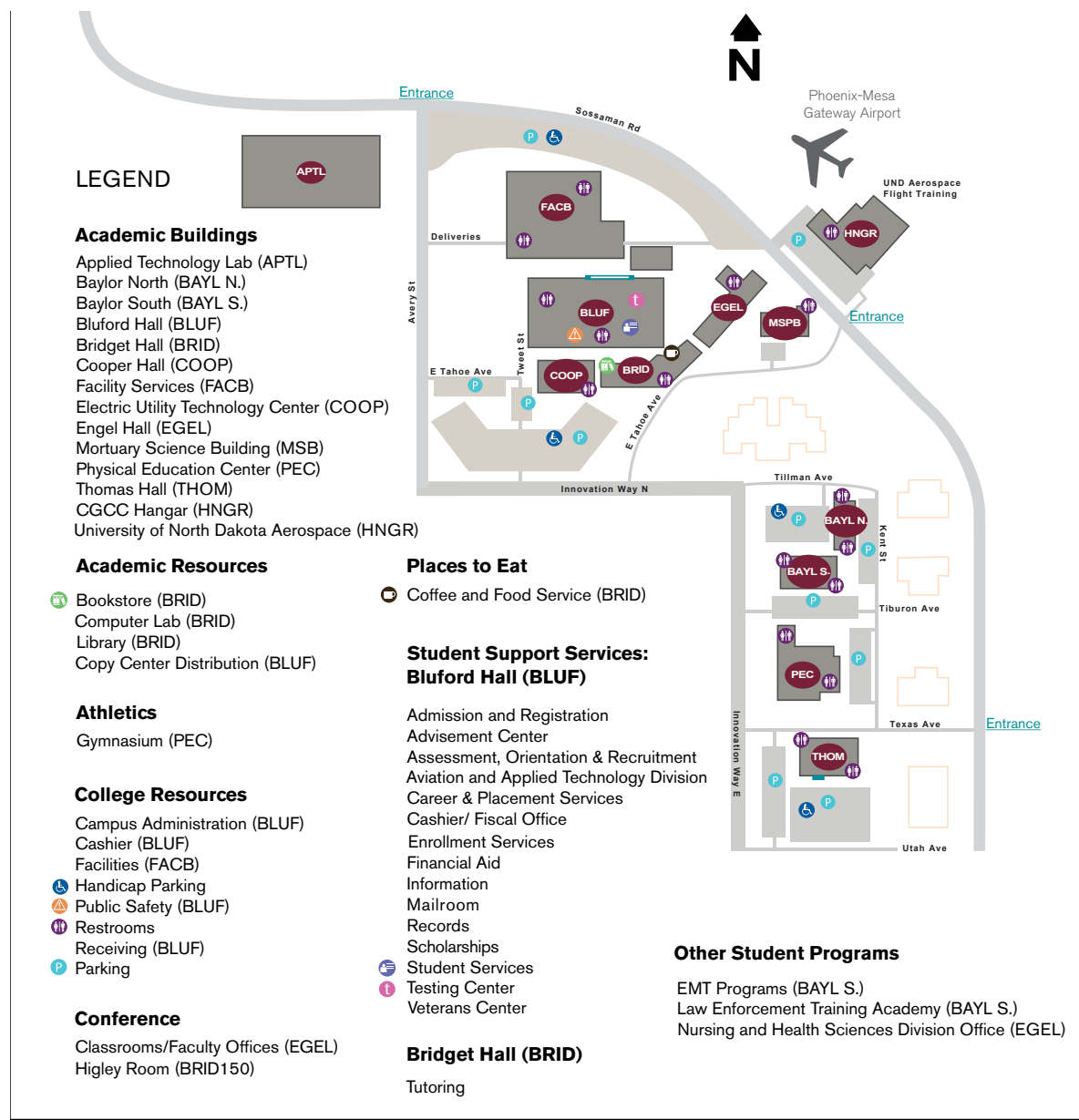


**Directions:** The Pecos Campus is located just north of the San Tan freeway (Loop 202 south) between the Cooper and Gilbert road exits.

## Williams Campus

7360 EAST TAHOE AVENUE  
 MESA, AZ 85212-0908  
 (480) 988-8000

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 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

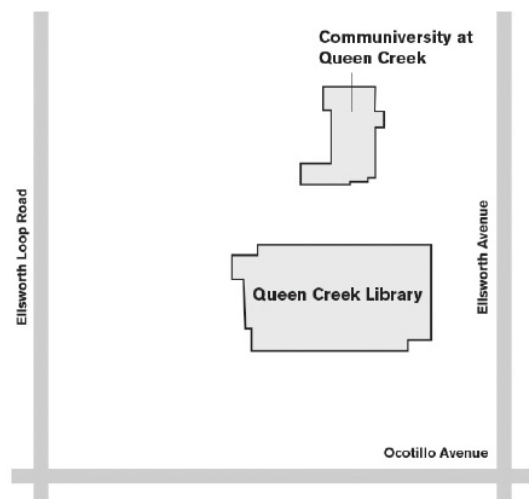
The Sun Lakes Center of CGCC is located at the northeast corner of Alma School and Riggs in Sun Lakes. The Center focuses on the lifelong learning needs of the mature adult population in the Southeast Valley.



## Communiversy 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.







## COLLEGE SERVICES & REGULATIONS



## 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 <https://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.

## 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 Williams Campus Gym. 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 at the Pecos Campus and the Sun Lakes Center are able to purchase books and supplies through the Bookstore located in a modular building west of the Student Center (Building SC) on the Pecos Campus. Students at the Williams Campus are able to purchase books and supplies at the Bookstore located inside Bridget Hall.

The Bookstore also carries gifts, clothing, book bags, semester and 31 day bus passes, official school rings, and gift cards.

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.

Because Follett Higher Education Group manages the Pecos Campus Bookstore and Williams Campus Bookstore, students also have the option of prepaying for and/or shipping their current semester's textbooks on-line at [www.chandler.bkstr.com](http://www.chandler.bkstr.com)

Call (480) 732-7352 for additional information about the Pecos Campus Bookstore. Call (480) 988-8106 for additional information about the Williams Campus Bookstore.

## Career Services

- Plans
- Major
- Career
- Future

Where are you going from here? Career Services is the place to talk about your major whether you need to decide on one or need help figuring out how to connect with your profession through a job or other experiences. The Career Services Office has two locations in which to serve the students of Chandler-Gilbert Community College.

Locations:

- Coyote Center at the Pecos Campus
- Bluford Hall at the Williams Campus

Students seeking career related information can also visit the Career Services section of the CGCC web site at [www.cgcc.edu/careers](http://www.cgcc.edu/careers) For more information call (480) 857-5211 to speak with a career advisor.

## 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, or in person at the Pecos Campus on the second floor of the Library in room LIB242 and at Bluford Hall room BLUF102 at the Williams Campus, or call (480) 988-8601.

## 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](http://www.cgc.edu/cic) for additional information.

## Counseling Services

Counseling Services 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 Services 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](http://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 Human Sexuality, Introduction to Multiculturalism, and Stress Management.

## 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 AND GROUP COUNSELING

Outside the classroom, students sometimes need additional support to manage specific concerns or issues that are hindering their best efforts to be successful. Our faculty

counselors provide free, confidential counseling sessions 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 majors and career options
  - Goal setting and decision-making
- Personal Counseling
  - Solution-focused problem solving
  - Successful college adjustment
  - Stress management and coping skills
- Crisis Intervention
  - 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

For more information, or to schedule an appointment, please refer to our website at [www.cgc.edu/counseling](http://www.cgc.edu/counseling), or call 480.732.7158 during normal business hours.

## 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. For more information on distance learning courses and to find out if this style of learning is right for you, go to [www.cgc.edu/elearning](http://www.cgc.edu/elearning)

## 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 our website at [www.cgc.edu/dual](http://www.cgc.edu/dual) or call (480) 732-7006.

## Early Outreach

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

### ACE PROGRAM

The ACE Program (Achieving a College Education) is an early outreach, two-year tuition scholarship college preparation program for high school 10th graders. 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 graduate from the program while attending high school. Students may apply directly through this office at (480) 857-5188 or through the ACE contact at their high school.

### HOOP OF LEARNING (NATIVE AMERICAN STUDENTS, 9TH THROUGH 12TH GRADERS)

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. High school students can apply with CGCC or through their local high school counselor. For more information, please contact Carriann Dehiya at (480) 732-7255.

### 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 contact (480) 732-7205.

### UNDERAGE STUDENTS (15 YEARS AND YOUNGER)

Students who are 15 years of age and younger are required to make an appointment with the Underage Advisor prior to registering for classes by calling (480) 732-7255. Prior to meeting with the advisor, these students must obtain a Request for Admission/Enrollment form available at Admissions, Records, and



Registration or the Advising Center and complete the Accuplacer placement exams in English, reading, and math when applicable. At least one parent or guardian must accompany the student when meeting with the advisor to discuss college expectations and class options. In addition, there is a mandatory orientation that the student and at least one parent or guardian must attend.

## Enrollment Services

Enrollment services, located on the Pecos Campus in the Coyote Center, includes Academic Advisement; Admissions, Records, and Registration; Financial Aid; the Testing Center; New Student Orientation; and Recruitment Services. These departments help insure student success by facilitating the advisement, registration and retention of students.

See also: Admissions, Records and Registration on [page 15](#) and Financial Aid [page 22](#) and Veterans Services on [page 34](#)

## ACADEMIC ADVISEMENT

Academic advising services are available in the Coyote Center on the Pecos Campus and in Bluford Hall at the Williams Campus. Limited advising services are available at the Communiversities at Queen Creek, students should call in advance for details.

Academic advising helps students to:

- Define and achieve educational goals
- Understand initial placement into English, mathematics, and reading courses
- Explore degree programs, plan a program of study, and assist in selection of academic classes
- Transfer to and from other colleges

It is recommended that all students meet with an academic advisor at least once each semester.

Academic advisement is available on a walk-in basis. The Advisement Center also coordinates campus visitations for representatives from local colleges and state universities throughout the year to meet with students to assist with their transition to a four-year institution or professional school. Topics covered with university and college representatives include information on admission, credit transfer, housing, and financial assistance.

Students can access on-line advisement tools and check sheets for CGCC certificates, degrees, and transfer programs; these tools can be printed for informational purposes and used during an advisement session.

## MY.MARICOPA.EDU ONLINE STUDENT CENTER

At <https://my.maricopa.edu> 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

## NEW STUDENT ORIENTATION

Attending New Student Orientation is your first vital step toward Starting Smart and becoming a successful college student.

Attending an orientation session prior to the start of classes is mandatory for all students new to CGCC. At New Student Orientation you will:

- Meet current students, administrators, faculty, and staff
- Learn about important support resources and departments on campus
- Gain knowledge and skills that will contribute to your success as a student
- Take a campus tour

If you have any questions, please contact the Office of Student Recruitment & Orientation at (480) 732-7385 or e-mail

[recruitment@cgcc.edu](mailto:recruitment@cgcc.edu)

## 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.cgcc.edu/recruitment](http://www.cgcc.edu/recruitment) or email [recruitment@cgcc.edu](mailto:recruitment@cgcc.edu)

## PLACEMENT TESTING

Course placement testing is the process of evaluating students' present skills in English, reading, and mathematics to assist students in choosing courses that match their skills. Course selection is based on scores from course placement tests.

New students enrolling in seven or more credit hours and students pursuing a degree or enrolling in English, reading, or mathematics courses must take a placement test.

Upon entry, new students will:

- Complete information about educational background and current college goals
- Complete the course placement tests in English, reading, and mathematics
- Obtain placement test results and course recommendations that students can then take to Advisement to work with an academic advisor for course selection

The Testing Center at the Pecos Campus is located in the Coyote Center on the second floor. The Testing Center at the Williams Campus is located in Bluford Hall.

For information regarding the times of the test sessions at the Pecos and Williams Campus, visit [www.cgcc.edu/testing](http://www.cgcc.edu/testing) For additional information for the Pecos Campus call (480) 732-7159 or call the Williams Campus at (480) 988-8000.

## Facilities Services

The Facilities Services office is responsible for creating and maintaining a physical environment conducive to effective teaching and learning. To report problems associated with either buildings or grounds, stop by the office or call (480) 732-7285 at the Pecos Campus or (480) 988-8131 at the Williams Campus. The Facilities Services office is located in Building FSB at the Pecos Campus and in the Facilities Building at the Williams Campus. Visit [www.cgcc.edu/facilities](http://www.cgcc.edu/facilities) for additional information.

## 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 20](#)

### 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:

- Grants
  - Pell Grant
  - Supplemental Educational Opportunity Grant (SEOG)
- Loans
  - Direct Stafford Loans
  - Direct Parent Loan for Undergraduate Students (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). The application process requires approximately two months, so it is best to apply as early as possible before the semester of attendance. Students should complete an application on-line at [www.fafsa.gov](http://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](http://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](http://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 the web site at [www.cgc.edu/aid/workstudy](http://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. Visit [www.cgc.edu/food](http://www.cgc.edu/food) or call (480) 732-7362.

## Institutional Research

The Institutional Research office, located on the Pecos Campus in Bradshaw Hall, Room BRD160, 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 [www.cgc.edu/ir](http://www.cgc.edu/ir)

## International Education Program

### PROGRAM CONTACT:

ANNIE JIMENEZ ~  
(480) 732-7391 OR (480) 726-4236  
[iep@cgc.edu](mailto:iep@cgc.edu) or [www.cgc.edu/ss/intl](http://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, study abroad programs, 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. For more information.

## 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.cgcc.edu/lc](http://www.cgcc.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

## 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 with ESL and grammar software
- Interactive workshops focusing on a variety of writing topics

## Library

### HOURS: FALL AND SPRING

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 the Library's website for the most up-to-date hours and holiday closure information:

[www.cgc.edu/library](http://www.cgc.edu/library)

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

Can be obtained from Enrollment Services located in the Coyote Center and are needed to check out library materials.

## Parking

Students taking classes at the Pecos Campus must display an MCCCDC parking decal to park on campus property. To obtain a decal, students must register their vehicle at the Coyote Center with current license plate information. Decals are available at no charge.

Students taking classes at the Williams Campus must obtain and display an MCCCDC parking sticker with a year validator. These are available from Williams Campus Public Safety at no charge for students, faculty and staff.

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

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

### PARKING VIOLATION PENALTIES

Violation of parking regulations will result in a citation and a fine being issued. In the case of parking violations, repeaters' vehicles may be towed away at their owner's expense.

All monetary fines shall be paid to the college cashier in the Cashier/Fiscal office. Payment

may be made in person or by mail. Failure to pay or appeal a citation within 15 working days of date of issue will result in the fine being doubled. In order to insure due process, fines may be appealed to the assigned appeals officer at the Public Safety Building on the Pecos Campus.

## 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.

## Public Safety

The Public Safety Department is 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 Public Safety Officers. The Public

Safety Department is located in Public Safety Building (PSB), at the Pecos Campus and in Bluford Hall at the Williams Campus.

Students are encouraged to inform the on-duty officer about any situation that might warrant support for safety reasons (stalkers, potentially violent situations, orders of protection, etc.).

Services to students, faculty, and staff include:

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

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

## EMERGENCIES

In the event of emergencies on campus, contact the Public Safety Department at

(480) 732-7280 at the Pecos Campus or (480) 988-8888 at the Williams Campus. 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 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.

## 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.

## Public Safety Regulations

### IDENTIFICATION

Public Safety 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

Students and all employees who drive motor vehicles on any CGCC campus are required to register all vehicles that may be used on college property with the Public Safety Department. Individuals who subsequently purchase or trade their registered vehicles must register the new vehicles.

An out-of-state/out-of-country student or college employee who operates or parks a

motor vehicle on college property must sign an affidavit at the time of registration certifying that the vehicle complies with A.R.S. 49-542 relating to vehicle emission testing. Vehicles which do not comply with A.R.S. 49-542 will not be granted a permit.

Vehicles must be registered in person at the Coyote Center at the Pecos Campus and in Bluford Hall at the Williams Campus.

## 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:
  - a. Students are urged to exercise care in securing their personal property, including motor vehicles, bicycles, mopeds, and motorcycles.
  - b. 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 Employment

More information is available in the Career Services Office in the Pecos Campus Coyote Center; (480) 857-5211.

## 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 "non-financial aid"



questions should call (480) 732-7312 or e-mail at [askcashiers@cgcc.edu](mailto:askcashiers@cgcc.edu). Students can also visit [www.cgcc.edu/fiscal](http://www.cgcc.edu/fiscal) for additional information.

## Student Helpline

### SUPPORT FOR STUDENT CONCERNS, COMPLAINTS AND COLLEGE WIDE ISSUES IN AND OUT OF THE COLLEGE 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 your 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@cgcc.edu](mailto:student-helpline@cgcc.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 MCCCDC 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 the web site at <https://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 payment of tuition and fees. 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 the Fiscal Office, located in the Coyote Center, at the Pecos Campus, or the Aviation and Technology Center 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. Listed below are some of the activities that students participate in:

## 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 for more information 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
- Womens 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 refers 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 on-line at [www.azsos.gov](http://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](http://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, contact (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 MCCC'D's DRS CONNECT system. All registered students must provide appropriate and current documentation that complies with MCCC'D documentation policy and guidelines. DRS provides: education and information regarding student rights and advocacy and academic adjustments that support student learning.

### **Technical Support Services**

Technical Support Services (TSS) is located on the second floor of the Library. Technical planning, design, integration, and ongoing operational support for computing and network services is provided by TSS staff.

This includes technical support in the following areas:

- Enterprise Network and Systems Services
- Client/Network Support
- Computer Hardware Repair
- Desktop Software
- Telephone Support
- Student Information System (SIS)
- Web-based Applications

TSS provides technical support at the Pecos Campus, Williams Campus, Sun Lakes Center, and the Communiversity at Queen Creek. CGCC's intra-network design provides connectivity to a variety of network environments including the Internet and wireless, in support of cross-platform workstations running Windows, Macintosh OS, and Unix.

Trained, qualified staff members are available for delivering technical services, implementation, and support for instructional and administrative systems. For technical assistance or coordination of technical support issues please call the Technical Support Helpdesk at (480) 732-7025 or visit the web site at [www.cgcc.edu/tss](http://www.cgcc.edu/tss)

## 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 MCCD policy on Operation and Insurance Coverage of District Owned and/or Lease Vehicles and Privately Owned Vehicular Usage for District Purposes.

For the most current information regarding course descriptions, log on to [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

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.maricopa.edu/trip](http://www.maricopa.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.maricopa.edu/veterans](http://www.cgc.maricopa.edu/veterans)

## APPROVED VA FUNDING

### Airway Science Technology, Flight Emphasis (Track I and III)

#### APPROVED FUNDING FOR VA FLIGHT TRAINING FOR ACADEMIC YEAR 2017-2018

FLIGHT STANDARDS DISTRICT OFFICE (FSDO)

APPROVED MINIMUM TIMES

PER PART 141 TRAINING COURSE OUTLINES

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 minimum training requirements and students are required to cover additional costs. VA will only cover costs listed for each specific time requirement.

Costs are calculated according to the following hourly rates:

Hourly Rates and Instruction Rates (FY2018 - effective 8/01/2017)					
Aircraft	Rate	FTD	Rate	Instructor	Rate
Cessna 172	\$139.00	Single Engine FTD	\$79.00	Fixed Wing	\$59.00
Arrow	\$189.00	Multi Engine FTD	\$99.00		
Seminole	\$275.00	Mentor FTD	\$30.00		

FSDO approved minimum times per part 141 training course outlines.

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

## 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.

AET210 - Instrument Commercial Flight I	50.0
AET220 - Instrument Commercial Flight II	68.5
AET240 - Multi-Engine Airplane Pilot Flight	36.5
	155.0

<b>AET210 - Instrument Commercial Flight I (Lessons 1-35)</b>		<b>\$11,147.50</b>
Solo C172	20.0	\$2,780.00
Dual C172	25.5	\$3,544.50
Dual SE FTD	14.0	\$1,106.00
Dual Instruction	39.5	\$2,330.50
Pre/Post & Ground Instruction	23.5	\$1,386.50
<b>AET220 - Instrument Commercial Flight II (Lessons 36-68)</b>		<b>\$14,163.30</b>
Solo C172	12.3	\$1,709.70
Dual C172	44.2	\$6,143.80
Dual SE FTD	14.0	\$1,106.00
Dual Instruction	58.2	\$3,433.80
Pre/Post & Ground Instruction	30.0	\$1,770.00
<b>AET240 - Multi-Engine Systems &amp; Proc (Lessons 69-94)</b>		<b>\$7,681.50</b>
Dual Seminole	15.0	\$4,125.00
Dual ME FTD	10.0	\$999.00
Dual Instruction	25.0	\$1,475.50
Pre/Post & Ground Instruction	18.5	\$1,091.50

<b>AET230 - Certified Flight Instructor: Airplane, Single Engine Land (Part 141)</b>		
<b>CFI Certification</b>		<b>\$7,300.00</b>
Dual C172	23.0	\$3,197.00
Dual Arrow	1.0	\$189.00
Dual SE FTD	1.0	\$79.00
Dual Instruction	25.0	\$1,475.00
Pre/Post & Ground Instruction	40.0	\$2,360.00
<b>Totals</b>		<b>\$ 40,292.30</b>

## 2017-2018 PROJECTED INDIVIDUAL FLIGHT TRAINING COSTS

These are the projected costs for flight courses for the 2017-2018 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

AET110 - Private Pilot Certification		<b>\$12,527.00</b>
Instructor Time	83 hrs	
S.E. Simulator	3 hrs	
Cessna 172	52 hrs	
FAA Written**		

### INSTRUMENT, COMMERCIAL AND MULTI-ENGINE

AET210 - Instrument Commercial Flight I (Lessons 1-35)		<b>\$11,431.00</b>
Instructor Time	70 hrs	
S.E. Simulator	15 hrs	
Cessna 172	44 hrs	

AET220 - Instrument Commercial Flight II (Lessons 36-68)		<b>\$13,584.00</b>
Instructor Time	82 hrs	
S.E. Simulator	8 hrs	
Cessna 172	56 hrs	
FAA Written**	(2)	

AET240 - Multi-Engine Systems & Procedures (Lessons 69-94)		<b>\$11,700.00</b>
Instructor Time	65 hrs	
M.E. Simulator	10 hrs	
Seminole	25 hrs	

### FLIGHT INSTRUCTOR

AET230 - Certified Flight Instructor Certification		<b>\$8,068.00</b>
Instructor Time	65 hrs	
Cessna 172	24 hrs	
Piper Arrow	3 hrs	
FAA Written**	(2)	

AET270 - Certified Flight Instructor Instrument		<b>\$6,034.00</b>
Instructor Time	50 hrs	
Cessna 172	21 hrs	
FAA Written**	(1)	

**Associate Degree program  
total flight cost: \$57,310.00.**

\*Does not include AET 270 CFIL.

\*\*FAA written price of \$165 is included in the budgeted total for each applicable course.

## Airway Science Technology, Flight Emphasis (Track II) Helicopter

Course	Course/Materials	Lab Fees-Fixed	Included Books & Materials
AET 210HH Commercial Pilot Flight Lab I (Instrument): Helicopter	Flight Time: 75 hours (75 dual IFR)	\$ 28,000.00	<ul style="list-style-type: none"> <li>* IFR Pilot Manual</li> <li>* Part 141 Instrument Rating Syllabus</li> <li>* Practical Test Standards-IFR</li> <li>* Test Prep-IFR</li> <li>* Oral Test Guide-IFR</li> <li>* PV-5 IFR Plotter</li> <li>* GNS 430 Simulator CD</li> </ul>
	Individual Ground Training: 42 hours		
Course	Course/Materials	Lab Fees-Fixed	Included Books & Materials
AET 220HH Commercial Pilot Flight Lab II: Helicopter	Flight Time: 85 hours (55 dual VFR, 20 advanced dual VFR, 10 solo)	\$ 28,300.00	<ul style="list-style-type: none"> <li>* Test Prep-Commercial</li> <li>* Practical Test Standards-Commercial/CFI</li> <li>* Commercial Syllabus</li> <li>* Oral Test Guide- Commercial</li> </ul>
	Individual Ground Training: 39 hours		
Course	Course/Materials	Lab Fees-Fixed	Included Books & Materials
AET 230HH Certified Flight Instructor Lab: Helicopter	Flight Time: 75 hours (50 dual VFR, 25 dual IFR)	\$ 28,500.00	<ul style="list-style-type: none"> <li>* Aviation Instructors Handbook</li> <li>* Part 141 CFI Syllabus</li> <li>* Test Prep-CFI</li> <li>* Oral Test Guide-CFI</li> </ul>
	Individual Ground Training: 67 hours		
<b>Program Total:</b>			<b>\$84,800.00</b>
<p><b>Note:</b> Prerequisite AET 110HH Private Pilot course is not covered by GI Bill benefits and is not included in program total. Cost basis for all semesters includes: Written, oral and flight testing required for issuance of the certificate or rating that is applicable to the course.</p> <p>Not Included: Costs associated with any re-testing necessary in the event of a failed FAA written, oral, or flight test. Medical exam, aviation kneeboard, and optional flight bag. Revisions to books and materials.</p>			

Costs are calculated according to the following hourly rates (tax = 7.8%):

Dual VFR	\$295.00/hour
Dual IFR	\$310.00/hour
Solo	\$250.00/hour plus tax
Ground Instruction	\$49.00/hour
Pre/Post Flight Instruction	\$49.00/hour
Checkride rental VFR	\$250.00/hour plus tax
Checkride rental IFR	\$280.00/hour plus tax

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





**MARICOPA COUNTY COMMUNITY COLLEGE DISTRICT COMMON POLICIES**

## MARICOPA COUNTY COMMUNITY COLLEGE DISTRICT COMMON POLICIES

The Administrative Regulations are used in managing the day-to-day operations of the Maricopa County Community College District (MCCCD) and are subject to change. Administrative Regulations are amended, adopted, or deleted as necessary and are subject to a formal approval process. Administrative Regulations are referenced by number, which corresponds with the regulations on the [MCCCD website](#).

Some regulations include reference to Arizona Revised Statutes from the State of Arizona and are noted as "ARS" followed by a reference number.

For printed copies of the regulations for the calendar year you were first admitted and enrolled, visit the Library or Enrollment Services area on your campus or visit [www.cgc.edu/catalog](http://www.cgc.edu/catalog) for the corresponding student handbook and catalog year as well as visit the [Administrative Regulations and Appendix \(Common Pages\)](#) items specifically relevant to students.

### Student Handbook

[2.5.4 Student Employment](#)

[2.5.5 Student Governance](#)

Appendix S-12 The Maricopa Community Colleges Allied Health or Nursing Program

[4.18 Consensual Relationships](#)

### Admissions, Registration and Enrollment

[2.1 General Regulation](#)

[2.2.1 Admission Policy](#)

[2.2.2 Admission Information](#)

[2.2.3 Other Admission Information](#)

[2.2.4 Credit for Prior Learning](#)

[2.2.6 Academic Advising](#)

[2.2.7 Student Assessment and Course Placement](#)

[2.2.8 Registration](#)

[2.2.9 Tuition and Fee Schedule](#)

[2.2.10 Refund Policy](#)

[2.2.11 Student Financial Assistance](#)

[2.2.12 Vaccinations](#)

[Appendix S-5 Student Financial Assistance](#)

[2.9 Veterans Services](#)

### Scholastic Standards

[2.3.1 Academic Load](#)

[2.3.2 Attendance](#)

[2.3.3. Grading](#)

[Appendix S-12 Important Deadline for Students](#)

[2.3.4 Academic Probation \(Progress\)](#)

[2.3.5 Instructional Grievance Process](#)

[Appendix S-6 Instructional Grievance Process](#)

[2.3.12 Non-Instructional Complaint Resolution Process](#)

[Appendix S-8 Non-Instructional Complaint](#)

[Resolution Process](#)[2.3.6 Withdrawal](#)

Appendix S-7 Withdrawal Procedures

[2.3.7 Academic Renewal](#)[2.3.8 Honors Program](#)[2.3.9 General Graduation Requirements](#)[2.2.5 Catalog under which a student graduates](#)[2.3.10 Transcripts for Transfer](#)

## College Environment

[2.4.4. \(See also 5.1.8\) Sexual Harassment Policy for Employees and Students](#)[5.1.9 Examples of Policy Violations](#)[5.1.10 Additional Policy Violations](#)[5.1.11 Responsibility for Policy Enforcement](#)[5.1.12 Complaints](#)[5.1.13 Confidentiality](#)[5.1.14 Violations of Law](#)[5.1.15 False Statements Prohibited](#)[5.1.16 Retaliation Prohibited](#)[Discrimination Complaint Procedures for Students](#)[2.4.6 Emissions Control Compliance](#)[2.4.8 Petition Signature Compliance](#)[2.4.9 Use of College Grounds by Non-MCCCD Affiliated Users](#)[2.4.10 Children on Campus](#)[2.4.11 Crime Awareness and Campus Security Act](#)[2.4.12 Workplace Violence Prevention](#)[2.4.12 Student Right to Know](#)

## Student Rights and Responsibilities

[2.4.5 Copyright Act Compliance](#)[3.2 Copyright Regulation](#)[3.4 Taping of Faculty Lectures](#)[4.4 Technology Resource Standards](#)[2.6 Hazing Prevention Regulation](#)[2.4.7 Abuse-Free Environment](#)[4.13 Alcoholic Beverage Usage Regulation](#)[4.12 Smoke Free/Tobacco Free Environment](#)

Appendix S-16 Statement on the Arizona Medical Marijuana Act (Proposition 203)

[2.8.1 Eligibility for Accommodations and Required Disability Documentation](#)[2.8.2 Eligibility of Students taking a reduced course load](#)[2.8.3 Technology Accessibility](#)[2.3.11 Academic Misconduct](#)

## Disciplinary Standards

[2.5.1 Disciplinary Standards](#)[2.5.2 Student Conduct Code](#)[2.5.3 Student Records](#)

Appendix S-17 FERPA Appeal Process

[4.6 Weapons Policy](#)

## Vision

[Vision, Mission & Values](#)





## DEGREE REQUIREMENTS

## GRADUATION/GENERAL EDUCATION POLICIES FOR MARICOPA COMMUNITY COLLEGES

### General Graduation Requirements (AR 2.3.9)

All students are required to complete the degree and/or certificate requirements as approved by the MCCCDC 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 not fewer than: 60 semester credit units in courses numbered 100 or above for the Associate in Arts degree, Associate in Science degree and Associate in General Studies degree; 60 semester credit units for the Associate in Applied Science degree; 62 semester credits for the Associate in Business degrees. For specific certificate programs, be credited with not 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 may 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 may 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. 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. 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.
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.



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 MCCCDC college /center.
8. Have paid required degree or certificate application fee.

See fee schedule for charges.

### GRADUATION WITH HONORS

All courses used to fulfill graduation requirements, including courses from other accredited institutions, will be entered in the grade point average calculation for honors designations. Students who have the following grade point averages will graduate with the following distinctions:

3.50 to 3.69	"with distinction"
3.70 to 3.89	"with high distinction"
3.90 to 4.0	"with highest distinction"

### GRADUATION - HONORS PROGRAM

Students who meet all the requirements of the Honors Program at the district college granting the degree will be designated as Honors Program Graduates.

### CERTIFICATES/DEGREES

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

1. Certificate of Completion (Career Program Specified);
2. Academic Certificate;
3. General Education Certificate;
4. Associate in Arts;
5. Associate in Science;
6. Associate in Business;
7. Associate in General Studies;
8. Associate in Applied Science (Career Program Specified).

All candidates for a degree and/or certificate must complete the General Graduation Requirements as approved by the MCCCDC 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 MCCCDC 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 CEG (Course Equivalency Guide) 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 MCCCDC and the institutions to which MCCCDC 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.

## **Catalog Under Which A Student Graduates**

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 '05 (Active)

Continued at a Public Community College..... Spring '06, Fall '06 (Active)

Transferred to a University ..... Spring '07 (2005 or Any Subsequent Catalog)

EXAMPLE B:

Admitted & Earned Course Credit at a

Public Community College or University ..... Fall '02 (Active)

Enrolled But Earned All Ws, Zs, or Fs..... Spring '03 (Inactive)

Enrolled in Audit Courses Only..... Fall '03 (Inactive)

Nonattendance ..... Spring '04 (Inactive)

Transferred to a University ..... Fall '04 (2004 or Any Subsequent Catalog)

2. Students who do not meet the minimum enrollment standard stipulated in No. 1 during three consecutive semesters (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:

Admitted & Earned Course Credit at a Public

Community College or University ..... Fall '02 (Active)

Nonattendance ..... Spring '03, Fall '03, Spring '04 (Inactive)

Readmitted & Earned Course Credit at a

Public Community College ..... Fall 04 (Active)

Transferred to a University ..... Spring 05 (2004 or Any Subsequent Catalog)

EXAMPLE B:

Admitted & Earned Course Credit at a Public

Community College or University ..... Fall '02 (Active)

Nonattendance ..... Spring '03 (Inactive)

Readmitted & Earned Course Credit at a

Public Community College ..... Summer ' 03 (Active)

Nonattendance ..... Fall ' 03, Spring ' 04 (Inactive)

Transferred to a University ..... Fall '04 (2002 or Any Subsequent Catalog)

\*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:

Admitted & Earned Course Credit at a Public

Community College or University..... Summer '04 (Active)

Continued at a Public Community College..... Fall '04, Spring '05 (Active)

Nonattendance ..... Fall '05 (Inactive)

Readmitted & Earned Course Credit at a

Public Community College ..... Spring '06 (Active)

Transferred to a University ..... Summer '06 (2004 or Any Subsequent Catalog)

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 timelimits for transfer coursework for the institution to which they plan to transfer.



## **Maricopa Community Colleges (MCCCD) 2017-2018, Arizona General Education Curriculum (AGEC) - A, B, S**

### **DESCRIPTION**

The Maricopa County Community College District Arizona General Education Curriculum (MCCCD AGEC) is a 35-38 semester-credit general education certificate that fulfills lower-division general education requirements for students planning to transfer to any Arizona public community college or university. Generally, the MCCCD AGEC transfers as a block without loss of credit.

In most cases, all courses used to satisfy the MCCCD AGEC will apply to graduation requirements of the university major for which the AGEC was designed.

There are three types of AGECS in MCCCD. They are the AGEC-A, the AGEC-B, and the 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 is the general education block of the five different MCCCD Associate in Arts (AA) degrees, the AGEC-B is part of the two MCCCD Associate in Business (ABUS) degrees, and the AGEC-S defines the general education requirements in MCCCD 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 majors, 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](http://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 eight additional credits of math and/or science appropriate to their major.

### ACADEMIC POLICIES THAT GOVERN THE AGEC A, B, S:

- Requires completion of 35-38 credit hours in courses numbered 100 and above and that a minimum of 12 of those credits be taken at one or any combination of the MCCCDC colleges.
- 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 General Education Requirements for these certificates may be completed in as few as 35 credits provided that courses selected for the Awareness Areas can also be counted toward Core Areas.

### TRANSFER CREDITS

- Credits transferred from outside of MCCCDC must at a grade of "C" (2.0 on a 4.0 scale) or better.
- Transfer credit graded pass/fail or pass/no credit may be used to satisfy AGEC requirements if documentation collected by the community college indicates that this was the only grading option available and that the Pass grade ("P") is equivalent to a "C" or better.
- External courses either with AGEC designations (from an AGEC granting/accepting institution at which they were taken) or evaluated as equivalent to an MCCCDC course with one or more AGEC designations may be applied toward the minimum credits for certificate completion. A course evaluation and/or general education designation may be subject to change. The AGEC designations are determined by how they are listed in AZTransfer's Arizona Course Equivalency Guide (CEG) for the semester in which the courses were completed. Given that curriculum is dynamic at both MCCCDC and the institutions from or to which MCCCDC students transfer, students have the option to petition for exceptions to official course evaluations and/or general education designations.

### CREDIT FOR PRIOR LEARNING

- 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 AGECE.

### COMPLETION AND TRANSFER

- Completion of the AGECE 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.

### AGECE REQUIREMENTS

- The 35-38 semester credits required for each of the three AGECEs follow. Descriptions and definitions of each requirement area follow. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGECE link. The lists provided for AGECE-A, -B, -S, and AGECE Matrix identify the courses in alpha-order by prefix as well as the different Core Areas and/or Awareness Areas where each course will apply.

\*Note that for students pursuing majors in the Fine Arts (Art, Theatre, Dance) or Elementary Education the required courses for some of the Core and/or Awareness Areas are much more prescriptive. Students in these majors should consult corresponding specialized Associate in Arts degree requirements and/or an academic advisor for guidance in the selection of their general education course work to minimize loss of credits).

.....

### AGECE-A REQUIREMENTS

	<u>Credits</u>
1. Core Areas .....	35
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. (See AGECE matrix for current course values.)	
a. First-Year Composition (FYC) .....	6
b. Literacy and Critical Inquiry [L] .....	3

c. Mathematics [MA] .....	3-5
Requires a course in college mathematics (MAT140, MAT141, MAT142) or college algebra (MAT150, MAT151, MAT152) or pre-calculus (MAT187) or any other mathematics course designated with the [MA] general education value and for which college algebra is a pre-requisite.)	
d. Computer/Statistics/Quantitative Applications [CS] .....	3
e. Humanities, Arts and Design [HU].....	6
Students are encouraged to choose course work from more than one discipline.	
f. Social-Behavioral Sciences [SB].....	6
Students are encouraged to choose course work from more than one discipline.	
g. Natural Sciences [SQ/SG] .....	8
The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of 4 credits each. Credits for lecture and lab components may be combined or each may carry separate credit.	
At least four (4) credits must be designated as SQ. Eight (8) credits of SG will not satisfy this requirement.	
2. Awareness Areas: .....	0-6
Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s). (See AGECEC 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

.....

**AGEC-B REQUIREMENTS**

	<u>Credits</u>
1. Core Areas: .....	35
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). (See AGECEC matrix for current course values.)	
a. First-Year Composition (FYC) .....	6
b. Literacy and Critical Inquiry [L].....	3
c. Mathematics [MA].....	3-5
Requires a course in brief calculus (MAT212) or a higher level mathematics course such as MAT220, or MAT221 or any course for which these courses are prerequisites.	

d. Computer/Statistics/Quantitative Applications [CS] .....	3
e. Humanities, Arts and Design [HU].....	6
Students are encouraged to choose course work from more than one discipline.	
f. Social-Behavioral Sciences [SB] .....	6
Students are encouraged to choose course work from more than one discipline.	
g. Natural Sciences [SQ/SG] .....	8
The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of 4 credits each. Credits for lecture and lab components may be combined or each may carry separate credit.	
At least four (4) credits must be designated as SQ. Eight (8) credits of SG will not satisfy this requirement.	
2. Awareness Areas: .....	0-6
Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s).	
(See <a href="#">AGEC matrix</a> for current course values.)	
a. Cultural Diversity in the United States [C].....	0-3
b. Global Awareness [G] OR Historical Awareness [H] .....	0-3

.....

### AGEC-S REQUIREMENTS

	<u>Credits</u>
1. Core Areas: .....	35
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). (See <a href="#">AGEC matrix</a> for current course values.)	
a. First-Year Composition (FYC) .....	6
b. Literacy and Critical Inquiry [L].....	3
Students are strongly encouraged to choose an [L] course that also has [HU] or [SB] designation It may also have been approved to satisfy one or more Awareness Areas ([C], [G], [H]). (See <a href="#">AGEC matrix</a> for current course values.)	
c. Mathematics [MA] .....	3-5
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 prerequisite.	
d. Humanities, Arts and Design [HU].....	6



For the AGECS, a single course with both [HU] and [L] designations may satisfy both Areas. (See AGECS matrix for current course values.)

e. Social-Behavioral Sciences [SB]..... 6

For the AGECS, a single course with both [SB] and [L] designations may satisfy both Areas. (See AGECS matrix for current course values.)

g. 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 General Chemistry I and
- CHM152 & CHM152LL General Chemistry II OR
- PHY115 & PHY116 University Physics I and II OR
- PHY121 & PHY131 University Physics I: Mechanics and II: Electricity and Magnetism OR
- BIO181 & BIO182 General Biology (Majors) I and II

h. Subject Options (Subject based on major) .....6-8

Use a transfer guide to select six (6)-ten (10) additional math and/or science credits that meet requirements for selected major.

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

2. Awareness Areas: .....0-6

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

(See [AGECS 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

.....

## 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 skills in mathematics appropriate for their discipline and can apply mathematical analysis in their chosen fields.

#### Computer/Statistics/Quantitative Applications [CS]

AGEC-A and AGECE-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.

#### 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.

## Maricopa Community Colleges (MCCCD) 2017-2018, Associate in Arts (AA) Degree

### DESCRIPTION

The Maricopa County Community College District Associate in Arts degree requires 60-64 semester credits for the program of study. The degree includes the following components:

- I. General Education:
  - Arizona General Education Curriculum for Arts (AGEC-A)
  - MCCCD Additional Requirements
- II. General Electives

### PURPOSE OF THE DEGREE

The Associate in Arts 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 will apply to general university graduation requirements of the majors that align with the Associate in Arts 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 Associate in Arts with majors at the Arizona public universities can be accessed via the following website: [www.aztransfer.com](http://www.aztransfer.com)

### DEGREE REQUIREMENTS

The 60-64 semester credits required for the Associate in Arts 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 each MCCCD college's website.

	<u>Credits</u>
I. MCCCD General Education .....	35-47
A. AGEC-A .....	35-41
1. Core Areas .....	35

\*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. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

<ul style="list-style-type: none"> <li>a. First-Year Composition (FYC)..... 6                             <ul style="list-style-type: none"> <li>• ENG101 OR ENG107 AND</li> <li>• ENG102 OR ENG108</li> </ul> </li> <li>b. Literacy and Critical Inquiry [L] ..... 3</li> <li>c. Mathematics [MA] ..... 3                             <p style="margin-left: 20px;">Requires a course in college mathematics (MAT140, MAT141, MAT142) or college algebra (MAT150, MAT151, MAT152) or pre calculus (MAT187) or any other [MA] designated course for which college algebra is a pre-requisite.</p> </li> <li>d. Computer/Statistics/Quantitative Applications [CS] ..... 3</li> <li>e. Humanities, Arts and Design [HU] ..... 6                             <p style="margin-left: 20px;">Students are encouraged to choose course work from more than one discipline</p> </li> <li>f. Social-Behavioral Sciences [SB]..... 6                             <p style="margin-left: 20px;">Students are encouraged to choose course work from more than one discipline</p> </li> <li>g. Natural Sciences [SQ/SG] ..... 8                             <p style="margin-left: 20px;">The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of 4 credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four (4) credits must be designated as SQ. Eight (8) credits of SG will not satisfy this requirement.</p> </li> </ul>	6
2. Awareness Areas: .....	0-6
<p>Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s). (See <a href="#">AGEC matrix</a> for current course values.)</p>	
<ul style="list-style-type: none"> <li>a. Cultural Diversity in the United States [C]..... 0-3</li> <li>b. Global Awareness [G] OR Historical Awareness [H] ..... 0-3</li> </ul>	0-3
MCCCD Additional Requirements.....	0-6
<p>As noted below, courses in this area may also be applied towards AGEC-A Core Area requirements.</p>	
1. Oral Communication.....	0-3
<ul style="list-style-type: none"> <li>• COM100 [SB] Introduction to Human Communication OR</li> <li>• COM110 [SB] Interpersonal Communication OR</li> <li>• COM225 [L] Public Speaking OR</li> <li>• COM230 [SB] Small Group Communication (3 credits) OR</li> </ul>	

- COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
- COM110AA & COM110AB & COM110AC [SB] (3 credits)

2. Critical Reading ..... 0-3

Students may demonstrate proficiency through assessment.

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

II. General Electives ..... 13-29

Select courses 100-level or higher to complete a minimum of 60 semester credits but no more than a total of 64 semester credits. 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](http://aztransfer.com), [maricopa.edu/transfer/partners](http://maricopa.edu/transfer/partners), as well as those of individual universities. For appropriate course selection, students should consult with an advisor.

**ASSOCIATE IN ARTS TOTAL CREDITS: 60-64**

## Maricopa Community Colleges (MCCCD) 2017-1018, Associate in Arts, Elementary Education Degree (AAEE)

### DESCRIPTION

The MCCCD Associate in Arts in Elementary Education (AAEE) requires the student to complete a total of 60-63 semester credits in the program of study. The degree has two major components:

I. General Education:

- Arizona General Education Curriculum for Arts (AGEC-A)
- MCCCD Additional Requirements

II. Elementary Education Requirements:

- Education Foundations
- Restricted Electives

### PURPOSE OF THE DEGREE

The AAEE 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

	<u>Credits</u>
I. MCCCD General Education .....	35-41
A. AGEC-A .....	35-38
1. Core Areas .....	35
a. First-Year Composition (FYC) .....	6
• ENG101 OR ENG107 AND	
• ENG102 OR ENG108	
b. Literacy and Critical Inquiry [L] .....	3
• COM225 Public Speaking	
c. Mathematics [MA] .....	3
Requires a course in college mathematics (MAT140, MAT141, MAT142) or college algebra (MAT150, MAT151, MAT152) 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.)	

- d. Computer/Statistics/Quantitative Applications [CS] .....3
- BPC110 Computer Usage and Applications OR
  - CIS105 Survey of Computer Information Systems

- e. 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 AGECEC 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:

- 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

2) Select one of the following EDU, ENH or HUM courses:

- EDU/ENH291 Children's Literature OR
- ENH110 Introduction to Literature OR
- ENH241 American Literature Before 1860 OR
- ENH242 American Literature After 1860 OR
- HUM250 OR
- HUM251 Ideas and Values in the Humanities

- f. Social-Behavioral Sciences [SB] .....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 [SB]. (AGEC designations are subject to change. See AGECEC matrix for each course's value(s) in the semester it is taken.)

1) Select one of the following US History/Government courses: 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 (GCU/POS227 if taken prior to Fall 2016 United States and Arizona Social Studies

AND

2) Select one of the following CFS, ECH, GCU, ECN, HIS or PSY courses

- CFS205 Human Development OR
- ECH/CFS176 Child Development OR
- GCU121 World Geography I: Eastern Hemisphere OR
- GCU122 World Geography II: Western Hemisphere OR
- ECN211 Macroeconomic Principles OR
- ECN212 Microeconomic Principles OR
- HIS104 United States History 1865 to Present OR
- PSY101 Introduction to Psychology

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

The lecture course(s) 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 or SG in Biology (BIO)

AND

2) Physical Sciences or Earth/Space Sciences: Select four (4) credits of SQ or SG from one of the following prefixes: 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.

2. Awareness Areas ..... 0-3

a. Cultural Diversity in the United States [C] ..... 0

Met by Elementary Education Requirements below. No additional coursework required.

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 AGECEC matrix for each course's value(s) in the semester it is taken.)



MCCCD Additional Requirements .....	0-3
1. Oral Communication.....	0
Met by COM225 required as part of AGEC Core. No additional coursework required.	
2. Critical Reading.....	0-3
Students may demonstrate proficiency through assessment.	
• CRE101 Critical Reading OR equivalent as indicated by assessment	
II. Elementary Education Requirements.....	25
A. Education Foundations.....	17
Complete all of the following:	
• EDU221 Introduction to Education	
• EDU222 Introduction to the Exceptional Learner	
• EDU230 Cultural Diversity in Education	
• MAT256 Investigating Quantity: Number, Operations and Numeration Systems	
• MAT257 Investigating Geometry, Probability and Statistics	
B. Electives for Arizona Professional Teacher Standards.....	8
A total of 8 semester credits are required to satisfy the Electives for Arizona Professional Teacher Standards: 3 credits in an additional Education course and 5 credits in Content Area Electives.	
Courses must transfer to all public Arizona universities as Elective Credit, Departmental Elective, or Equivalent to a university course as indicated in the Arizona Course Equivalency Guide 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.	
1. Additional Education Course Requirement.....	3
Select any EDU course(s) (except EDU221, EDU222, EDU230 and EDU250) to satisfy this requirement.	
2. Content Area Electives .....	5
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.	
Choose any combination from the following list of courses and prefixes to total five (5) credits of additional coursework. Course(s) selected must be different from those counted toward AGEC-A or Education Foundations requirements.	

See note below regarding Arizona Constitution requirement for state certification.

Any ARH, ART, CIS, ECN, BPC, ENG, ENH, GCU, GPH, HIS, MHL, MTC, POS, THF, THE, THP prefixed course(s)

- Any EDU course(s) (except EDU221, EDU222, EDU230 and EDU250)
- Any MAT (courses numbered higher than 142 except MAT256 and MAT257)
- Any Foreign Language course(s)
- Any Natural Science course(s)
- CFS/ECH176 Child Development
- CFS205 Human Development
- EED215 Early Learning: Health, Safety, Nutrition and Fitness
- AAA/CPD115 Creating College Success

**ASSOCIATE IN ARTS ELEMENTARY EDUCATION TOTAL CREDITS: 60-66**

\*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] may want to 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].

## Maricopa Community Colleges (MCCCD) 2017-1018, Associate in Arts, Fine Arts (AAFA) -Art

### DESCRIPTION

The Maricopa County Community College District Associate in Arts, Fine Arts – Art (AAFA-Art) degree requires a minimum of 60 semester credits for the program of study. The degree includes the following components:

- I. General Education:
  - Arizona General Education Curriculum for Arts (AGEC-A)
  - MCCCD Additional Requirements
- II. Fine Arts Requirements – Art

### PURPOSE OF THE DEGREE

The Associate in Arts, Fine Arts – Art (AAFA-Art) 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 – Art will apply to general university graduation requirements of the majors that align with AAFA-Art degree; however, students need to be aware of 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-Art degree with majors at the Arizona public universities can be accessed via the following website: [www.aztransfer.com](http://www.aztransfer.com)

### DEGREE REQUIREMENTS

The 60-69 semester credits required for the Associate in Arts, Fine Arts - Art degree follow. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGECA and the AGECA Matrix. Courses available for both Areas during an upcoming semester can also be found using the “Find A Class” website at each MCCCD college.

	<u>Credits</u>
I. MCCCD General Education .....	35-44
A. AGECA - A .....	35-38
1. Core Areas .....	35

\*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. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

a.	First-Year Composition (FYC) .....	6
•	ENG101 OR ENG107 AND	
•	ENG102 OR ENG108	
b.	Literacy and Critical Inquiry [L] .....	3
c.	Mathematics [MA] .....	3
	Requires a course in college mathematics (MAT140, MAT141, MAT142) or college algebra (MAT150, MAT151, MAT152) or pre-calculus (MAT187) or any other [MA] designated course for which college algebra is a pre-requisite.	
d.	Computer/Statistics/Quantitative Applications [CS] .....	3
e.	Humanities, Arts and Design [HU] .....	6
•	ARH101 [H] Prehistoric Through Gothic Art AND	
•	ARH102 [H] Renaissance Through Contemporary Art	
f.	Social-Behavioral Sciences [SB] .....	6
	Students are encouraged to choose course work from more than one discipline.	
g.	Natural Sciences [SQ/SG] .....	8
	The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of 4 credits each. Credits for lecture and lab components may be combined or each may carry separate credit.	
	At least four (4) credits must be designated as SQ. Eight (8) credits of SG will not satisfy this requirement.	
2.	Awareness Areas .....	0-6
a.	Cultural Diversity in the United States [C] .....	0-3
	May be met by [HU] or [SB] course depending on specific courses selected. (See AGEC matrix for current course values.)	
b.	Global Awareness [G] OR Historical Awareness [H] .....	0
	Met by ARH101 and ARH102 required as part of AGEC-Core. No additional coursework required.	
c.	Mathematics [MA] .....	3
	MCCCD Additional Requirements .....	0-6
	As noted below, courses in this area may also be applied towards AGEC-A Core Area requirements.	

1. Oral Communication.....0  
 Met by COM225 required as part of AGEK Core. No additional coursework required.
  - 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)
  
2. Critical Reading.....0-3  
 Students may demonstrate proficiency through assessment.
  - CRE101 Critical Reading OR equivalent as indicated by assessment
  
- II. Fine Arts Requirements – Art .....25
  1. Fine Art Foundations.....13  
 Complete all of the following:
    - ART111 Drawing I
    - ART112 Two-Dimensional Design
    - ART113 Color
    - ART115 Three-Dimensional Design
    - ART255AB The Portfolio
  
  2. Fine Art Electives..... 12  
 Choose any combination from the following list of courses totaling a minimum of twelve (12) credits of additional coursework.
    - ART116 Life Drawing I
    - ART122 Drawing and Composition II
    - ART131 Photography I
    - ART151 Sculpture I
    - ART161 Ceramics I
    - ART165 Watercolor Painting I
    - ART167 Painting I
    - ART250 Introduction to Printmaking

**ASSOCIATE IN ARTS, FINE ARTS – ART TOTAL CREDITS: 60-69**

## Maricopa Community Colleges (MCCCD) 2017-2018, Associate in Arts, Fine Arts (AAFA) -Dance

### DESCRIPTION

The Maricopa County Community College District Associate in Arts, Fine Arts - Dance degree requires a minimum of 65 semester credits for the program of study. The degree includes the following components:

- I. General Education:
  - Arizona General Education Curriculum for Arts (AGEC-A)
  - MCCCD Additional Requirements
- II. Fine Arts Requirements – Dance

### PURPOSE OF THE DEGREE

The Associate in Arts, Fine Arts - Dance 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 – Dance will apply to general university graduation requirements of the majors that align with AAFA-Dance degree; however, students need to be aware of 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-Dance degree with majors at the Arizona public universities can be accessed via the following website: [www.aztransfer.com](http://www.aztransfer.com)

### DEGREE REQUIREMENTS

The 65-74 semester credits required for the Associate in Arts, Fine Arts - Dance degree 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 each MCCCD college’s website.

	<u>Credits</u>
I. MCCCD General Education .....	35-44
A. AGEC-A .....	35-38



\*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. (AGEC designations are subject to change. See AGECEC matrix for each course's value(s) in the semester it is taken.)

1. Core Areas .....	35
a. First-Year Composition (FYC) .....	6
• ENG101 OR ENG107 AND	
• ENG102 OR ENG108	
b. Literacy and Critical Inquiry [L] .....	3
c. Mathematics [MA] .....	3
Requires a course in college mathematics (MAT140, MAT141, MAT142) or college algebra (MAT150, MAT151, MAT152) or pre-calculus (MAT187) or any other [MA] designated course for which college algebra is a pre-requisite.	
d. Computer/Statistics/Quantitative Applications [CS] .....	3
e. Humanities, Arts and Design [HU] .....	6
• DAH100 Introduction to Dance	
AND Any additional Humanities, Art and Design course [HU]	
The following options are recommended:	
• DAH201 World Dance Studies OR	
• DAH250 [C] Dance in Popular Culture OR	
• DAH255 [C] Hip Hop: Arts, Aesthetic and Culture	
f. Social-Behavioral Sciences [SB] .....	6
Students are encouraged to choose course work from more than one discipline.	
g. Natural Sciences [SQ/SG] .....	8
The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of 4 credits each. Credits for lecture and lab components may be combined or each may carry separate credit.	
• BIO160 [SG] Introduction to Human Anatomy and Physiology OR	
• BIO201 [SG] Human Anatomy and Physiology I	
AND	
• Any [SQ] course	
2. Awareness Areas: .....	0-3
a. Cultural Diversity in the United States [C] .....	0-3
May be met by [HU] or [SB] course depending on specific courses selected.	

b. Global Awareness [G] OR Historical Awareness [H].....	0-3
MCCCD Additional Requirements .....	0-6
As noted below, courses in this area may also be applied towards AGEC-A Core Area requirements.	
1. Oral Communication.....	0-3
Met by COM225 required as part of AGEC Core. No additional coursework required.	
• 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)	
2. Critical Reading.....	0-3
Students may demonstrate proficiency through assessment.	
• CRE101 Critical Reading OR equivalent as indicated by assessment	
II. Fine Arts Requirements – Dance.....	30
Part I: Foundation.....	12
Complete all of the following:	
• DAN150 Dance Performance I	
• DAN210 Dance Production I	
• DAN221 Rhythmic Awareness I	
• DAN264 Choreography I	
• DAN280 Dance Practicum	
Part II: Performance Standards.....	9
Select from the following options to complete a minimum of nine semester credits.	
Students must attain Level III competency in ballet and modern dance courses:	
Ballet I-IV: (maximum of 2 credits each) DAN131 (1), 134 (1), 231 (1), 234 (1).....	1-2
Ballet III and IV [Intensive] : (max of 4 credits each) DAN231AA (2), 234AA (2).....	2-4
Ballet Pointe: DAN237 (1).....	1
Modern I-IV: (maximum of 2 credits each) DAN132 (1), 135 (1), 232 (1), 235 (1).....	1-2
Modern III and IV [Intensive] :(max of 4 credits each) DAN232AA (2), 235AA (2).....	2-4

Jazz I-IV: (maximum of 1 credit each) DAN133 (1), 136 (1), 233 (1).....	1
Jazz III and IV [Intensive] :(max of 2 credits each) DAN233AA (2), 236AA (2).....	2
Dance Conservatory I-III: DAN290++, 291++, 292++ (any).....	1-3
Part III: Restricted Electives.....	0-3
Students can choose to complete a combination of up to three credits in Part III and the remaining credits in Part IV; or students can opt to complete all Elective credits in Part IV. No more than three credits may be selected from the following DAN prefixed courses:	
Hip Hop (any) DAN102++, 202++.....	1 each
Break Dancing: DAN103++, 203++.....	1 each
Ballroom: DAN104++, 204++.....	1 each
Swing: DAN105++, 205++.....	1 each
Latin: DAN106++, 206++.....	1 each
Country: DAN107++, 207++.....	1 each
Tango: DAN108++, 208++.....	1 each
Contemporary: DAN115++.....	1 each
World: DAN120++.....	1 each
Social: DAN125++.....	1 each
Musical Theatre Dance I-IV: DAN129, 130, 229, 230.....	1 each
Ballet I-IV: DAN131 (1), 134 (1), 231 (1), 234 (1).....	1 each
Ballet III and IV [Intensive]: DAN231AA (2), 234AA (2).....	2 each
Ballet Pointe: DAN237 (1).....	1 each
Modern I-IV: DAN132 (1), 135 (1), 232 (1), 235 (1).....	1 each
Modern III and IV [Intensive]: DAN232AA (2), 235AA (2).....	2 each
Jazz I-IV: DAN133 (1), 136 (1), 233 (1), 236 (1) .....	1 each
Jazz III and IV [Intensive] :DAN233AA (2), 236AA (2).....	2 each
Tap I-IV: DAN140 (1), 141 (1), 240 (1), 245(1).....	1 each
Tap III and IV [Intensive]: DAN233AA (2), 236AA (2).....	2 each

Tap Ensemble: DAN146 (1).....	1 each
Improvisation: DAN164.....	1 each
Dance Workshop: DAN141(1).....	1 each
Dance Performance I-IV: DAN150, 155, 250, 255.....	1 each
Multimedia Performance Ensemble: DAN/MUP285AA.....	1 each
Dance Conservatory I-IV: DAN290++, DAN291++, DAN292++.....	1-3 each
*Special Projects: DAN298++.....	1-3 each

Part IV: Restricted Electives: Dance Theory Electives .....6-9

Students can choose to complete a combination of up to three (3) credits in Part III and the remaining credits in Part IV; or students can opt to complete all nine (9) Elective credits in Part IV. DAH classes cannot be used as an AGECE-A core area requirement and as a Dance Theory Elective (Part IV). They may be counted toward designated [G], [H] and/or [C] Awareness area(s).

DAH110 Dance in Film.....	3
DAH190 Discovering Dance Careers .....	1
DAH201 World Dance Studies .....	3
DAH210 History of Ballet and Modern Dance.....	3
DAH250 Dance in Popular Culture.....	3
DAH255 Hip Hop Arts, Aesthetic and Culture.....	3
DAN138 Dance Seminar I .....	1
DAN170 Dance Kinesiology.....	3
DAN201++Special Topics: Dance (any).....	1-3
DAN211 Dance Production II .....	3
DAN222 Rhythmic Awareness II.....	3
DAN238 Dance Seminar II .....	1
DAN241 Dance Notation I .....	3
DAN265 Choreography II.....	3
DAN272 Dance Technology.....	3
DAN275 Choreography for Film and Video.....	3
DAN282++ Service-Learning Experience in Dance (any) .....	1-3
DAN293 Teaching Dance in Elementary Education .....	3
DAN294 Teaching Dance in Secondary Education.....	3

DAN295 Teaching and Management of Studio Dance.....	3
*DAN296++ Cooperative Education (any) .....	1-4
*DAN298++ Special Projects (any).....	1-3

\* Selection of DAN296 or 298 courses to satisfy degree requirements should be done in consultation with a program advisor or faculty member as Special Projects courses do not currently transfer to any of the three Arizona state public universities.

**ASSOCIATE IN ARTS, FINE ARTS – DANCE TOTAL CREDITS: 65-74**

## Maricopa Community Colleges (MCCCD) 2017-2018, Associate in Arts, Fine Arts (AAFA) –Theatre

### DESCRIPTION

The Maricopa County Community College District Associate in Arts, Fine Arts - Theatre degree requires a minimum of 60-64 semester credits for the program of study. The degree includes the following components:

- I. General Education:  
Arizona General Education Curriculum for Arts (AGEC-A)  
MCCCD Additional Requirements
- II. Fine Arts Requirements – Theatre

### PURPOSE OF THE DEGREE

The Associate in Arts, Fine Arts - Theatre (AAFA -Theatre) 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 – Theatre will apply to general university graduation requirements of the majors that align with AAFA-Theatre 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-Theatre degree with majors at the Arizona public universities can be accessed via the following website: [www.aztransfer.com](http://www.aztransfer.com)

### DEGREE REQUIREMENTS

The 60-64 semester credits required for the Associate in Arts, Fine Arts - Theatre degree follow. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGECE-A and the AGECE Matrix. Courses available for both Areas during a current or upcoming semester can also be found using the “Find A Class” tool on at each MCCCD college’s website.

	<u>Credits</u>
I. MCCCD General Education .....	35-44
A. AGECE - A .....	35-41



\*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. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

1. Core Areas .....	35
a. First-Year Composition (FYC) .....	6
• ENG101 OR ENG107 AND	
• ENG102 OR ENG108	
b. Literacy and Critical Inquiry [L] .....	3
• THE220 Modern Drama	
c. Mathematics [MA] .....	3
Requires a course in college mathematics (MAT140, MAT141, MAT142) or college algebra (MAT150, MAT151, MAT152) or pre-calculus (MAT187) or any other [MA] designated course for which college algebra is a pre-requisite.	
d. Computer/Statistics/Quantitative Applications [CS] .....	3
e. Humanities, Arts and Design [HU] .....	6
• HUM/THF205 Introduction to Cinema AND	
• THE111 Introduction to Theatre	
f. Social-Behavioral Sciences [SB] .....	6
Students are encouraged to choose course work from more than one discipline.	
g. Natural Sciences [SQ/SG] .....	8
The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of 4 credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four (4) credits must be designated as SQ. Eight (8) credits of SG will not satisfy this requirement.	
2. Awareness Areas: .....	0-6
a. Cultural Diversity in the United States [C] .....	0-3
May be met by [SB] course depending on specific courses selected.	
b. Global Awareness [G] OR Historical Awareness [H] .....	0-3
May be met by [SB] and/or [SQ/SG] course depending on specific courses selected.	
MCCCD Additional Requirements .....	0-6
As noted below, courses in this area may also be applied towards AGEC-A Core Area requirements.	

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

Students may demonstrate proficiency through assessment.

  - CRE101 [L] Critical Reading (3) OR equivalent as indicated by assessment

Part II. Fine Arts Requirements – Theatre:..... 25-29

1. Theatre Foundations.....16-17

Complete all of the following:

- THF115 Makeup for Stage and Screen ..... 3
- THP112 Acting I..... 3
- THP213 Introduction to Technical Theatre..... 3
- THP214 Directing Techniques..... 3
- THP217 Introduction to Design Scenography..... 3
- THP201AA Theatre Production I (1) OR
- THP201AB Theatre Production II (2) ..... 1-2

2. Theatre Electives.....9-12

Choose any combination from the following list of courses totaling a minimum of nine (9) credits of additional coursework. Students may take a variety of courses, or they may choose to emphasize a particular aspect of theatre, such as acting, technical theatre, cinema, theatre education, directing, movement, musical theatre, etc. Students should consult with their campus theatre advisor for the restricted electives recommended to attain each area of emphasis.

- HUM/THF206 Introduction to Television Arts..... 3
- HUM/THF210 Contemporary Cinema..... 3
- THE118 Playwriting..... 3
- THF120AA Audition Techniques for Stage and Screen: Prepared Monologue ..... 1
- THF120AB Audition Techniques for Stage and Screen: Cold Readings ..... 1

THF130 Combat for Stage and Screen.....	3
THF209 Acting for the Camera .....	3
THF219 Advanced Acting for the Camera.....	3
THP131 Stage Movement.....	3
THP151 Theatre for Youth.....	3
THP211 Creative Drama .....	3
THP212 Acting II .....	3
THP216 Beginning Stage Lighting.....	3
THP219 Introduction to Puppetry.....	3
THP226 Theatrical Design: Costuming .....	3
COM/THP241 Oral Interpretation of Literature .....	3
THP262 Entertainment Industry Design Drafting .....	3
THP267 Painting Techniques for Film, TV and Theatre .....	3
THP268 Opportunities in Production.....	3
THP269 Technical Theatre Portfolio Development .....	1
MUP/THP270 Musical Theatre Workshop .....	2
COM/THP271 Voice and Diction .....	3
THP281 Production and Acting I .....	3
THP298AA-AC Special Projects.....	1-3

**ASSOCIATE IN ARTS, FINE ARTS – THEATRE TOTAL CREDITS: 60-64**

## Maricopa Community Colleges (MCCCD) 2017-2018, Associate in Science Degree (AS)

### DESCRIPTION

The degree includes the following components:

- I. General Education:  
Arizona General Education Curriculum for Science (AGEC-S)  
MCCCD Additional Requirements
- II. Required Courses (Major Courses)

### PURPOSE OF THE DEGREE

The Associate in Science 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 will apply to university graduation requirements of the university major for which the Associate in Science is designed. Information regarding the articulation of the Associate in Science with majors at the Arizona public universities can be accessed via the following website: [www.aztransfer.com](http://www.aztransfer.com)

### ACADEMIC POLICIES THAT GOVERN THE ASSOCIATE IN SCIENCE DEGREE

- Completion of the Associate in Science and the AGEC-S provides for exemption from Arizona public university admission requirements for Arizona residents who have a minimum Grade Point Average of 2.0 on a 4.0=A scale and a minimum 2.5 on a 4.0=A scale for non-residents.
- The graduation policies within the general catalog must be satisfied for completion of the Associate in Science degree.
- A minimum of 60 semester credits in courses numbered 100 and above to be completed with a grade of "C" or better. Credit units transferred from outside of the district need to be at a grade of "C" or better. A grade of "C" equals 2.0 on a 4.0 grading scale or equivalent. On an exception basis, P-grades may be allowed in the AGEC for credit transferred if documentation collected by the community college indicates that the P-grade issued was the only option for the student and the P-grade is a "C" or better. The P-grade exception does not apply to credits awarded by AGEC granting/receiving institutions.

- Credit received through prior learning assessment or credit by evaluation is transferable within the Maricopa Community Colleges but is not necessarily transferable to other colleges and universities. No more than 20 semester credit hours may be applied toward AGEC.
- The General Education Requirements for AGEC-S may be completed in 36-38 semester credits with the following stipulations
  - Courses can satisfy a Core area and one or two Awareness areas simultaneously.
  - A course cannot be used to satisfy more than one Core area requirement in the AGEC A and B.
  - A course can be used to satisfy the L and SB or L and HU requirements simultaneously in the Core area for the AGEC S.
- General Education Courses can satisfy multiple areas within the degree simultaneously (AGEC-S Core Area, AGEC Awareness Area, MCCCDC Additional Requirements, or lower-division courses applicable to the major).
- 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. Students do have the option to petition for general education evaluations and/or general education designations upon transfer.
- Courses completed at one of the Maricopa Community Colleges to meet AGEC-S requirements must be listed in the Course Equivalency Guide within AZ Transfer as an equivalent course, departmental elective credit (XXXXDEC), or general elective credit (Elective) at all Arizona public universities. The course's evaluation and/or general education designation is valid for the term in which the student is awarded credit on the transcript. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGEC link.
- Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HISELC, MATELC), 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 elective requirements with courses that are transferable and applicable to their intended university degree. For appropriate course selection, students should consult with an advisor.
- Courses transferred from another regionally accredited institution to one of the Maricopa Community Colleges will be evaluated by the college for inclusion in the AGEC-S or Associate in Science Degree.
- Courses and their modular equivalents will satisfy AGEC-S and Associate in Science requirements.

- If a course is cross-referenced with one or more other courses, then only one of the cross-referenced courses will be accepted to meet requirements.
- Courses completed at one of the Maricopa Community Colleges to satisfy Common Courses must be transferable as elective or better to the universities that have the shared majors listed on a Common Course Matrix. A shared major is a university degree program that has similar academic preparation to one or more degree programs at other Arizona public universities as listed on the Common Course Matrices. For appropriate course selection, students should consult with an advisor.

### DEGREE REQUIREMENTS

The 60-64 semester credits required for the Associate in Science follow. View specific course information via the following website: <https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation> by clicking on the statewide AGEC icon. The AGEC A, B, S, and AGEC Matrix identify the courses in alpha-order by prefix as well as the Core Areas and Awareness Areas where the course will apply.

#### I. MCCCDC General Education

The MCCCDC General Education includes two areas: MCCCDC AGEC-S and MCCCDC additional requirements.

MCCCDC AGEC-S	<u>Credits</u>
1. Core Areas: .....	36-38
a. First-Year Composition (FYC) .....	6
b. Literacy and Critical Inquiry [L].....	0-3
<p>        Recommend selecting a course that satisfies L (Literacy and Critical Inquiry) and SB (Social-Behavioral Sciences) OR L (Literacy and Critical Inquiry) and HU (Humanities, Arts and Design) or L (Literacy and Critical Inquiry) and COM or L (Literacy and Critical Inquiry) and CRE101 requirements simultaneously.</p>	
c. Mathematical Studies [MA].....	4
<p>        To complete the Mathematical Studies requirement, select one course to satisfy Mathematics [MA] S.</p>	
<p>            1) Mathematics [MA] S (4 credits)</p> <p>                Select a calculus course MAT220 or MAT221, OR</p> <p>                Any mathematics course for which MAT220 or MAT221 is a prerequisite.</p>	
d. Humanities, Arts and Design [HU].....	6
<p>        Students are encouraged to choose course work from more than one discipline for a total of six semester credits. Select a course</p>	



that satisfies both L and HU requirements simultaneously.

- e. Social-Behavioral Sciences [SB] .....6

Students are encouraged to choose course work from more than one discipline for a total of six semester credits.

Select a course that satisfies both L and SB requirements simultaneously.

- f. Natural Sciences.....8

To complete the Natural Sciences requirement:

Select eight (8) semester credits of either general chemistry CHM151 & CHM151LL and CHM152 & CHM152LL OR Eight (8) semester credits of university physics PHY115 & PHY116 or PHY121 & PHY131 OR Eight (8) semester credits of general biology, BIO181 & BIO182 appropriate to the major.

- g. Subject Options (subject based on major).....6-8

Students completing AGECS, through careful selection of courses that meet the other major or pre-requisite requirements for Science degree, will meet this requirement. Using a transfer guide, select courses from Mathematics courses above Calculus, and/or Science courses from: Astronomy, Biology, Botany, Chemistry, Environmental Science, Geology, Physical Geography, Physics, Zoology.

2. Awareness Areas:

Students must satisfy two Awareness Areas: Cultural Diversity in the United States [C] and either Global Awareness [G] or Historical Awareness [H]. However, it is not necessary for students to exceed thirty-six to thirty-eight semester credits to complete the Awareness Areas because 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]

AND

Global Awareness [G] OR

Historical Awareness [H]

- 3. MCCC Additional Requirements ..... 0-6

Students must satisfy Oral Communication and Critical Reading areas. However, it is not necessary for students to exceed the thirty-six to thirty-eight semester credits required in order to complete the MCCC Additional Requirements.

- a. Oral Communication

A total of three (3) semester credits are required for Oral Communication.

However, if students select a communication course that satisfies both the Oral

Communication area and an area within the Core, then the Oral Communication requirement has been satisfied and additional electives may be taken.

Select from the following options:

- COM100 [SB] (3 credits) OR
- COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
- COM110 [SB] (3 credits) OR
- COM110AA & COM110AB & COM110AC [SB] (3 credits) OR
- COM225 [L] (3 credits) OR
- COM230 [SB] (3 credits)

b. Critical Reading

A total of three (3) semester credits are required for the Critical Reading area. If students demonstrate proficiency through assessment, then the Critical Reading requirement has been satisfied and additional electives may be taken.

CRE101 [L] OR equivalent as indicated by assessment

II. General Electives

Select courses to complete a minimum of 60 semester credits but no more than a total of 64 semester credits.

For students who have decided on a major that articulates with the AS, but who are undecided on the university to which they will transfer, courses satisfying the General Electives area should be selected from the list of Common Courses, Arizona Transfer Pathway Guides, and/or University Transfer Guides in order for the courses to apply in the major upon transfer.

The list of Common Courses for each major is included in the Arizona Transfer Pathway Guides. University Transfer Guides are also available for the Arizona public universities. These guides, both statewide and institutional, are accessible on the following web site: [www.aztransfer.com](http://www.aztransfer.com)

Maricopa courses and external courses evaluated as Maricopa equivalents or departmental electives (for example, HISELC, MATELC), 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 elective requirements with courses that are transferable and applicable to their intended university degree. For appropriate course selection, students should consult with an advisor. For appropriate course selection, students should consult with an advisor.

For some majors, students must demonstrate 4th semester proficiency at the 202 course level to satisfy the Non-English Language Requirements. Students should consult the Arizona Transfer Pathway Guides and/or the University Transfer Guides to determine this requirement for the major at the university to which they intend to transfer. If required, it is recommended

that students choose Maricopa courses as electives to meet this requirement as part of the Associate in Science degree.

Students who are undecided on a major or university should consult an advisor. Not all majors have common courses, so it is recommended that students consult with an advisor for a list of common courses or assistance with selecting appropriate electives.

**ASSOCIATE IN SCIENCE TOTAL CREDITS: 60-64**

## **Maricopa Community Colleges (MCCCD) 2017-2018, Associate in Business (ABUS) Degree, General Requirements (GR)**

### **DESCRIPTION**

The Maricopa County Community College District Associate in Business General Requirements (ABUS-GR) degree requires a total of 62-71 semester credits for the program of study. The degree has three major components:

- I. General Education:  
Arizona General Education Curriculum for Business (AGEC-B)
- II. Common Lower Division Program Requirements
- III. General Electives

### **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 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) and/or Common Lower Division Program Requirements).

### **DEGREE REQUIREMENTS**

The 62-71 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 AGECE 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.

	<u>Credits</u>
I. MCCCDC General Education .....	35-41
A. AGEC-B .....	35-41
<p>*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. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)</p>	
1. Core Areas .....	35
a. First-Year Composition (FYC) .....	6
• ENG101 OR ENG107 AND	
• ENG102 OR ENG108	
b. Literacy and Critical Inquiry [L] .....	3
<p>(*Note: Students planning to attend ASU W.P. Carey will be required to take COM225.)</p>	
c. Mathematics [MA] .....	3
<p>MAT212 Brief Calculus or higher mathematics course</p>	
d. Computer/Statistics/Quantitative Applications [CS] .....	3
<p>CIS105 Survey of Computer Information Systems</p>	
e. Humanities, Arts and Design [HU] .....	6
<p>Students are encouraged to choose course work from more than one discipline.</p>	
f. Social-Behavioral Sciences [SB] .....	6
<p>Students are encouraged to choose course work from more than one discipline.</p>	
g. Natural Sciences [SQ/SG] .....	8
<p>The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of 4 credits each. Credits for lecture and lab components may be combined or each may carry separate credit.</p> <p>At least four (4) credits must be designated as SQ. Eight (8) credits of SG will not satisfy this requirement.</p> <p>*Note: Students transferring to ASU in Accountancy should take two of the following courses in meeting the general education requirements: a transfer course in Sociology; Psychology; COM230 or COM225. If students do not take these prior to transfer, they may need to take additional hours to meet ASU graduation requirements.</p>	
2. Awareness Areas: .....	0-6
<p>Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s). (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)</p>	

a. Cultural Diversity in the United States [C].....	0-3
b. Global Awareness [G] OR Historical Awareness [H].....	0-3
II. Common Lower Division Program Requirements:.....	18-30
Accounting:.....	6-9
• ACC111 Accounting Principles I 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 AGECEC 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
Quantitative Methods:.....	3
• GBS220 Quantitative Methods in Business OR	
• *MAT217 Mathematical Analysis for Business OR	
• *MAT218 Mathematical Analysis for Business	
* Students planning to attend ASU W.P. Carey will be required to take MAT217 or MAT218.	
Business Electives:.....	3-6
Select from the following options:	
Some courses may be used to satisfy both Business Elective and Core Area	
requirements, as indicated in the AGECEC matrix. (AGECEC designations are subject to	
change. See AGECEC matrix for each course's value(s) in the semester it is taken.)	
• CIS114DE Excel Spreadsheet	
• CIS133DA Internet/Web Development Level I	
• CIS162AD C#: Level I	
• GBS110 Human Relations in Business and Industry OR	
• MGT251 Human Relations in Business	
• GBS151 Introduction to Business	
• GBS233 [L] Business Communication	



- GBS220 Quantitative Methods in Business (If course used to satisfy Common Lower Division Program Requirements, it can not be used to satisfy Business Electives.)
- IBS101 Introduction to International Business
- MGT253 Owning and Operating a Small Business
- REA179 Real Estate Principles I
- REA180 Real Estate Principles II
- MKT271 Principles of Marketing
- PAD100 21st Century Public Policy and Service
- SBU200 Society and Business

III. General Electives: ..... 0-9

Select courses 100-level or higher as needed to complete a minimum of 62 semester credits but no more than a total of 71 semester credits. Ideally students should select courses that meet requirements for their major/area of interest and transfer institution. For appropriate course selection, students should consult with an academic advisor. 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](http://aztransfer.com), [maricopa.edu/transfer/partners](http://maricopa.edu/transfer/partners), as well as those of individual universities. For appropriate course selection, students should consult with an advisor.

**ASSOCIATE IN BUSINESS GENERAL REQUIREMENTS TOTAL CREDITS: 62-71**

## Maricopa Community Colleges (MCCCD) 2017-2018, Associate in Business (ABUS) Degree, Special Requirements (SR)

### DESCRIPTION

The Maricopa County Community College District Associate in Business, Special Requirements (ABUS-SR) degree requires a total of 62-71 semester credits for the program of study. The degree has three major components:

- I. General Education:  
Arizona General Education Curriculum for Business (AGEC-B)
- II. Common Lower Division Program Requirements
- III. General Electives

### PURPOSE OF THE DEGREE

The Associate in Business General 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 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) and/or Common Lower Division Program Requirements).

### 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: AGECE-B and the AGECE Matrix. Courses available for both Areas during a current or upcoming semester can also be found using the "Find A Class" tool on at each MCCCD college's website.

	<u>Credits</u>
I. MCCCD General Education .....	35-41

A. AGEC-B .....35-41

\*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. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

1. Core Areas .....35

a. First-Year Composition (FYC) .....6

- ENG101 OR ENG107 AND
- ENG102 OR ENG108

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

(\*Note: Students planning to attend ASU W.P. Carey will be required to take COM225.)

c. Mathematics [MA] ..... 3

MAT212 Brief Calculus or higher mathematics course

d. Computer/Statistics/Quantitative Applications [CS] .....3

CIS105 Survey of Computer Information Systems

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

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

f. Social-Behavioral Sciences [SB] ..... 6

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

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

The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of 4 credits each. Credits for lecture and lab components may be combined or each may carry separate credit.

At least four (4) credits must be designated as SQ. Eight (8) credits of SG will not satisfy this requirement.

2. Awareness Areas: ..... 0-6

Some courses may be used to satisfy both a Core Area and one or more Awareness Area(s). (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

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

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

II. Common Lower Division Program Requirements: .....21-30

Accounting: ..... 6-9

- ACC111 Accounting Principles I 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 [CS] Business Statistics.....3

Programming I:.....3

CIS162AD C#: Level I

ProgrammingII:.....3

CIS250 Management of Information Systems

Quantitative Methods:..... 3

- GBS220 Quantitative Methods in Business OR

- MAT217 Mathematical Analysis for Business OR

- MAT218 Mathematical Analysis for Business

(\*Note: Students planning to attend ASU W.P. Carey will be required to take MAT217 or MAT218)

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

Select courses 100-level or higher as needed to complete a minimum of 62 semester credits but no more than a total of 71 semester credits. Ideally students should select courses For appropriate course selection, students should consult with an academic advisor. 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 advisor.

**ASSOCIATE IN BUSINESS SPECIAL REQUIREMENTS TOTAL CREDITS: 62-71**

## Maricopa Community Colleges (MCCCD) 2017-2018, Associate in General Studies (AGS) Degree

### 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 (AA, AAEE, AAFA), Associate in Business (ABUS-GR, ABUS-SR) or Associate in Science (AS) ) by the Maricopa Community Colleges.

Students who demonstrate skills comparable to those in Critical Reading and/or Computer Usage may substitute acceptable elective courses to satisfy the total credits required for the degree.

### 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.



- Credits transferred from outside of MCCCCD 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.

	<u>Credits</u>
I. MCCCCD General Education .....	38-45
1. Core Areas .....	12-16
a. First-Year Composition.....	6
• ENG101 OR ENG107 AND	
• ENG102 OR ENG108	
b. Mathematics.....	3-5
c. Computer Usage.....	0-1
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.	
d. Oral Communication .....	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)	
e. Critical Reading.....	0-3
Students may demonstrate proficiency through assessment. CRE101 Critical Reading OR equivalent as indicated by assessment.	

2. Distribution Areas..... 26-27

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

    b. Social-Behavioral Sciences .....9  
         Students are encouraged to choose course work from more than one discipline.

    c. 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 advisor.

    d. Literacy and Critical Inquiry .....3  
         Students are encouraged to choose course work from more than one discipline.

II. General Electives ..... 15-26  
         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.

**ASSOCIATE IN GENERAL STUDIES TOTAL CREDITS: 60-64**

**AGS REQUIREMENTS:**

All courses listed meet AGS requirements as specified. Courses in Purple Italic Underline also meet Arizona General Education Curriculum AGECE 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)

MAT Mathematics 112, 120, 121, 122, 122AA & 122AB&122AC, 140, 141, 142, 150, 151, 151AA & 151AB & 151AC & 151AD, 152, 172, 182, 187, 206, 212, 213, 220, 221, 230, 231, 240, 241, 256,

257, 261, 262, 276, 277, Equivalent course/Satisfactory completion of a higher level Mathematics course.

#### Computer Usage (1 credit)

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

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, 162, 162AC, 169, 183AA, 217AM, 259, 262)

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

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
- CNS Construction 101
- COM Communication 241
- DAH Dance Humanities 100, 201, 250, 255
- EDU Education 291, 292, 294
- ENG English 200, 213, 218
- ENH English Humanities Any ENH Course(s), including 110, 111, 112, 113, 114, 117, 130, 190, 200, 201, 202, 204, 206, 214, 221, 222, 230, 231, 232, 235, 241, 242, 245, 251, 252, 253, 254, 255, 256, 259, 260, 275, 277, 277AA-AK, 280, 284, 285, 291, 294, 295 (and except 250)
- FRE French 265
- HCR Health Care Related 210

- HIS History 101, 102, 103, 108, 110, 111, 113, 114, 203, 212, 251,253, 254, 252, 275
- HUM Humanities Any HUM course(s), including 100, 101, 105AA,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, 245, 250, 251, 260, 261, 292, 295 (and except 120, 225)
- INT Interior Design 115, 120, 225
- 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
- REL Religious Studies Any REL Course(s), 100, 101, 151, 200, 202, 203, 205, 206, 207, 210, 211, 212, 213, 214, 218, 223, 225, 230, 240, 244, 245, 248, 250, 251, 271, 277, 292, 294, 295, 282AA-AC, 290, 291
- SLC Studies in Language & Culture 201
- SPA Spanish 241, 242, 265, 266
- SPH Spanish Humanities 241, 245
- SSH Sustainability/Social Sciences and Humanities 111
- STO Storytelling 292, 294
- TCM Telecommunications 107
- THE Theater 111, 220
- THF Theatre and Film 205, 206, 210
- THP Theater/Performance/Production 241
- WST Women's Studies 209, 284, 285, 290
- Social-Behavioral Sciences (9 credits)
- Students are encouraged to choose courses from more than one discipline.
- AFR African American Studies 202
- 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
- CCS Ethnic Relations 202
- CFS Child/Family Studies 112, 157, 159, 176, 205, 235, 259

- COM Communication 100, 100AA&100AB&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
- FUS Future Studies 101
- 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 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, 115, 120, 125, 130, 140, 180, 210, 212, 221, 222, 223, 230, 270, 281AB, 282AA-AC, 285
- PSY Psychology 101, 123, 132, 156, 157, 215, 218, 225, 235, 240, 241, 243, 250, 260, 266, 277, 280, 292
- 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 (and except 143, 245, 253, 265, 270)
- SSH Sustainability/Social Sciences and Humanities 111



SUS Sustainability/Natural Sciences 110

SWU Social Work 102, 171, 250, 258, 292

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&102, 106&107, 111&113, 112&114

BIO Biology 100, 101, 102, 105, 107, 108, 109, 111, 145, 149AF, 149AH, 149AK, 149AL, 149AM, 149AN, 156, 156XT, 160, 181, 181XT, 182, 201, 202, 205, 241, 245

CHM Chemistry 107&107LL, 130&130LL, 130AA, 150&151LL, 150AA, 151&151LL, 151AA, 152&152LL, 152AA, 154&154LL, 230&230LL

ENV Environmental Sciences 101

FON Food and Nutrition 241&241LL

FOR Forensic Science 105, 106, 275

GLG Geology 101&103, 102&104, 105, 106&107, 110&111, 121, 140, 229AB-AC, 230AA-AC, 231AA-AD, 280, 281, 282AA

GPH Physical Geography 111, 112&113, 211, 212&214, 213&215

PHS Physical Science 110, 120

PHY Physics 101, 101AA, 111, 111AA, 112, 115, 116, 121, 131

PSY Psychology 275, 290AB, 290AC

Literacy and Critical Inquiry (3 credits)

AIS American Indian Studies 213

BIO Biology 294

COM Communication 222, 225, 241

CPD Counseling and Personal Development 160

CRE Critical Reading 101

- 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
- MGT Management 230
- MHL Music: History/Literature 204
- PHI Philosophy 103, 106, 218, 244
- POS Political Science 115
- PSY Psychology 290AB, 290AC
- REL Religious Studies 203, 205, 207
- THE Theatre 220
- THP Theatre Performance/Production 241

Elective Courses (15-16 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) 2017-2018, Associate in Applied Science (AAS) General Education Requirements

### DESCRIPTION

The degree includes the following components:

- I. General Education:
  - Arizona General Education Curriculum for Arts (AGEC-A)
  - MCCCD Additional Requirements
- II. Required Courses (Major Courses)

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. Students can find other listings of AAS degree options sorted either alphabetically or by area of interest. Requirements for each degree can be found on the linked webpages or 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;
- Requires grades as listed for specific areas such as the General Education Core where a minimum grade of "C" is required. See specific AAS occupational degree for specific program grade requirements;
- 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 (see exception, next paragraph). 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. The minimum of six credit hours in the certificate or 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;

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

- 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 (15 credits - grade of "C" or better)

Demonstrate college-level skills in the following areas:

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 101/111/Equivalent as indicated by assessment

Mathematics (3 credits)

MAT Mathematics 103AA&103AB/112/120/121/122/122AA/122AB/122AC/140/141/142/150 /151/151AA/151AB/151AC/151AD/152/172/182/187/206/212/213/220/221/230/231/240/241/256/257/261/262/276/277/equivalent course/Satisfactory completion of a higher level mathematics course

GENERAL EDUCATION DISTRIBUTION AREAS (9-10 credits)

Humanities, Arts and Design (2-3 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)
- ART Art 131
- ASB Anthropology 211/214/220/222/223/253
- CCS Chicana and Chicano Studies 101
- CNS Construction 101
- COM Communication 241
- DAH Dance Humanities 100/201/250/255
- EDU Education 291/292/294
- ENG English 200/213/218
- ENH English Humanities Any ENH Course(s) (except 250)
- FRE French 265
- HCR Health Care Related 210
- HIS History 101/102/103/108/110/111/113/114/203/212/251/252/275
- HUM Humanities Any HUM course(s) (except 120, 225)
- INT Interior Design 115/120/225
- 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
- SPA Spanish 241/242/265/266
- SPH Spanish Humanities 241, 245
- SSH Sustainability/Social Sciences and Humanities 111
- STO Storytelling 292/294
- TCM Telecommunications 107
- THE Theatre 111/220
- THF Theatre and Film 205/206/210

THP Theatre Performance/Production 241

WST Women's Studies 209/284/285/290

Social-Behavioral Sciences (3 credits)

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

AFR African American Studies 202

AIS American Indian Studies 101/140/141/160

AJS Administration of Justice Studies 101/200/225/258/259/270

ASB Anthropology 100/102/202/211/222/223/226/230/235/252

ASM Anthropology 104/275

CFS Child/Family Studies 112/157/159/176/205/235/259

COM Communications 100/100AA&100AB&100AC/110/110AA&110AB & 110AC/  
163/230/250/263

ECH Early Childhood Education 176

ECN Economics Any ECN course(s)

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 258

FUS Future Studies 101

GCU Cultural Geography 102/113/121/122/141/221

HES Health Science 100

HIS History Any HIS course(s) (except 111,170, 251, 252, 253, 254)

HON Honors 201

IBS International Business 109

IFS Information Studies 210

MCO Mass Communications 120

PAD Public Administration 200

POS Political Science Any POS course(s)

PSY Psychology 101/123/132/156/157/215/218/225/235/240/241/243/250/260/266/277/280/292

- 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, 270)  
 SSH Sustainability/Social Sciences and Humanities 111  
 SUS Sustainability/Natural Sciences 110  
 SWU Social Work 102/171/250/258/292  
 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&102/106&107/111/112/113/114  
 BIO Biology 100/101/102/105/107/108/109/111/145/149AN/156/  
 156XT/160/181/181XT/182/201/201XT/202/205/241/245  
 CHM Chemistry 107&107LL/130&130LL/130AA/150AA/150&151LL/151AA/151&151LL/152AA/  
 152&152LL/154&154LL/230&230LL  
 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  
 PHY Physics 101/101AA/111/111AA/112/115/116/ 121/131  
 PSY Psychology 275/290AB/290AC



## Maricopa Community Colleges (MCCCD) 2017-2018, Academic Certificate (AC)

### PURPOSE OF THE ACADEMIC CERTIFICATE

The Maricopa 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 AGECEC 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/STO291-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 degree, 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 web site](#).

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

In collaboration and partnership with the health care community and its response to the dynamic changes occurring in the health care arena and health care practice, the Maricopa Community Colleges integrated the curriculum of all allied health and nursing programs. All allied health or nursing program pathways and educational offerings emphasize the achievement of relevant competencies and provide value to the individual, the employer, and the community. As a result, graduates of the various allied health or nursing program pathways will meet the community's demand for a flexible, multi-skilled health care workforce that meets employer and consumer needs. Refer to individual college catalogs for specific health care program pathways.

For further information, <http://healthcare.maricopa.edu> is a comprehensive information source.

### **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).

### **ALLIED HEALTH OR NURSING PROGRAM COLLEGE ATTENDANCE**

As the allied health or nursing programs are integrated across the Maricopa Community Colleges, college of attendance requirements for the completion of the healthcare program pathways can be met through the completion of coursework taken at all Maricopa Community Colleges and Skills Centers.

### **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, MCCCDC has instituted two specific background check requirements in order for a student to enroll in a program on or after September 1, 2011. First, the student must obtain, at his or her own cost, a Level I Fingerprint Clearance Card from the Arizona Department of Public Safety. Precluding offenses for a Level I card can be found in Arizona Revised Statute § 41-1758.07 (<http://www.azleg.gov/FormatDocument.asp?inDoc=/ars/41/01758-07.htm&Title=41&DocType=ARS>). Additionally, students must also obtain a “pass” status on a MCCCDC supplemental background check from MCCCDC’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 MCCCDC’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 MCCCDC supplemental background check review may include searches of the following databases and information but MCCCDC 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 Number Verification
3. Residency History
4. Arizona Statewide Criminal offense Databases
5. Nationwide Criminal offense Databases
6. State of Arizona and National Sexual Offender Registries
7. Homeland Security Watch Lists

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 regardless of how long ago the conviction was
5. Any arrest warrant issued by any state
6. Any misdemeanor conviction for the following regardless of how long ago the conviction was:
  - A. Violent crimes
  - B. Sex crime of any kind including non consensual sexual crimes and sexual assault
  - C. Murder, attempted murder
  - D. Abduction
  - E. Assault
  - F. Robbery
  - G. Arson
  - H. Extortion
  - I. Burglary
  - J. Pandering
  - K. Any crime against minors, children, vulnerable adults including abuse, neglect, exploitation
  - L. Any abuse or neglect
  - M. Any fraud
  - N. Illegal drugs
  - O. Aggravated DUI
8. Any misdemeanor relating to a controlled substance conviction in last 7 years
9. Any other misdemeanor conviction within last 3 years with the exception-any misdemeanor traffic misdemeanor [NOTE that a DUI is NOT considered a traffic misdemeanor.]

The information that MCCCDC uses for the “pass/fail” background check is subject to change at any time without notice. MCCCDC recommends that students carry proof of the background clearance at all times during any clinical agency learning experience.

### **STUDENTS ACCEPTED IN A PROGRAM BEFORE SEPTEMBER 1, 2011**

Students who are accepted in a program before September 1, 2011 will generally need to meet the requirements of each program that existed before that date. It is not MCCCDC’s intent to apply the standards effective on September 1, 2011 to students accepted in a program before that date. However, note that MCCCDC always reserves the right to change the requirements for these programs, even after a student is accepted. Students should be aware of this right.

## **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 MCCCDC'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 MCCCDC'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 MCCCDC 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**

MCCCDC has no obligation to make repeated attempts to place a student when the reason for MCCCDC'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 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**

MCCCDC 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.

## Occupational Program Matrix

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

### COLLEGE KEY

CG:	Chandler Gilbert Community College
PC:	Phoenix College
EM:	Estrella Mountain Community College
PV:	Paradise Valley Community College
GC:	Glendale Community College
RS:	Rio Salado College
GW:	GateWay Community College
SC:	Scottsdale Community College
MC:	Mesa Community College
SM:	South Mountain Community College

### Agriculture, Food & Natural Resources

- Equine Science.....SC
- Environmental and Natural Resource Conservation .....PC
- Environmental and Natural Resource Sustainability .....PC
- Equine Science.....SC
- Landscape Aide.....MC
- Landscape Horticulture.....MC
- Landscape Specialist.....MC
- Sustainable Agriculture .....MC
- Veterinary Technology .....MC

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### Architecture & Construction

- Air Conditioning/Refrigeration/Facilities..GW
- Architectural Technology .....SC
- Building Inspection .....MC
- Construction Trades: Carpentry .....GW
- Construction Trades: Construction Management .....GW

- Construction Trades: Electricity.....GW
- Construction Trades: General Construction Worker .....GW
- Construction Trades: Heat and Frost Insulation.....GW
- Construction Trades: Ironworking .....GW
- Construction Trades: Millwrighting.....GW
- Construction Trades: Painting and Drywalling .....GW
- Construction Trades: Pre-Apprenticeship.....GW
- Construction Trades – Mechanical Trades: Pipefitting .....GW
- Construction Trades – Mechanical Trades: Plumbing.....GW
- Construction Trades – Mechanical Trades: Sheet Metal .....GW
- Computer Aided Drafting .....MC
- Computer Aided Design and Drafting CADD Level I.....MC
- Construction Management .....MC
- Construction Trades: Heavy Equipment Operations.....GW
- Mechanical Drafting.....MC
- Power Plant Technology.....EM
- Residential and Light Commercial Air Conditioning.....GW
- Workforce Development: Carpentry Level IRS
- Workforce Development: Carpentry Level II .. .....RS
- Workforce Development: Furniture Construction/Refinishing Level I .....RS
- Workforce Development: Furniture Construction/Refinishing Level II.....RS



## Art, A/V Technology & Communication

- Adolescent Development .....RS
- Adult Development and Aging.....RS
- Alteration Specialist.....MC
- Apparel Construction .....PC
- Audio Production Technologies ..GC, MC, PC, PV, SC
- Beginning Piano Pedagogy .....MC
- Intermediate Piano Pedagogy .....MC
- Costume Design and Production.....MC
- Costuming .....PC
- Computer Graphic Design .....PC
- Dance Technology.....SC
- Disc Jockey Techniques .....MC, SC
- Digital Media Arts .....GC
- Family Life Education.....GC, RS
- Fashion Design .....PC
- Fashion Design Level I .....PC
- Fashion Design Level II.....PC
- Fashion Illustration.....PC
- Fashion Merchandising.....PC
- Fashion Merchandising & Design .....MC
- Fashion Design Entrepreneurship .....PC
- Graphic Design: Visual Communication .....SC
- Interior Merchandising .....MC, PC, EM
- Interior Design .....MC, PC, SC
- Interior Design: Advanced.....MC
- Image Consultant.....MC
- Journalism and New Media Studies.....GC, PV,MC, SC
- Music Business.....CG, GC, MC, PC, PV, SC, SM
- Photography.....GC, PC
- Parent Education.....RS
- Pattern Design Level I .....PC
- Pattern Design Level II.....PC
- Workforce Development:
  - Graphic Arts Level I.....RS
- Workforce Development:
  - Graphic Arts Level II.....RS

## Business, Management & Administration

- Accounting .....GC, PC, GW, RS, SM, CG, EM
- Accounting – Specialized
  - Para-Professional .....PV
- Accounting Paraprofessional .....GC
- Administrative Professional .....PV
- Administrative Technology .....GW
- Administrative Professional .....PC, MC
- Automobile Insurance: Customer Service .RS
- Automobile Insurance Claims:
  - Customer Service .....RS
- Broadband Telecommunications:
  - Account Services .....RS
- Broadband Telecommunications.....RS
- Broadband Telecommunications:
  - Field Operation.....RS
- Broadband Telecommunications:
  - Technical Support Services.....RS
- Bookkeeping .....SC
- Business.....MC, SC
- Business (Fastrack).....SC
- Business Management.....SM
- Business Technology Specialist.....GW
- Business Office Assistant .....GC
- Computer Applications .....PC
- Court Reporting: Judicial .....GW
- Credit Counseling: Customer Service.....RS
- Entrepreneurial Studies Level I.... GW, MC, PV, RS, SM
- Entrepreneurial Studies Level II... GW, MC, PV, RS, SM
- General Business.....CG, GC, MC, PC, RS, SC, SM
- General Business Specialized .....PVC
- Human Resources Management .....PC
- Human Services-Assistance:
  - Public Assistance Eligibility.....RS
- Human Services-Specialist:
  - Customer Service .....RS
- Human Services - Unemployment Insurance: Customer Service .....RS

- Insurance Studies ..... GC, MC, RS
- International Business .....PV
- International Trade..... MC
- Management.....PC, MC, PV
- Middle Management..... GC, PV
- Military Leadership ..... RS
- Motor Vehicle: Customer Service .....RS
- Office Technology .....GW
- Organizational Leadership... CG, GC, EM, GW, MC, PV, RS
- Organizational Management.....CG, GC, EM, GW, MC, RS
- Pharmacy: Customer Service .....SM
- Paralegal Studies.....PC
- Project Management.....MC
- Quality Customer Service ..... RS
- Realtime Reporting Scoping .....GW
- Public Relations .....MC, GC
- Retail Management..... CG, GC, GW, MC,PC RS, SM, SC
- Retail Sales Manager ..... MC
- Retail Pharmacy: Customer Service ..... RS
- Small Business.....MC
- Small Business Entrepreneurship.....GC, SM, GW
- Small Business Management.....EM, GW
- Small Business Start-Up.....CG, MC, PC, PV, RS, SM
- Sports Management ..... PV, SC
- Social Media Marketing .....CG, MC, SC, SM
- Supervision and Management I .....SM
- Supervision and Management II .....SM
- Supervision.....GC
- Technology Support Analyst.....MC
- Utilities Customer Service..... RS
- Water Services: Customer Service..... RS
- Bilingual Education/Dual Language Immersion (BE/DLI) ..... MC
- Child and Family Organizations Management and Administration....GC, RS
- Child Development Associate (CDA) Preparation..... GC, PV, SM, EM
- Curriculum for Young Children.....PC
- Early Care Specialist.....MC
- Early Childhood Development .....SM
- Early Childhood Education and Administration: Birth through Age Five.....PC
- Early Childhood Classroom Management.....PC
- Early Childhood Education.....PV, GC, EM
- Early Childhood Administration and Management.....GC, RSC
- Early Learning and Development .....CG, MC, RS, SM
- Family Child Care Management ..... RS, SM
- Foundations of Student Services .....EM
- Gifted Education .....EM
- Instructional Assistance ..... MC, SM
- Infant and Toddler Development..... RS, SM
- Reading Specialist .....MC
- Senior Living Management ..... RS
- Workforce Development and Community Re-Entry..... RS
- Workforce Development: Trim Plumbing .....RS

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### Education and Training

- Adult Learning and Development..... RS
- Adult Learning and Coaching Development ..... RS

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### Environmental Technology

- Environmental Science Technology.....GW
- Energy Systems Technology..... RS
- Geospatial Technologies ..... MC
- Occupational Safety and Health Technology..... GW
- Safety, Health and Environmental Studies PV
- Wastewater Treatment.....GW
- Water Resources Technologies.....GW
- Water Treatment .....GW

## Finance

- Banking and Finance .....PC
- Bank Account Management:
  - Customer Service .....RS
- Certified Residential Appraiser.....MC
- Licensed Real Estate Appraiser.....MC
- Real Estate.....PC
- Real Estate: Prelicense.....MC, SM
- Residential Appraisal Trainee .....MC

## Government and Public Administration

- Public Administration.....RS
- Public Administration: Legal Services.....RS
- Tribal Development.....SC

## Health Science

- Advanced Behavioral Health Sciences.....GC, SM
- Advanced Emergency Medical Technology (Paramedic).....PC, PV
- Basic Behavioral Health.....GC, SM
- Clinical Dental Assisting .....RS
- Community Dental Health Coordination...RS
- Community Emergency Response Team (CERT): Level I.....PC
- Computed Tomography.....GW
- Developmental Disabilities Specialist.....GC
- Diagnostic Medical Sonography .....GW
- Dental Assisting.....PC
- Dental Hygiene.....PC, RS, MC
- Dental Assisting Technology.....RS
- Diagnostic Medical Sonography:
  - Vascular Technology .....GW
- Electroneurodiagnostic (END) Technology.....GW
- Emergency Communications and Deployment.....PC
- Fast Track Practical Nursing.....GW

- Healthcare Insurance.....RS
- Healthcare Regulatory Compliance .....GW
- Health Information:
  - Long Term Care Settings.....PC
- Health Information Technology.....PC
- Health Services Management .....GW
- Health Unit Coordinating/
  - Patient Care Associate .....GW
- Histologic Technology.....PC
- Hospital Central Service Technology.....GW
- Laboratory Assisting.....PC
- Magnetic Resonance Imaging.....GW
- Medical Laboratory Sciences .....PC
- Medical Assisting .....PC
- Medical Coding: Hospital-Based.....PC
- Medical Billing and Coding:
  - Physician-Based.....PC
- Medical Radiography.....GW
- Nursing.....CG, EM, GC, GW, MC, PC, PV, SC
- Nurse Assisting .....GW, MC, PC, PV, EM
- Nursing Refresher .....GW, MC
- Phlebotomy.....PC, SM
- Physical Therapist Assisting .....GW
- Polysomnographic Technology .....GW
- Practical Nursing.....CG, GC, GW, MC, PV, SC, EM
- Recovery Support.....SM
- Respiratory Care .....GW
- Speech Language Pathology Assistant.....EM
- Surgical Technology .....GW
- Surgical Technology for the Operating Room Nurse .....GW

## Hospitality and Tourism

- Airline Operations .....RS
- Airline Operations: Ground Operations .....RS
- Airline Operations: Passenger Services .....RS
- Airline Operations: Reservations .....RS
- Airline Operations: Reservations and Ticketing Services .....RS

- Baking and Pastry.....EM, PC
- Basic Culinary Studies.....EM
- Commercial Food Preparation .....PC
- Commercial Bakery and Pastry Arts.....SC
- Culinary Arts.....SC
- Culinary Fundamentals..... SC, SM
- Culinary Principles.....EM
- Culinary Studies.....EM, PC
- Dietetic Technology..... CG, PV
- Food Service Administration.....PC
- Hospitality and Tourism/  
Golf Management .....SC
- Hospitality and Tourism/  
Hotel Management.....SC
- Hospitality and Tourism/  
Restaurant Management.....SC
- Hospitality and Tourism/Spa and Wellness  
Center Management.....SC
- Hospitality/Hotel Management.....EM
- Hospitality and Tourism/Tourism  
Development and Management .....SC
- Sustainable Food Systems .....MC, RS
- Personal Trainer .....GC, MC
- Personal Training Specialist..... CG, GC, MC,  
PV, SC, SM
- Professional Addictions Counseling .....RS
- Recreation Management .....MC, SC
- Teaching, Healing, Meditation for  
Stress Management .....PV
- Yoga Instruction .....SC
- Yoga Therapy .....SC

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### Information Technology

- Advanced Computer Usage  
and Applications..... RS
- Advanced Web Designer..... MC
- Applications in Geospatial  
Technologies..... MC
- Adobe Foundations..... GC, MC, SM, PV
- Adobe Creative Suite in Business:  
Master Suite Applications Specialist..... MC
- Adobe Creative Suite in Business: Print  
and Web Applications Specialist .... MC, PV
- Adobe Creative Suite in Business: Production  
Applications Specialist ..... MC, SM
- Business Applications ..... CG
- Business Applications Specialist..... CG
- Business Office Computer Applications ....GC
- Comic and Sequential Art.....PC
- Computer and Information  
Technologies.....SM
- Computer Applications Technology.....EM
- Computer Applications: Microsoft Office  
Specialist/Advanced .....MC
- Computer Applications: Microsoft Office  
Specialist/Basic .....MC
- Computer Hardware and  
Desktop Support ..... CG, EM
- Computer Hardware and  
Network Support.....SC
- Computer Information Systems ..... GC, GW,  
PC, PV

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### Human Services

- Addictions and Substance Use  
Disorders Level I ..... RS
- Addictions and Substance Use  
Disorders Level II ..... RS
- Addictions and Substance Use Disorders ..RS
- Adolescent Studies .....PC
- Clinical Research Coordinating .....GW
- Deaf Studies .....PC
- Exercise Science and  
Personal Training .....CG, GC, MC, PV, SC
- Family Development.....PC
- Family Support .....PC
- Group Fitness Instructor .....MC
- Interpreter Preparation .....PC
- Massage Therapy ..... CG, PC
- Nutrition for Fitness  
and Wellness ..... GC, MC, SC

- Computer Information Systems Technologies.....SC
- Computer Information Technology .....PV
- Computer Networking Technology .....PV
- Computer Programming .....MC
- Computer Systems Maintenance.....PV
- Computer Technology .....RS
- Computer Usage and Applications .....RS
- Data Analytics.....SC
- Digital Arts .....MC
- Digital Design .....RS
- Digital Photography.....PC
- Digital Arts: Digital Illustration.....MC
- Digital Arts: Digital Photography .....MC
- Digital Arts: Graphic Design.....MC
- Database Development .....SC
- Desktop Publishing .....EM
- Digital Cinema Arts.....GC
- Editing.....SC
- eLearning Design Specialist.....RS
- Game Technology .....MC, GC
- Healthcare Technology Systems.....GC, PV
- Information Security .....GC
- Information Security Technology.....GC,
- Information Technology.....CG
- Information Technology: Android/iOS Programming.....SM
- Information Technology: Cisco Networking.....SM, MC
- Information Technology: Computer Applications Specialist .....SM
- Information Technology: Microsoft Programming .....SM
- Information Technology: Network Server.....SM
- Information Technology: Network Security .....SM
- Information Technology: Programming and Mobile Development .....SM
- Information Technology Support .....SM
- IT and Power Systems Security.....EM
- Linux Associate .....CG, EM, MC
- Linux Networking Administration.....EM, GC, MC
- Linux Professional .....CG, EM, GC, GW, PC, SC, SM, MC, PV
- Microsoft Desktop Support Technology .....EM, GC, PV
- Microsoft Networking Technology .....EM, GC, GW, PV
- Microsoft Technical Specialist.....EM, GW, PV
- Microsoft Server Administration .....EM, GC
- Microsoft Certified Information Technology Professional (MCITP) ...EM, GW Administrator
- Mobile Apps Programming ....EM, PV, RS, SM
- Multimedia and Business Technology .....MC
- Media Arts: Computer Art/Illustration CG, PC
- Media Arts: Digital Animation .....PC
- Media Arts: Digital Imaging .....CG, PC
- Media Arts: Web Design .....PC
- Motion Picture/Television Production .....SC
- Multimedia Technology.....MC
- Network Administration.....SC
- Network Administration: CISCO Network Professional.....MC, SM
- Network Administration: Microsoft Windows Server .....CG, GW, MC, SM
- Networking: Design and System Support .RS
- Networking Administration: Cisco .....CG, EM, GC, GW, SM, MC
- Networking System Administration .....MC
- Networking Technology: Cisco .....CG, EM, GC, GW
- Oracle Database Operations .....CG
- Production Film .....SC
- Production Television .....SC
- Programming .....RS, EM, SM
- Programming and System Analysis.....CG, EM, GC, MC, PC, PV, SC, SM

- Software Development .....SC
- Screenwriting .....SC
- Technical Theatre .....PC, SC
- Web Application Development .....SM
- Web Design .....GC, PV, EM, PC, CG, SM
- Web Design Technologies .....SC
- Web Design: User Interface.....RS
- Web Designer.....MC
- Web Developer.....GC, MC, PC, PV, EM
- Web Development.....SC
- Web Development  
and Graphic Design .....SM, EM
- Web Server Administrator .....MC



### Manufacturing

- Advanced CAM Systems  
Programming .....MC
- Automation Technology .....MC
- Automation Technology Level I .....MC
- Automation Technology Level II.....MC
- Automation Technology Level III.....MC
- Applied Electrical Technologies.....RS
- CAD Application.....GC
- CAD Fundamental.....GC
- CNC Machining I .....MC
- CNC Machining II .....MC
- CAD Technology .....GC
- Computer and Networking Technology....GC
- Electro/Mechanical Drafting .....MC
- Electromechanical Manufacturing  
Technology .....MC
- Electric Utility Technology .....CG
- Electric Utility Design Technology .....CG
- Electrical Technology:  
Residential Writing.....GW
- Electromechanical Automation  
Technology .....MC
- Electronics Engineering Technology .....MC
- Electronics Technology .....MC
- Industrial Design Technology .....GW

- Industrial Design Technology:  
Design Specialist: SolidWorks .....GW
- Lineman Technology Level I .....RS
- Lineman Technology Level II .....RS
- Lineman Technology Level III.....RS
- Lineman Technology Level IV .....RS
- Machining I.....MC
- Machining II.....MC
- Manufacturing Engineering Technology .MC
- Manufacturing Management .....MC
- Manufacturing Welding .....MC
- Micro Circuit Mask Design.....MC
- Meter Technology .....CG
- Network Maintenance.....GC
- Nuclear Power Technology .....EM
- Production Technology .....GW
- Production Technology:  
CNC Technology.....GW
- Production Technology:  
Quality Assurance.....GW
- Workforce Development:  
Electrical Level I .....RS
- Workforce Development:  
Electrical Level II .....RS
- Welding.....MC



### Marketing, Sales & Service

- Marketing .....PC, PV, SC
- Salesmanship .....MC



### Law, Public Safety, Corrections & Security

- Administration of Justice .....GC, PC, PV, RS
- Administration of Justice-  
Comprehensive .....PC
- Administration of Justice-  
Fundamentals .....PC
- Administration of Justice Studies.....CG, MC,  
SC, GW



- Advanced Corrections.....RS
- Basic Corrections.....RS
- Corrections .....RS
- Correctional Studies.....CG
- Crime and Accident Scene  
Photography.....PC, SC
- Crime Scene Investigation.....SC, PC
- Crime Scene Technology.....SC, PC
- Detention Services.....RS
- Domestic Preparedness and  
Homeland Security .....PC
- Driver Operator.....GC, EM, MC, PC, PV
- Evidence Technology.....PC, EM
- Emergency Medical Technology CG, GC, MC,  
PC, PV, SC
- Emergency Management.....MC, PV
- Emergency Response and OperationsEM, GC,  
MC, PC, PV, SC
- Fire Academy .....GC, SC
- Fire Officer Leadership .....MC, EM, GC, PC, PV
- Fire Science.....PV, EM, MC
- Firefighter Operations .....GC, MC, PC, PV, EM
- Fingerprint Classification and  
Identification .....PC, SC
- Forensic Investigation .....MC
- Forensic Technology.....PC
- Forensic Science: Crime Lab .....SC
- Fire Investigation .....EM, GC, MC, PC, PV
- Global Citizenship .....MC
- Homeland Security .....CG, GW
- Hazardous Materials Response .....PC
- Judicial Studies .....MC
- Justice Studies.....CG, SC, EM
- Juvenile Corrections.....RS
- Law Enforcement Investigator .....GC
- Law Enforcement Technology Academy ...RS
- Law Enforcement.....SC
- Law Enforcement Training Academy ..GC, CG
- Legal Studies.....MC
- Paralegal .....RS
- Paramedicine.....GC, PC, PV, MC

- Police Academy Preparation Level I.....SC
- Police Science.....MC, SC
- Public Safety Technology .....RS
- Tribal Court Advocacy .....SC
- Victimology .....MC

## Science, Technology, Engineering & Mathematics

- Aircraft Maintenance Technology.....CG
- Aircraft Maintenance  
Technology (Part 147).....CG
- Airframe Maintenance (Part 147) .....CG
- Airway Science Technology, .....  
Flight Emphasis .....CG
- Biotechnology.....MC
- Biotechnology and Molecular  
Biosciences .....GC
- Certified Flight Instructor Instrument  
Airplane Rating.....CG
- Engineering Technology .....GC, CG, EM, SM
- Flight Technology .....CG
- Nanotechnology .....RS
- Powerplant Maintenance (Part 147) .....CG

## Transportation, Distribution, & Logistics

- Air Conditioning and Electrical  
Accessories .....GW
- Air Conditioning.....MC
- Automotive Chassis.....GC
- Automotive Drive Trains.....GW
- Automotive Electrical Systems.....MC
- Automotive Engines and Drive Trains.....GC
- Automotive Performance Technology .....MC
- Automotive Suspension, Steering  
and Brakes.....GW
- Automotive Technology.....GC, GW



- Automotive Maintenance and Light Repair.....GC
- Automotive Engine Performance .....GC
- Automotive Heating, Ventilation and Air Conditioning (HVAC).....GC
- Automotive Technology.....GC
- Brakes, Alignment, Suspension and Steering.....MC
- Engine Performance and Diagnosis...GW, MC
- Transmissions and Power Trains .....MC
- Workforce Development: Automotive Technology Level I.....RS
- Workforce Development: Automotive Technology Level II.....RS



## EDUCATIONAL PROGRAMS

## 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.
  2. Certificate Programs—a series of courses designed for concentrated proficiency in specialized career fields.
  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

For more information about educational programs, contact the Academic Advisement Center at (480) 732-7317.

## OCCUPATIONAL PROGRAMS

### Accounting Accounting

#### CERTIFICATE OF COMPLETION: CCL 5665

23-26 Credits

#### PROGRAM CONTACT:

MATT FISHER ~  
(480) 857-5538

[matt.fisher@cgcc.edu](mailto:matt.fisher@cgcc.edu)

#### PROGRAM DESCRIPTION

The Certificate of Completion (CCL) in Accounting is for students seeking to gain skills and knowledge in the field of accounting. Possible entry-level jobs for this program include accounting clerk, accounts payable/receivable clerk, claims clerk, credit clerk, full-charge bookkeeper, accounting intern, or comparable positions.

#### PROGRAM NOTES

Students must earn a grade of "C" or better in all courses required within the program. Consultation with an academic advisor is recommended for course selection. + indicates course has prerequisites and/or corequisites.

#### REQUIRED COURSES: 23-26 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
- +ACC115      Computerized Accounting .....2
- 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

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### Accounting

#### ASSOCIATE IN APPLIED SCIENCE: AAS 3149

60-65 Credits

#### PROGRAM CONTACT:

MATT FISHER ~  
(480) 857-5538

[matt.fisher@cgcc.edu](mailto:matt.fisher@cgcc.edu)

#### PROGRAM DESCRIPTION

The Associate in Applied Science (AAS) in Accounting is one of several options for students seeking to gain skills and knowledge in the field of accounting. Possible entry-level jobs for this program include accounting clerk, accounts payable/receivable clerk, claims clerk, credit clerk, full-charge bookkeeper, accounting intern, or comparable positions.

#### PROGRAM NOTES

Students must earn a grade of "C" or better in all courses required within the program. Consultation with an academic advisor is recommended for course selection.

+ indicates course has prerequisites and/or corequisites.

**PREREQUISITES: 3 CREDITS**

+CRE101	College Critical Reading and Critical Thinking (3) OR Equivalent as indicated by assessment.....3
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**REQUIRED COURSES: 29-32 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
+ACC115	Computerized Accounting .....2
ACC121	Income Tax Preparation (3) OR
+ACC221	Tax Accounting (3) .....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
+GBS233	Business Communication.....3

**RESTRICTED ELECTIVES: 9 CREDITS**

ACC++++	Any ACC Accounting course(s) except courses used to satisfy Required Courses area .....9
CIS117CM	Microsoft Access: Database Management.....3
GBS110	Human Relations in Business and Industry (3) OR
MGT251	Human Relations in Business (3).....3
GBS131	Business Calculations.....3

GBS207	Business Law (General Corporate).....3
+GBS220	Quantitative Methods in Business .....3

**GENERAL EDUCATION: 22-24 CREDITS****CORE: 12-14 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 in the Oral Communication area.....3

**CRITICAL READING**

Met by CRE101, College Critical Reading and Critical Thinking OR Equivalent as indicated by assessment in Program Prerequisites area. ....0

**MATHEMATICS**

+MAT120	Intermediate Algebra (5) OR
+MAT121	Intermediate Algebra (4) OR
+MAT122	Intermediate Algebra (3) OR Satisfactory completion of a higher level mathematics course..... 3-5

**DISTRIBUTION: 10 CREDITS****HUMANITIES AND FINE ARTS**

Any approved general education course in the Humanities and Fine Arts area.....3

**SOCIAL AND BEHAVIORAL SCIENCES**

ECN211	Macroeconomic Principles (3) OR
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ECN212	Microeconomic Principles (3) OR	
SBU200	Society and Business (3) .....	3

**NATURAL SCIENCES**

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

**Administration of Justice Studies**

**ASSOCIATE IN APPLIED SCIENCE: AAS 3012**

62 Credits

**PROGRAM CONTACT:**

LEON KUTZKE ~  
(480) 732-7058

[leon.kutzke@cgcc.edu](mailto:leon.kutzke@cgcc.edu)

**PROGRAM DESCRIPTION**

The Associate in Applied Science (AAS) in Administration of Justice Studies program is designed to prepare students for careers within the criminal justice system including law enforcement, the courts, probation, parole, corrections, and social services agencies that support the criminal justice system. The program is interdisciplinary in nature and provides students with a broad knowledge of the criminal justice system, its organizational components and processes, and its legal and public policy contexts. Students may select one of four Certificate of Completion (CCL) programs to complete the AAS degree: Correctional Studies, Forensic

Science, Homeland Security, or Justice Studies.

**PROGRAM NOTES**

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 module.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 33 CREDITS**

The required courses below comprise a group of Program Common Core courses that are required for the AAS degree in addition to completion of one of four certificate programs. Some certificates may contain additional course requirements.

AJS119	Computer Applications in Justice Studies.....	3
AJS200	Current Issues in Criminal Justice.....	3
AJS225	Criminology .....	3
AJS258	Victimology and Crisis Management.....	3
AJS270	Community Relations.....	3

Certificate of Completion in Correctional Studies (5776) ..... 18 Credits

Certificate of Completion in Forensic Science (5326) ..... 18 Credits

Certificate of Completion in Homeland Security (5322) ..... 18 Credits

Certificate of Completion in Justice Studies (5327) ..... 18 Credits

**RESTRICTED ELECTIVES: 4-7 CREDITS**

Students must select credits in the Restricted

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



Electives area to earn a total of 62 credits required for the AAS in Administration of Justice Studies degree. Selected courses will not apply in both the Required Courses area and the Restricted Electives area.

AJS++++ Any Administration of Justice Studies courses..... 4-7

**GENERAL EDUCATION: 22-25 CREDITS**

**CORE: 12-15 CREDITS**

**FIRST-YEAR COMPOSITION**

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

**ORAL COMMUNICATION**

Any approved general education course in the Oral Communication area.....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 in the Mathematics area.....3

**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

AJS123 Ethics and the Administration of Justice .....3

**SOCIAL AND BEHAVIORAL SCIENCES**

AJS101 Introduction to Criminal Justice.....3

**NATURAL SCIENCES**

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

**Correctional Studies**

**CERTIFICATE OF COMPLETION: CCL 5776**

18 Credits

**PROGRAM CONTACT:**

LEON KUTZKE ~  
 (480) 732-7058

[leon.kutzke@cgc.edu](mailto:leon.kutzke@cgc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in Correctional Studies 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**

Students must earn a grade of "C" or better for all courses required within the program.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 18 CREDITS**

AJS109 Substantive Criminal Law .....3  
 AJS124 Correctional Institutions.....3  
 AJS212 Juvenile Justice Procedures .....3  
 AJS240 The Correction Function .....3  
 AJS250 Correctional Administration.....3  
 AJS275 Criminal Investigation I .....3

## Forensic Science

### CERTIFICATE OF COMPLETION: CCL 5326

18 Credits

#### PROGRAM CONTACT:

LEON KUTZKE ~  
(480) 732-7058

[leon.kutzke@cgc.edu](mailto:leon.kutzke@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 for all courses required within the program.

Overall program minimum G.P.A. = 2.00.

#### REQUIRED COURSES: 18 CREDITS

AJS201	Rules of Evidence.....	3
AJS213	Evidence Technology/ Fingerprints.....	3
AJS215	Criminalistics: Physical Evidence .....	3
AJS216	Criminalistics: Biological Evidence.....	3
AJS241	Police Photography .....	3
AJS275	Criminal Investigation I.....	3

## Homeland Security

### CERTIFICATE OF COMPLETION: CCL 5322

18 Credits

#### PROGRAM CONTACT:

LEON KUTZKE ~  
(480) 732-7058

[leon.kutzke@cgc.edu](mailto:leon.kutzke@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

Students must earn a grade of "C" or better for all courses required within the program.

Overall program minimum G.P.A. = 2.00.

#### REQUIRED COURSES: 18 CREDITS

AJS109	Substantive Criminal Law .....	3
AJS/DPR/ FSC139	Emergency Response to Terrorism.....	3
AJS195	International and Domestic Terrorism.....	3
AJS230	The Police Function .....	3
AJS260	Procedural Criminal Law .....	3
AJS275	Criminal Investigation I.....	3

## Justice Studies

### CERTIFICATE OF COMPLETION: CCL 5327

18 Credits

#### PROGRAM CONTACT:

LEON KUTZKE ~  
(480) 732-7058

[leon.kutzke@cgc.edu](mailto:leon.kutzke@cgc.edu)

#### PROGRAM DESCRIPTION

The Certificate of Completion in Justice Studies is designed to provide the student with a broad understanding of the criminal justice system and its primary components: law enforcement, the courts, and corrections.

#### PROGRAM NOTES

Students must earn a grade of "C" or better for all courses required within the program.

Overall program minimum G.P.A. = 2.00.

#### REQUIRED COURSES: 18 CREDITS

AJS109	Substantive Criminal Law .....	3
AJS212	Juvenile Justice Procedures .....	3
AJS230	The Police Function .....	3
AJS240	The Correction Function .....	3
AJS260	Procedural Criminal Law .....	3
AJS275	Criminal Investigation I .....	3

## Law Enforcement Training Academy

### CERTIFICATE OF COMPLETION: CCL 5485

30 Credits

#### PROGRAM CONTACT:

MARGARET ZUCCARO ~  
(480) 988-8755

[margaret.zuccaro@cgc.edu](mailto:margaret.zuccaro@cgc.edu)

#### PROGRAM DESCRIPTION

The Certificate of Completion (CCL) in Law Enforcement Training Academy is designed for students wishing to pursue a law enforcement career as a law enforcement officer. The student will develop skills in eight functional areas: Introduction to Law Enforcement, Law and Legal Matters, Patrol Procedures, Traffic Control, Crime Scene Management, Community and Police Relations, Report Writing, and Police Proficiency Skills. At the conclusion of this program the student will have completed all requirements of the Arizona Peace Officer Standards and Training (AzPOST) Board standards established to certify police officers in the State of Arizona.

#### PROGRAM NOTES

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**ADMISSION CRITERIA**

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

**REQUIRED COURSES: 30 CREDITS**

+AJS/LEO102 Peace Officer Certification I..... 17

+AJS/LEO202 Peace Officer Certification II ..... 13

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## Aircraft Flight Technology

### Airway Science Technology, Flight Emphasis

#### ASSOCIATE IN APPLIED SCIENCE: AAS 3707

61-67.5 Credits

**PROGRAM CONTACT:**

BASHIR KHALIL ~  
(480) 988-8112

[bashir.khalil@cgcc.edu](mailto:bashir.khalil@cgcc.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, agricultural, public service, corporate, or private aircraft, and to prepare students to sit for the following Federal Aviation Administration (FAA) written and practical examinations:

Track I: Commercial Pilot Certificate with Single Engine Airplane Land Rating; Instrument Rating; and the Multiengine Rating as well as the Flight Instructor Certificate with the Single Engine Airplane Land Rating.

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

Track II: Commercial Pilot Certificate with Helicopter Rating; Instrument Rating as well as the Flight Instructor Certificate with the Helicopter Rating.

Track III: Commercial Pilot Certificate with Single Engine Airplane Land Rating; Instrument Rating; and the Multiengine Rating as well as the Flight Instructor Certificate with the Single Engine Airplane Land Rating. Students will also have experience in the actual or simulated operations of a small Unmanned Aircraft Systems (UAS) as permitted by Federal Regulations.

**JOB DESCRIPTION**

The Associate in Applied Science in Airway Science Technology, Flight Emphasis program is designed to prepare students with the required Federal Aviation Administration certificates for initial employment as aircraft pilots in a wide variety of entry-level, flight-related occupations. Depending on which track students select, such occupations may include flight instructor, banner tow pilot, jump plane pilot, corporate transportation, mineral exploration and production, public service, etc. In some instances, additional specialized training will be required. Students aspiring to employ with airlines can elect to use their flight instructor certificate to help build flight time in an economical manner.

**JOB OPPORTUNITIES**

While the aviation industry is cyclic, affected by both economic and military implications,

indicators point to an increase in pilot hiring through 2030. Job mobility within the aviation industry increases as flight experience increases. The experienced pilot who demonstrates quality flight techniques, willingness to learn, organizational skills, reliability, and good communication skills will find opportunities to advance into larger aircraft operations, or other positions within the industry such as management, business owner, sales, corporate jet operator, or systems trainer.

### FLIGHT POLICIES

Light and simulator training costs are the responsibility of the student. They are determined on an hourly basis for aircraft and flight instruction, and are in addition to tuition, fees, and other registration 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.

Ground school courses must be taken concurrently with the appropriate flight courses. Attendance is mandatory in the aviation ground school courses in accordance with Federal Aviation Regulation Part 141, Appendices A and D. Failure to meet these attendance requirements will disqualify the student for FAA pilot certification.

### TRANSFER OF PILOT RATINGS

Students with a Private Pilot Certificate obtained without college credit must complete the flight lessons contained in the Federal Aviation Regulations Part 141 Private Pilot Test Course before enrolling in any 200-level ground or flight courses.

Students holding Commercial Pilot or Flight Instructor Certificates obtained without college credit are required to take the appropriate ground school courses, and complete the flight lessons contained in the Federal Aviation Regulations Part 141 Commercial Pilot Test Course.

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 for transferability. Students with pilot certification obtained with college credit at other institutions must demonstrate proficiency of each certificate and associated ratings before credit will be accepted to satisfy CGCC curriculum requirements. 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 FAA 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. 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.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A = 2.50.

**ADMISSION CRITERIA**

Students must apply for acceptance into the Associate in Applied Science in Airway Science Technology, Flight Emphasis program before enrolling in any 200-level courses by completing an application available from the Aviation Division.

Due to the International Traffic in Arms Regulations requirements surrounding UAS Operations, certain courses, materials, and instruction may be restricted to United States Citizens only.

**PROGRAM PREREQUISITES: 0-15 CREDITS**

Students must consult with a program advisor as the program prerequisites may be waived as requirements to the program for

those students who have FAA Private Pilot Certificates and/or have course equivalents as indicated by assessment.

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

+MAT120 Intermediate Algebra (5) OR  
+MAT121 Intermediate Algebra (4) OR  
+MAT122 Intermediate Algebra (3) OR  
Equivalent as indicated by assessment OR  
Satisfactory completion of a higher-level  
mathematics course. .... 0-5

**Track I: Multiengine Aircraft**

+AET107 Private Pilot Ground School (5) AND  
+AET110 Private Pilot Flight (2) OR  
A division/program approved FAA Pilot  
Certificate (0) ..... 0-7

**Track II: Helicopters**

+AET107HH Private Pilot Ground School: Helicopter (5) AND  
+AET110HH Private Pilot Flight: Helicopter (2) OR  
FAA Private Pilot Certificate (0) ..... 0-7

**Track III: UAS and Aviation Public Service**

+AET107 Private Pilot Ground School (5) AND  
+AET110 Private Pilot Flight (2) OR  
A division/program approved FAA Pilot  
Certificate (0) ..... 0-7

**REQUIRED COURSES: 38-48.5 CREDITS**

Students must select one (1) of three (3) tracks:

Track I: Multi-Engine Aircraft ..... Credits: 45.5  
AET115 Aviation Meteorology .....3  
+AET203 Basic Airplane Systems .....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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

+AET205	Aircraft Structures, Systems, and Maintenance .....4	+AET227HH	Certified Flight Instructor: Helicopter Ground School .....4
+AET207	Attitude Instruments and Navigation .....3	+AET230HH	Certified Flight Instructor: Helicopter..... 1
+AET210	Instrument Commercial Flight I .....2	+AET257	Readings in Aviation .....3
+AET213	Aerodynamics and Performance .....3	CIS105	Survey of Computer Information Systems .....3
+AET215	Aircraft Powerplants .....4	Track III: UAS and Aviation Public Service	
+AET217	Instrument Procedures .....3	Credits: 48.5	
+AET220	Instrument Commercial Flight II .....2	AJS101	Intro. to Criminal Justice .....3
+AET225	Advanced Aircraft Systems .....4	AET115	Aviation Meteorology .....3
+AET227	Certified Flight Instructor: Airplane, Single Engine Land Ground School .....5	AJS/DPR/ FSC147	Emergency Preparedness .....3
+AET230	Certified Flight Instructor: Airplane, Single Engine Land .....1	AJS230	The Police Function .....3
+AET237	Multiengine Airplane Pilot Ground School .....2	+AET203	Basic Airplane Systems .....3
+AET240	Multi-Engine Airplane Pilot Flight .....0.5	+AET207	Attitude Instruments and Navigation .....3
+AET257	Readings in Aviation .....3	+AET208	Aviation Safety .....3
CIS105	Survey of Computer Information Systems .....3	+AET210	Instrument Commercial Flight I .....2
Track II: Helicopters Credits: 38		+AET213	Aerodynamics and Performance .....3
AET115	Aviation Meteorology .....3	+AET217	Instrument Procedures .....3
+AET203HH	Basic Helicopter Systems .....2	+AET220	Instrument Commercial Flight II .....2
+AET205	Aircraft Structures, Systems, and Maintenance .....4	+AET226	Introduction to Unmanned Aircraft Systems Operation .....2
+AET207HH	Attitude Instruments and Navigation: Helicopter .....2	+AET227	Certified Flight Instructor: Airplane, Single Engine Land Ground School .....5
+AET210HH	Instrument Flight: Helicopter .....2	+AET230	Certified Flight Instructor: Airplane, Single Engine Land .....1
+AET213HH	Aerodynamics and Performance: Helicopter .....2	+AET228	Public Safety Aviation .....3
+AET215	Aircraft Powerplants .....4	+AET260	Public Safety Aviation Applications in Unmanned Aircraft Systems Flight Lab .....1
+AET217HH	Instrument Procedures: Helicopter .....2	+AET229	Crew Resource Management .....3
+AET220HH	Commercial Flight: Helicopter .....2	+AET237	Multi-Engine Airplane Pilot Ground School .....2
+AET225	Advanced Aircraft Systems .....4	+AET240	Multi-Engine Airplane Pilot Flight .....0.5

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



**RESTRICTED ELECTIVES: NONE**

**GENERAL EDUCATION: 23-24 CREDITS**

**CORE: 14 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**

- +COM225 Public Speaking.....3

**CRITICAL READING**

Met by CRE101 in Program Prerequisites area.....0

**MATHEMATICS**

- +MAT187 Precalculus (5) OR  
Equivalent as indicated by assessment OR  
Satisfactory completion of a higher level  
mathematics course.....5

**DISTRIBUTION: 9-10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course in the  
Humanities and Fine Arts area ..... 2-3

**SOCIAL AND BEHAVIORAL SCIENCES**

- ECN212 Microeconomic Principles.....3

**NATURAL SCIENCES**

- +PHY111 General Physics I.....4

**Certified Flight Instructor  
Instrument Airplane Rating**

**CERTIFICATE OF COMPLETION:  
CCL 5825N**

4 Credits

**DIVISION CHAIR:**

ERIC SNYDER ~  
(480) 988-8127

[eric.snyder@cgc.edu](mailto:eric.snyder@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**

Students must earn a grade of "C" or better in all courses within the program. This program is not eligible for Title IV Federal Financial Aid. + indicates course has prerequisites and/or corequisites.

**REQUIRED COURSES: 4 CREDITS**

- +AET258 Certified Flight Instructor:  
Instrument Airplane Ground  
School .....3
- +AET270 Certified Flight Instructor:  
Instrument Airplane Flight.....1

## Flight Technology

### CERTIFICATE OF COMPLETION: CCL 5707

29.5 Credits

#### PROGRAM CONTACT:

BASHIR KHALIL ~  
(480) 988-8112

[bashir.khalil@cgcc.edu](mailto:bashir.khalil@cgcc.edu)

#### PROGRAM DESCRIPTION

The Certificate of Completion in Flight Technology curriculum is designed to prepare students to apply technical knowledge and skills to aircraft flying and to prepare them to sit for the Federal Aviation Administration (FAA) written and practical examinations for Commercial Pilot Certificate with Single Engine Airplane, Land Rating, Instrument Rating, and Multiengine Rating. Instruction includes aircraft design, systems, flight operations and procedures, radio communication and navigation, and governmental rules and regulations pertaining to aircraft operations.

#### JOB DESCRIPTION

This program is designed to prepare students with the required Federal Aviation Administration certificates for initial employment as airplane pilots in a wide variety of entry-level, flight-related occupations such as flight instructor, banner tow pilots, jump plane pilots, etc. In some instances, additional specialized training will be required.

#### FLIGHT POLICIES

Flight and simulator training costs are the

responsibility of the student. They are determined on an hourly basis for aircraft and flight instruction, and are in addition to tuition, fees, and other registration expenses. Once students have been accepted into the CGCC Flight Technology 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.

Ground school courses must be taken concurrently with the appropriate flight courses.

Attendance is mandatory in the aviation ground school courses in accordance with Federal Aviation Regulation Part 141, Appendices A and D. Failure to meet these attendance requirements will disqualify the student for FAA pilot certification.

#### TRANSFER OF PILOT RATINGS

Students with a Private Pilot Certificate obtained without college credit must demonstrate proficiency and knowledge before enrolling in any 200-level ground or flight courses.

Students holding Commercial Pilot or Flight Instructor Certificates obtained without college credit are required to take the appropriate ground school courses, and complete the flight lessons contained in the Federal Aviation Regulations Part 141 Commercial Pilot Test Course.

Aviation and related courses from other colleges and universities will not

automatically transfer to CGCC. All aviation transfer courses, flight or nonflight, are reviewed by the Aviation Division for transferability. Students with pilot certificates obtained with college credit at other institutions must demonstrate proficiency of each certificate and associated ratings before credit will be accepted to satisfy CGCC curriculum requirements.

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 FAA 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. 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.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.50.

**ADMISSION CRITERIA**

Students must apply for acceptance into the Flight Technology program before enrolling in any 200-level flight courses by completing an application available from the Aviation Division.

**PROGRAM PREREQUISITES: 13-15 CREDITS**

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

+AET107	Private Pilot Ground School (5) AND	
+AET110	Private Pilot Flight (2) OR FAA Private Pilot Certificate.....	7
+CRE101	College Critical Reading and Critical Thinking (3) OR Equivalent as indicated by assessment.....	3
+MAT120	Intermediate Algebra (5) OR	
+MAT121	Intermediate Algebra (4) OR	
+MAT122	Intermediate Algebra (3) OR Equivalent as indicated by assessment OR Satisfactory completion of a higher level mathematics course.....	3-5

**REQUIRED COURSES: 29.5 CREDITS**

AET115	Aviation Meteorology.....	3
+AET203	Basic Airplane Systems.....	2
AET205	Aircraft Structures, Systems and Maintenance.....	4
+AET207	Attitude Instruments and Navigation .....	2
+AET210	Commercial Pilot Flight I .....	2
+AET213	Aerodynamics and Performance .....	2
+AET215	Aircraft Powerplants.....	4

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

+AET217	Instrument Procedures .....	2
+AET220	Commercial Pilot Flight II .....	2
+AET225	Advanced Aircraft Systems .....	4
+AET237	Multi-Engine Airplane Pilot Ground School .....	2
+AET240	Multi-Engine Airplane Pilot Flight .....	0.5

.....

## Aircraft Maintenance Technology

### Aircraft Maintenance Technology

#### ASSOCIATE IN APPLIED SCIENCE: AAS 3670

89-92 Credits

#### DIVISION CHAIR:

ERIC SNYDER ~  
(480) 988-8127

[eric.snyder@cgcc.edu](mailto:eric.snyder@cgcc.edu)

#### PROGRAM DESCRIPTION

The Aircraft Maintenance Technology (AMT) certificate and degree programs are designed to prepare students for licensure as certified airframe, powerplant, or airframe and powerplant (A&P) technicians and for employment in entry-level positions in the aircraft maintenance field.

PART 147: The Part 147 curriculum meets Federal Aviation Administration (FAA) requirements for the number of hours of instruction and for the level and type of competency expected of the students in general, airframe, and powerplant subject areas. Completion of the appropriate certificate programs may lead to an Associate in Applied Science in Aircraft Maintenance

Technology degree.

The Certificate of Completion in Airframe Maintenance (Part 147) is designed for individuals who hold an FAA Powerplant Certificate or who desire to specialize in areas of structural maintenance or repair. This Certificate provides the necessary knowledge to continue into areas of avionics, composites, or heavy structures specializations. This program of study normally requires two semesters to complete if the program prerequisites have been met.

The Certificate of Completion in Powerplant Maintenance (Part 147) is designed for individuals who hold an FAA Airframe Certificate or who desire to specialize in areas of engine maintenance or repair. This program of study normally requires two semesters to complete if the program prerequisites have been met.

The Certificate of Completion in Aircraft Maintenance Technology (Part 147) is designed for individuals who want to prepare for FAA Airframe and Powerplant Certificates but are limited by funding agencies to a single continuing program of study. This program of study normally requires four semesters to complete if the program prerequisites have been met.

The program prerequisites normally require one or more semesters to complete.

The Associate in Applied Science in Aircraft Maintenance Technology degree combines the technical aspects of the certificate

programs with selected general education courses in the areas of English, math, reading, communications, humanities, and physics.

**PART 65:** The Part 65 curriculum is designed for those students who wish to gain specific knowledge and skills in the aircraft maintenance field or are pursuing Federal Aviation Administration certification under Federal Aviation Regulation, Part 65.77.

Students benefiting from these courses would include aircraft maintenance apprentices, pilots, kit aircraft builders, aircraft enthusiasts, and past and current military personnel who have worked in aircraft maintenance. Completion of the Part 65 courses may lead to an Associate in Applied Science in Aircraft Maintenance Technology degree. Students wishing to enroll in the Part 65 courses must have the permission of the Department or Division and will be accepted on a first-come, first-served, space-available basis only.

### **JOB DESCRIPTION**

Aviation maintenance technicians inspect the engines, landing gear, instruments, pressurized sections, accessories, and other parts of the aircraft, and perform necessary maintenance. Technicians use precision instruments and non-destructive inspection equipment. They also repair sheet metal or composite surfaces and check for corrosion, distortion, and cracks in the aircraft structure. After completing repairs, mechanics must test them to ensure that they work properly.

Aviation maintenance technicians must perform careful and thorough work requiring

a high degree of mechanical aptitude. Frequently, they must lift or pull as much as 50 pounds. They often stand, lie, or kneel in awkward positions and occasionally must work in precarious positions on scaffolds or ladders. Noise and vibration are common when testing engines. Aviation maintenance technicians generally work 40 hours a week on 8-hour shifts around the clock.

Aviation maintenance technicians who work on civilian aircraft are certificated by the Federal Aviation Administration (FAA) as airframe mechanic, powerplant mechanic, or combination airframe and powerplant (A&P) mechanics who can work on nearly any part of the plane. Although a few people become Aviation maintenance technicians through on-the-job training, most learn their job in one of the schools certified by the FAA under Federal Aviation Regulation Part 147. FAA standards require certificated schools offer students at least 1,900 class hours.

### **PROGRAM NOTES**

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

### **ADMISSION CRITERIA**

Students wishing to enroll in this Part 147 Certificate program must complete an application process before being officially accepted into the program.

**PROGRAM PREREQUISITES: 28-29 CREDITS**

- +ENG091 Fundamentals of Writing (3) OR  
Equivalent as indicated by  
assessment .....3
- +MAT091 Introductory Algebra (4) OR
- +MAT092 Introductory Algebra (3) OR  
Equivalent as indicated by  
assessment ..... 3-4
- +RDG091 College Reading Skills I (3) OR  
Equivalent as indicated by  
assessment .....3
- AND
- +AMT124 Aircraft Forms and Regulations,  
Weight and Balance, Drawings,  
and Ground Operations (5)
- AND
- +AMT126 Fundamentals of Mathematics  
and Electricity (9) AND
- +AMT128 Fundamentals of Aviation  
Physics, Corrosion Control,  
Materials and Processes, Fluid  
Lines and Fittings (5) OR
- +AMT124AA Aircraft Forms and Regulations,  
Weight and Balance, Drawings,  
and Ground Operations:  
Part 65 (5) AND
- +AMT126AA Fundamentals of Mathematics  
and Electricity: Part 65 (9) AND
- +AMT128AA Fundamentals of Aviation  
Physics, Corrosion Control,  
Materials and Processes, Fluid  
Lines and Fittings: Part 65 (5) ... 19

AND  
Permission of the Department or Division.

**REQUIRED COURSES: 65 CREDITS**

- Certificate of Completion in Airframe  
Maintenance (Part 147) (32)
- AND
- Certificate of Completion in Powerplant  
Maintenance (Part 147) (33)

- OR
- Certificate of Completion in Aircraft  
Maintenance Technology (Part 147) (65).....65
- OR
- +AMT220AA Fundamentals of Aircraft Wood  
Structures, Covering and  
Finishing and Bonded  
Structures: Part 65 .....3
- +AMT222AA Atmosphere Control, Fire  
Detection, Ice and Rain  
Protection Systems: Part 65 .....4
- +AMT224AA Aircraft Sheet Metal: Part 65 .....5
- +AMT226AA Aircraft Landing Gear, Hydraulic,  
Pneumatic, Fuel, Position and  
Warning Systems: Part 65 .....7
- +AMT228AA Aircraft Electrical Systems,  
Instruments, Fuel Indicating,  
Communication and  
Navigation Systems: Part 65 .....7
- +AMT230AA Airframe Assembly, Inspection,  
and Welding: Part 65 .....6
- +AMT263 Aircraft Turbine Engines .....5
- +AMT264AA Aircraft Reciprocating Engines:  
Part 65 .....7
- +AMT266 Engine Fuel System, Fuel  
Metering and Induction  
System .....6
- +AMT268AA Engine Electrical, Ignition and  
Starter Systems: Part 65 .....6
- +AMT270AA Engine Instruments, Fire  
Protection  
and Lubrication, Cooling and  
Exhaust Systems: Part 65 .....5
- +AMT272 Propeller Systems and Engine  
Inspections .....4

**GENERAL EDUCATION: 24-27 CREDITS**

**CORE: 15-17 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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



**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 Writing (3).....6

**ORAL COMMUNICATION**

Any approved general education course in the Oral Communication area .....3

**CRITICAL READING**

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

**MATHEMATICS**

- +MAT120 Intermediate Algebra (5) OR
- +MAT122 Intermediate Algebra (3) OR
- Equivalent as indicated by assessment 3-5

**DISTRIBUTION: 9-10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course in the Humanities and Fine Arts area ..... 2-3

**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 (Part 147)**

**CERTIFICATE OF COMPLETION: CCL 5670**

65 Credits

**DIVISION CHAIR:**

ERIC SNYDER ~  
(480) 988-8127

[eric.snyder@cgcc.edu](mailto:eric.snyder@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion in Aircraft Maintenance Technology (Part 147) Program is designed for individuals who want to prepare for the FAA Airframe and Powerplant Certificates but are limited by funding agencies to a single continuing program of study. This program of study normally requires four semesters to complete if the prerequisites have been met.

The program prerequisites normally require one or more semesters to complete.

**PROGRAM NOTES**

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**ADMISSION CRITERIA**

Students wishing to enroll in this Part 147 Certificate program must complete an application process before being officially accepted into the program.



**PROGRAM PREREQUISITES: 28-29 CREDITS**

+ENG091	Fundamentals of Writing (3) OR Equivalent as indicated by assessment .....3
+MAT091	Introductory Algebra (4) OR
+MAT092	Introductory Algebra (3) OR Equivalent as indicated by assessment ..... 3-4
+RDG091	College Reading Skills I (3) OR Equivalent as indicated by assessment .....3
AND	
+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

AND  
Permission of the Department or Division.

**REQUIRED COURSES: 65 CREDITS**

+AMT220	Fundamentals of Aircraft Wood Structures, Covering and Finishing and Bonded Structures .....3
+AMT222	Atmosphere Control, Fire Detection, 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
+AMT263	Aircraft Turbine Engines .....5
+AMT264	Aircraft Reciprocating Engines...7
+AMT266	Engine Fuel System, 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

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**Airframe Maintenance  
(Part 147)**

**CERTIFICATE OF COMPLETION:  
CCL 5668**

32 Credits

**DIVISION CHAIR:**

ERIC SNYDER ~  
(480) 988-8127

[eric.snyder@cgcc.edu](mailto:eric.snyder@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion in Airframe Maintenance (Part 147) Program is designed for individuals who hold an FAA Powerplant Certificate or who desire to specialize in areas of structural maintenance or repair. This certificate provides the necessary knowledge to continue into areas of avionics, composites, or heavy structures specializations. This program of study normally requires two semesters to complete if the prerequisites have been met.

The program prerequisites normally require one or more semesters to complete.

**PROGRAM NOTES**

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**ADMISSION CRITERIA**

Students wishing to enroll in this Part 147 Certificate program must complete an application process before being officially accepted into the program.

**PROGRAM PREREQUISITES: 28-29 CREDITS**

+ENG091 Fundamentals of Writing (3) OR Equivalent as indicated by assessment.....3

+MAT091 Introductory Algebra (4) OR

+MAT092 Introductory Algebra (3) OR Equivalent as indicated by assessment..... 3-4

+RDG091 College Reading Skills I (3) OR Equivalent as indicated by assessment.....3

AND

+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 and pass an Aviation General Subject exam with a minimum score of 70 percent.

AND

Permission of the Department or Division.

**REQUIRED COURSES: 32 CREDITS**

+AMT220 Fundamentals of Aircraft Wood Structures, Covering and Finishing and Bonded Structures .....3

+AMT222 Atmosphere Control, Fire Detection, 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

.....

**Powerplant Maintenance (Part 147)**

**CERTIFICATE OF COMPLETION: CCL 5669**

33 Credits

**DIVISION CHAIR:**

ERIC SNYDER ~ (480) 988-8127

[eric.snyder@cgcc.edu](mailto:eric.snyder@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion in Powerplant Maintenance (Part 147) Program is designed for individuals who hold an FAA Airframe Certificate or who desire to specialize in areas of engine maintenance or repair. This program of study normally requires two

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semesters to complete if the prerequisites have been met.

The program prerequisites normally require one or more semesters to complete.

**PROGRAM NOTES**

Students must earn a grade of “C” or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**ADMISSION CRITERIA**

Students wishing to enroll in this Part 147 Certificate program must complete an application process before being officially accepted into the program.

**PROGRAM PREREQUISITES: 28-29 CREDITS**

- +ENG091 Fundamentals of Writing (3) OR Equivalent as indicated by assessment .....3
  - +MAT091 Introductory Algebra (4) OR
  - +MAT092 Introductory Algebra (3) OR Equivalent as indicated by assessment ..... 3-4
  - +RDG091 College Reading Skills I (3) OR Equivalent as indicated by assessment .....3
- AND
- +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 Airframe Certificate and pass an Aviation General Subject exam with a minimum score of 70 percent.

AND

Permission of the Department or Division.

**REQUIRED COURSES: 33 CREDITS**

- +AMT263 Aircraft Turbine Engines .....5
- +AMT264 Aircraft Reciprocating Engines...7
- +AMT266 Engine Fuel System, 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

**Art: Computer Illustration**  
**Media Arts: Computer Art/Illustration**

**CERTIFICATE OF COMPLETION: CCL 5881**

16 Credits

**PROGRAM CONTACT:**

TED WOLTER ~  
 (480) 732-7089

[william.wolter@cgcc.edu](mailto:william.wolter@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in Media Arts: Computer Art/Illustration is designed for the student who wishes to develop an area

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

of specialization in Computer Art/Illustration. The program acquaints the student with art principles and assists the students in developing their abilities to solve design and compositional problems as related to the art. 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 included in multimedia such as illustrator, artist, designer, paste-up artist, freelance artist-designer, graphic design artist, or multimedia artist.

**PROGRAM NOTES**

+ indicates course has prerequisites and/or corequisites.

Students must earn a grade of "C" or better in all courses within the program.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 16 CREDITS**

+ADA/ART169	Two-Dimensional Computer Design .....	3
+ADA/ART177	Computer-Photographic Imaging (3) OR	
+ART173	Computer Art (3) .....	3
+ADA/ART289	Computer Illustration .....	3
ART100	Introduction to Computer Graphic Art .....	1
ART111	Drawing I .....	3
ART116	Life Drawing I .....	3

**Art: Digital  
Photography  
Media Arts: Digital Imaging**

**CERTIFICATE OF COMPLETION:  
CCL 5879**

16 Credits

**PROGRAM CONTACT:**

TED WOLTER ~  
(480) 732-7089

[william.wolter@cgcc.edu](mailto:william.wolter@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in Media Arts: Digital Imaging program is designed for the student who wishes to develop marketable skills in the area of photography and digital imaging. The program is designed to provide the student with an understanding of film, cameras, and film equipment; a knowledge of photography terminology; and digital imaging tools and processes. This curriculum is designed to prepare students for employment and upgrades the skills of persons already employed in this field. Knowledge and skills can be applied to such occupational areas as media production, marketing, graphic production, desktop publishing, multimedia, service bureau and customer service, and web page production. Job titles may include artist, photographer, designer, and freelance artist-designer. An Associate in Applied Science (AAS) is also available.

**PROGRAM NOTES**

+ indicates course has prerequisites and/or corequisites.

Students must earn a grade of "C" or better in all courses within the program.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 16 CREDITS**

+ADA/ART177	Computer-Photographic Imaging .....	3
ART100	Introduction to Computer Graphic Art .....	1
ART131	Photography I .....	3
+ART132	Photography II (3) OR	
+ART143	Intermediate Digital Photography (3) .....	3
ART142	Introduction to Digital Photography .....	3
+ART270	Intermediate Computer Photographic Imaging .....	3

## Business

### General Business

#### ASSOCIATE IN APPLIED SCIENCE: AAS 3148

61-66 Credits

**PROGRAM CONTACT:**

LEE GARZA ~  
(480) 732-7211

[lee.garza@cgcc.edu](mailto:lee.garza@cgcc.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. Although many courses will transfer to a four-year institution, some courses do not. This curriculum is not designed to meet the needs of students who wish to transfer to a four-year institution. A Certificate of Completion (CCL) is also available.

**PROGRAM NOTES**

+ indicates course has prerequisites and/or corequisites.

Students must earn a grade of "C" or better in all courses required within the program.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 21 CREDITS**

ACC111	Accounting Principles I .....	3
CIS105	Survey of Computer Information Systems .....	3
GBS110	Human Relations in Business and Industry (3) OR	
MGT175	Business Organization and Management (3) OR	
MGT251	Human Relations in Business (3) .....	3
GBS151	Introduction to Business .....	3
GBS205	Legal, Ethical, and Regulatory Issues in Business .....	3
+GBS233	Business Communication .....	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)
- GBS++++ Any GBS General Business course(s)
- MGT++++ Any MGT Management course(s)
- MKT++++ Any MKT Marketing course(s)
- EPS++++ Any EPS Entrepreneurial Studies course(s)
- IBS++++ Any IBS International Business course(s)
- REA++++ Any REA Real Estate course(s)
- SBS++++ Any SBS Small Business Management course(s)
- CIS114DE Excel Spreadsheet .....3
- CIS117DM Microsoft Access: Database Management.....3
- CIS133DA Internet/Web Development Level I .....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**

Any approved general education course in the Oral Communication area .....3

**CRITICAL READING**

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

**MATHEMATICS**

- +MAT120 Intermediate Algebra (5) OR
- +MAT121 Intermediate Algebra (4)
- +MAT122 Intermediate Algebra (3) ..... 3-5

**DISTRIBUTION:10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course in the Humanities and Fine Arts 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

.....  
**General Business**

**CERTIFICATE OF COMPLETION: CCL 5683**

21 Credits

**PROGRAM CONTACT:**

LEE GARZA ~  
(480) 732-7211

[lee.garza@cgcc.edu](mailto:lee.garza@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in General Business is designed to provide business training for various entry-level positions in

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



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**

+ indicates course has prerequisites and/or corequisites.

Students must earn a grade of "C" or better in all courses required within the program.

**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)	
GBS+++++	Any GBS General Business course(s)	
MGT+++++	Any MGT Management course(s)	
MKT+++++	Any MKT Marketing course(s)	
IBS+++++	Any IBS International Business course(s)	
REA+++++	Any REA Real Estate course(s)	
SBS+++++	Any SBS Small Business Management course(s)	
CIS114DE	Excel Spreadsheet .....	3
CIS117DM	Microsoft Access: Database Management.....	3

CIS133DA	Internet/Web Development Level I .....	3
EPS+++++	Any EPS Entrepreneurial Studies course(s).....	1-3

**Organizational Leadership**

**CERTIFICATE OF COMPLETION: CCL 5731**

18 Credits

**PROGRAM CONTACT:**

BETH NUNEVILLER ~  
(480) 857-5134

[beth.nuneviller@cgcc.edu](mailto:beth.nuneviller@cgcc.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, directing, and evaluating business situations. This program also emphasizes procedures for effective allocation of time, money, materials, space, and personnel. An Associate in Applied Science (AAS) in Organizational Management is also available.

**PROGRAM NOTES**

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisite and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**PROGRAM PREREQUISITES: 0-3 CREDITS**

+ENG101 First-Year Composition (3) OR



+ENG107 First-Year Composition for  
ESL (3) OR  
Permission of Department or Division (0)..... 0-3

**REQUIRED COURSES: 18 CREDITS**

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  
GBS151 Introduction to Business .....3  
+GBS233 Business Communication .....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

provides leadership and communication skills and techniques for planning, directing, and evaluating business situations, with an emphasis on effective allocation of time, money, materials, space, and personnel. A Certificate of Completion (CCL) in Organizational Leadership is also available.

**PROGRAM NOTES**

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisite and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 18 CREDITS**

Certificate of Completion in Organizational Leadership (5731)..... 18

**RESTRICTED ELECTIVES: 19-25 CREDITS**

Students must choose 19-25 industry/job related course credits from any MCCCDC 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).....3

.....  
**Organizational Management**

**ASSOCIATE IN APPLIED SCIENCE:  
AAS 3727**

60 Credits

**PROGRAM CONTACT:**

BETH NUNEVILLER ~  
(480) 857-5134

[beth.nuneviller@cgcc.edu](mailto:beth.nuneviller@cgcc.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

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

	AND	
+ENG102	First-Year Composition (3) OR	
+ENG108	First-Year Composition for ESL (3) 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
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**MATHEMATICS**

Any approved general education course from the Mathematics area..... 3-5

**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

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

**SOCIAL AND BEHAVIORAL SCIENCES**

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

**NATURAL SCIENCE**

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

**Retail Management**

**ASSOCIATE IN APPLIED SCIENCE:  
AAS 3048**

61-63 Credits

**PROGRAM CONTACT:**

BETH NUNEVILLER ~  
(480) 857-5134

[beth.nuneviller@cgcc.edu](mailto:beth.nuneviller@cgcc.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.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 24-27 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

CISI05	Survey of Computer Information Systems (3).....3
GBS110	Human Relations in Business and Industry (3) OR
MGT251	Human Relations in Business (3) .....3
MGT101	Techniques of Supervision (3) OR
MGT229	Management and Leadership I (3).....3
MGT179	Utilizing the Human Resources Department (3) OR
MGT276	Personnel/Human Resources Management (3) .....3
MKT268	Merchandising (3) OR
MGT180	Retail Management (3).....3
MKT271	Principles of Marketing .....3

**RESTRICTED ELECTIVES: 9-15 CREDITS**

Student must complete additional nine (9) to fifteen (15) credits from GBS, MGT, and/or MKT prefixed courses (except courses used to satisfy Required Courses area nor excluded below) to complete a minimum of 61 total program credits. Must include at least one MKT course.

GBS++++	Any GBS General Business course(s).....0-12
MGT++++	Any MGT Management course(s) except MGT180 .....0-12
MKT++++	Any MKT Marketing course(s) except MKT268 .....3-15

**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) OR
+ENG111	Technical Writing (3).....6

ENG102 or ENG108 recommended for students pursuing a BAS degree at an Arizona university.

**ORAL COMMUNICATION**

COM100	Introduction to Human Communication .....3
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**CRITICAL READING**

+CRE101	College Critical Reading and Critical Thinking (3) OR Equivalent as indicated by assessment .....3
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**MATHEMATICS**

Any approved general education course from the Mathematics area..... 3-5

**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

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

**SOCIAL AND BEHAVIORAL SCIENCES**

SBU200	Society and Business.....3
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**NATURAL SCIENCES**

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

.....  
**Retail Management**

**CERTIFICATE OF COMPLETION: CCL 5286**

24 Credits

**PROGRAM CONTACT:**

BETH NUNEVILLER ~  
(480) 857-5134

[beth.nuneviller@cgcc.edu](mailto:beth.nuneviller@cgcc.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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

## 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 for all courses required within the program.

+ indicates course has a prerequisite and/or corequisites.

Overall program minimum G.P.A. = 2.00.

### REQUIRED COURSES: 24 CREDITS

ACC111	Accounting Principles I (3) OR
ACC211	Financial Accounting (3).....3
BPC110	Computer Usage and Applications (3) OR
CISI05	Survey of Computer Information Systems (3).....3
COM100	Introduction to Human Communication .....3
GBS110	Human Relations in Business and Industry (3) OR
MGT251	Human Relations in Business (3).....3
MGT180	Retail Management (3) OR
GBS270AC	Business Internship (3) OR
GBS296WC	Cooperative Education (3) OR
GBS298AC	Special Projects (3) .....3
MGT101	Techniques of Supervision (3)

	OR
MGT229	Management and Leadership I (3).....3
MGT179	Utilizing the Human Resources Department (3) OR
MGT276	Personnel/Human Resources Management (3) .....3
MKT271	Principles of Marketing .....3

## Child and Family Professional Development Child and Family Professional Development

### ACADEMIC CERTIFICATE: AC 6238

16 Credits

**PROGRAM CONTACT:**  
JENNIFER PETERSON ~  
(480) 857-5535

[jennifer.peterson@cgcc.edu](mailto:jennifer.peterson@cgcc.edu)

### PROGRAM DESCRIPTION

The Academic Certificate (AC) in Child and Family Professional Development is designed for practitioners in the early childhood, school-age, or home visitor field seeking coursework and portfolio/resource file assistance to meet a wide variety of national credentialing requirements (such as the Council for Professional Recognition CDA or the National Child Care Association CCP). Individuals completing this certificate will have fulfilled only the required training clock hours and resource file/portfolio prior to application to external credentialing organizations. Final credentialing assessment

and award of the external credential is awarded by the external credentialing organization.

**PROGRAM NOTES**

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Individuals may be required to meet current state/local regulatory requirements such as fingerprint clearance, health/immunization record and/or CPR certificate.

**REQUIRED COURSES: 16 CREDITS**

Required Core: 3

ECH253 National Credential Portfolio Development .....3

Academic Specialization: 13

Students must complete one of the following blocks:

**Family Child Care**

CFS163 Family Child Care: Introduction to Business Management .....3

CFS164 Family Child Care: Curriculum and Environment .....3

EED205 The Developing Child: Prenatal to Age Eight .....3

EED215 Early Learning: Health, Safety, Nutrition and Fitness .....3

+EED260 Early Childhood Infant/Toddler Internship (1)OR

+EED261 Early Childhood Preschool Internship (1) .....1

**Infant Toddler**

EED205 The Developing Child: Prenatal to Age Eight .....3

EED215 Early Learning: Health, Safety, Nutrition and Fitness .....3

+EED260 Early Childhood Infant/Toddler Internship.....1

+ITD210 Early Attachments, Relationships, and Families: Birth to Age Three .....3

+ITD220 Cognition and Communication: Birth to Age Three .....3

**Preschool**

ECH128 Early Learning: Play and the Arts .....3

EED205 The Developing Child: Prenatal to Age Eight .....3

EED212 Guidance, Management and the Environment.....3

EED215 Early Learning: Health, Safety, Nutrition and Fitness.....3

+EED261 Early Childhood Preschool Internship.....1

**Home Visitor**

CFS190 Home-Based Visitation .....3

CFS205 Human Development .....3

CFS220 Introduction to Parenting and Family Development .....3

CFS225 Foundations of Parent Education .....3

+FCS260 Family and Consumer Science Internship .....1

**School Age**

CFS167 School-Age Child Care Provider .....3

CFS/ECH176 Child Development .....3

CFS206 Child and Family Organizations: Management and Administration .....3

EED215 Early Learning: Health, Safety, Nutrition and Fitness .....3

+FCS260 Family and Consumer Science Internship .....1

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

## Cisco Networking Networking Technology: Cisco

### ASSOCIATE IN APPLIED SCIENCE: AAS 3816

60-63 Credits

#### PROGRAM CONTACT:

TOM PEARSON ~  
(480) 726-4131

[tom.pearson@cgcc.edu](mailto:tom.pearson@cgcc.edu)

#### PROGRAM DESCRIPTION

The Associate in Applied Science (AAS) in Networking Technology: Cisco provides training for a supervisory position working with Cisco Systems networking and Internet hardware. A Cisco Systems recognized regional or local academy, prepares students for industry-recognized certification. The curriculum is taught by Cisco Systems Certified Professionals. Knowledge and skills are developed to install, configure, maintain, and troubleshoot Cisco routers and components, advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs); troubleshoot problems with various common hardware and software configurations; perform administrative tasks in a network; develop methods for customer service. Courses in the program also prepare students for the Cisco Certified Networking Associate examination.

#### JOB DESCRIPTION

A Cisco networking Administrator will be required to perform various tasks such

as designing, installing, maintaining and troubleshooting Cisco routers and components, Local Area Networks (LANs), and Wide Area Networks (WANs). Additional skills that are necessary include troubleshooting problems with various common hardware and software configurations, performing administrative tasks in a network, developing methods for customer service, and utilizing electronic systems.

#### JOB OPPORTUNITIES

Cisco systems is the world's largest manufacturer of networking and Internet hardware and has seen tremendous growth of market share. The employment opportunities for trained Networking Administrators are outstanding.

#### PROGRAM NOTES

Students must earn a grade of "C" or better for each course listed in the Required Courses area.

+ indicates course has prerequisites and/or corequisites.

++ indicates any module.

A course cannot be used to satisfy both the Required Course and Restricted Electives area.

#### REQUIRED COURSES: 22 CREDITS

+BPC170	A+ Exam Prep: Computer Hardware Configuration and Support .....	3
CIS126++	UNIX/Linux Operating System any course (3) .....	3

OR



MST150++	Microsoft Windows any course (3) .....	3
CNT140AA	Introduction to Networks .....	4
+ CNT150AA	Cisco - Routing and Switching Essentials .....	4
+ CNT160AA	Scaling Networks .....	4
+ CNT170AA	Cisco - Connecting Networks .....	4

One of the following 2 tracks must be fulfilled:

Track 1 - Exploration..... 14-18

CNT140	Cisco Networking Basics (4) OR	
CNT140AA	Introduction to Networks (4) OR	
CNT138	CCNA Discovery - Networking for Home and Small Businesses (3) AND	
+CNT148	CCNA Discovery - Working at a Small-to-Medium Business or Internet Service Provider (3) ...	4-6
+CNT150	Cisco Networking Router Technologies (4) OR	
+CNT150AA	Cisco - Routing and Switching Essentials (4) .....	4
+CNT160	Cisco Switching Basics and Intermediate Routing (3) OR	
+CNT160AA	Scaling Networks (4) .....	3-4
+CNT170	Cisco Wide Area Network (WAN) Technologies (3) OR	
+CNT170AA	Cisco - Connecting Networks (4) .....	3-4

Track 2 - Discovery ..... 14

CNT138	CCNA Discovery - Networking for Home and Small Businesses .....	3
+CNT148	CCNA Discovery - Working at a Small-to-Medium Business or Internet Service Provider .....	3
+CNT158	CCNA Discovery - Introduction to Routing and Switching in the Enterprise .....	4

+CNT168	CCNA Discovery - Designing and Supporting Computer Networks .....	4
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**RESTRICTED ELECTIVES: 16 CREDITS**

Student may select fifteen (16) credits from any of the following courses, except courses used to satisfy Required Courses area:

BPC110	Computer Usage and Application (3) OR	
CIS105	Survey of Computer Information Systems (3).....	3
+CIS126++	UNIX/Linux Operating System (any module) (3) OR	
+MST150	Microsoft Windows Professional (3) OR	
+MST150VI	Microsoft Windows Vista Administration (3) OR	
+MST150XP	Microsoft Windows XP Professional (3).....	3
+CIS190	Introduction to Local Area Networks (3) OR	
MST140	Microsoft Networking Essentials (3) .....	3
+CIS270	Essentials of Network and Information Security .....	3
+CIS296WA	Cooperative Education (1) OR	
+CIS296WB	Cooperative Education (2) OR	
+CIS296WC	Cooperative Education (3) OR	
+CIS296WD	Cooperative Education (4).....	1-4
CIS298AA	Special Projects (1) OR	
CIS298AB	Special Projects (2) OR	
CIS298AC	Special Projects (3) .....	1-3
CIS121AB	Microsoft Command Line Operations .....	1
CIS102	Interpersonal and Customer Service Skills for IT Professionals .....	1
CIS110	Home Entertainment and Computer Networking.....	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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



ELT100	Survey of Electronics.....3	CIS280	Current Topics in Computing.....3
CIS224	Project Management Microsoft Project for Windows .....3	+BPC/ CIS290AA	Computer Information Systems Internship (1) OR
+CNT205	Cisco Certified Network Associate Security .....4	+BPC/ CIS290AB	Computer Information Systems Internship (2) OR
+CNT181	Cisco Securing IOS Networks.....4	+BPC/ CIS290AC	Computer Information Systems Internship (3)..... 1-3
+CNT202	Cisco Secure Firewall Appliance Configuration.....3		
+CNT183	Cisco Secure Virtual Private Network Configuration.....3		
+CNT185	Cisco Network Security .....4		
+CNT206	Cisco Certified Network Associate Wireless .....4		
+CNT2+++	Any 200 level course with a CNT Prefix..... 1-4		
+BPC270	A+ Exam Prep: Operating System Configuration and Support .....3		
+BPC273	Advanced Server Computer Maintenance: Server+ Prep.....3		
+CIS127DL	Linux Utilities .....3		
+CIS238DL	Linux System Administration.....3		
+CIS239DL	Linux Shell Scripting.....3		
+CIS240DL	Linux Network Administration...3		
+CIS241DL	Apache Web Server Administration (Linux/Unix).....3		
+CIS271DL	Linux Security.....3		
+CIS274DL	Linux Enterprise Network Security.....3		
+MST152	Microsoft Windows Server (4) OR		
+MST152DA	Microsoft Windows 2000 Server (4) OR		
+MST152DB	Microsoft Windows 2003 Server (4) 4		
+MST155	Implementing Windows Network Infrastructure.....3		
+MST157	Implementing Windows Directory Services.....3		
+CIS250	Management of Information Systems .....3		

**GENERAL EDUCATION: 25 CREDITS****CORE: 15 CREDITS****FIRST-YEAR COMPOSITION**

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

**ORAL COMMUNICATION**

Any approved general education course in the  
Communication area.....3

**CRITICAL READING**

+CRE101	College Critical Reading and Critical Thinking (3) OR Equivalent as indicated by assessment.....3
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**MATHEMATICS**

Any approved general education course  
with a MAT subject .....3

**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course in the Humanities and Fine Arts 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

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**Networking Administration: Cisco**

**CERTIFICATE OF COMPLETION: CCL 5969**

14-18 Credits

**PROGRAM CONTACT:**

TOM PEARSON ~  
(480) 726-4131

[tom.pearson@cgcc.edu](mailto:tom.pearson@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in Networking Administration: Cisco provides training for those interested in working with Cisco Systems networking and Internet hardware. Knowledge and skills are developed to install, configure, maintain, and troubleshoot Cisco routers and switches, and configure advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs). The courses in the program are designed to help prepare students for the Cisco Certified Networking Associate (CCNA) examination and are taught by Cisco Certified Professionals using the Cisco Networking Academy program curriculum.

**PROGRAM NOTES**

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

**REQUIRED COURSES: 14-18 CREDITS**

One of the following 2 tracks must be fulfilled:

Track 1 - Exploration..... 14-18

- CNT140 Cisco Networking Basics (4) OR
- CNT140AA Introduction to Networks (4) OR
- CNT138 CCNA Discovery - Networking for Home and Small Businesses (3) AND
- +CNT148 CCNA Discovery - Working at a Small-to-Medium Business or Internet Service Provider (3)... 4-6
- +CNT150 Cisco Networking Router Technologies (4) OR
- +CNT150AA Cisco - Routing and Switching Essentials (4).....4
- +CNT160 Cisco Switching Basics and Intermediate Routing (3) OR
- +CNT160AA Scaling Networks (4) ..... 3-4
- +CNT170 Cisco Wide Area Network (WAN) Technologies (3) OR
- +CNT170AA Cisco - Connecting Networks (4)..... 3-4

Track 2 - Discovery ..... 14

- CNT138 CCNA Discovery - Networking for Home and Small Businesses .....3
- +CNT148 CCNA Discovery - Working at a Small-to-Medium Business or Internet Service Provider .....3
- +CNT158 CCNA Discovery - Introduction to Routing and Switching in the Enterprise.....4

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

+CNT168 CCNA Discovery -  
Designing and Supporting  
Computer Networks.....4

## Networking Technology: Cisco

### CERTIFICATE OF COMPLETION: CCL 5967

22 Credits

#### PROGRAM CONTACT:

TOM PEARSON ~  
(480) 726-4131

[tom.pearson@cgcc.edu](mailto:tom.pearson@cgcc.edu)

#### PROGRAM DESCRIPTION

The Certificate of Completion (CCL) in Networking Technology: Cisco provides training for those interested in supervisory responsibilities working with Cisco Systems networking and Internet hardware. Knowledge and skills are developed to install, configure, maintain, and troubleshoot Cisco routers and switches; configure advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs); troubleshoot problems with various hardware and software configurations and perform administrative tasks in a network. The courses in the program are also designed to help prepare students for the Cisco Certified Networking Associate (CCNA) examination and are taught by Cisco Certified Professionals using the Cisco Networking Academy program curriculum.

#### PROGRAM NOTES

Students must earn a grade of "C" or better for all courses required within the program.

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

+ indicates course has prerequisite and/or corequisites.

#### REQUIRED COURSES: 22 CREDITS

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support .....3  
CIS126++ UNIX/Linux Operating System ....  
(any course) ..... (3)  
OR MST150++ Microsoft Windows (any course) .  
.....(3)  
CNT140AA Introduction to Networks .....4  
+ CNT150AA Cisco - Routing and Switching ....  
Essentials ..... 4  
+ CNT160AA Scaling Networks .....4  
+ CNT170AA Cisco - Connecting Networks ....4

## Computer Applications Business Applications

### ASSOCIATE IN APPLIED SCIENCE: AAS 3548

60-64 Credits

#### PROGRAM CONTACT:

LANA SHORT ~  
(480) 732-7191

[lane.short@cgcc.edu](mailto:lane.short@cgcc.edu)

#### PROGRAM DESCRIPTION

The Associate in Applied Science (AAS) in Business Applications is designed to provide the skills needed for those students who are interested in becoming part of the support system in almost any workplace configuration in a wide variety of business areas. This program prepares students to use common business computer applications for professional and personal computing.

Other business skills, including accounting, effective communication, management, marketing, and business law basic principles are integrated in the program. Courses in the program prepare for the Microsoft examinations for certification as a Microsoft Office Specialist (MOS).

**PROGRAM NOTES**

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 31 CREDITS**

ACC111	Accounting Principles I .....	3
CIS105	Survey of Computer Information Systems .....	3
CIS113DE	Microsoft Word: Word Processing .....	3
CIS114DE	Excel Spreadsheet .....	3
CIS117DM	Microsoft Access: Database Management .....	3
CIS118DB	Desktop Presentation: Powerpoint .....	3
CIS121AE	Windows Operating System: Level 1 .....	1
CIS133DA	Internet/Web Development Level 1 .....	3
CIS224	Project Management Microsoft Project for Windows .....	3
GBS151	Introduction to Business .....	3
+GBS233	Business Communication .....	3

**RESTRICTED ELECTIVES: 7-8 CREDITS**

Students choose two (2) 3 credit courses and one (1) 1 or 2 credit course from the following in a consultation with a program advisor:

BPC/ OAS111AA	Computer Keyboarding I.....	1
BPC/ OAS111AB	Computer Keyboarding II.....	1
ACC115	Computerized Accounting .....	2
GBS205	Legal, Ethical and Regulatory Issues in Business.....	3
MGT101	Techniques of Supervision .....	3
MGT175	Business Organization and Management .....	3
MGT229	Management and Leadership 1.....	3
MGT251	Human Relations in Business....	3
MGT253	Owning and Operating a Small Business .....	3
MGT271	Principles of Marketing.....	3
CIS102	Interpersonal and Customer Service Skills for IT Professional..	1
CIS290AA	Computer Information Systems Internship.....	1
+CIS213DE	Advanced Microsoft Word: Word Processing.....	3
+CIS214DE	Advanced Excel Spreadsheet: Level II .....	3
+CIS217AM	Advanced Microsoft Access: Database Management.....	3

**GENERAL EDUCATION: 22-25 CREDITS**

**CORE: 12-15 CREDITS**

**FIRST-YEAR COMPOSITION**

+ENG101	First-Year Composition (3) OR	
+ENG107	First-Year Composition for ESL (3).....	3
+ENG102	First-Year Composition (3) OR	
+ENG108	First-Year Composition for ESL (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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

**ORAL COMMUNICATION**

COM100 Introduction to Human Communication (3) OR  
 +COM230 Small Group Communication (3).....3

**CRITICAL READING**

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

**MATHEMATICS**

Any approved general education course from the Mathematics area.....3

**DISTRIBUTION:10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course from the Humanities and Fine Arts 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 from the Natural Sciences area .....4



**Business Applications**

**CERTIFICATE OF COMPLETION: CCL 5644N**

20 Credits

**PROGRAM CONTACT:**

LANA SHORT ~  
 (480) 732-7191

[lane.short@cgcc.edu](mailto:lane.short@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in Business Applications Specialist emphasizes training on word processing, spreadsheet, database, and presentation software for business purposes. Courses provide students with skills to work in various settings, such as administrative assistant, accountant, small business owner, and managers at all levels. This certificate is designed to provide preparation for the Microsoft examinations for certification as a Microsoft Office Specialist (MOS).

**PROGRAM NOTES**

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 13 CREDITS**

CIS113DE Microsoft: Word Processing ..... 3  
 CIS114DE Excel Spreadsheet .....3  
 CIS117DM Microsoft Access Database Management ..... 3  
 CIS118DB Desktop Presentation Powerpoint..... 3  
 CIS121AE Windows Operating Systems Level 1 ..... 1

**RESTRICTED ELECTIVES: 7 CREDITS**

Students choose two (2) 3 credit courses and one (1) 1 credit course from the following:

BPC/ Computer Keyboarding II ..... 1  
 OAS111AA  
 BPC/  
 OAS111AB Computer Keyboarding II ..... 1

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

ACC111	Accounting Principles.....	3
CIS133DA	Internet/Web Development Level 1 .....	3
CIS224	Project Management Microsoft Project for Windows .....	3

.....

## Computer Database Administration and Development Oracle Database Operations

### CERTIFICATE OF COMPLETION: CCL 5183

12 Credits

#### PROGRAM CONTACT:

PREMA RAYAPPA  
(480) 732-7230

[prema.rayappa@cgcc.edu](mailto:prema.rayappa@cgcc.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; also creating application code that can be shared by multiple forms, reports, and data management tools. Chandler-Gilbert Community College, an Oracle Academic Initiative institution, offers programs 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).

#### JOB DESCRIPTION

Oracle Certified Associates are professionals who are required to perform various job tasks such as enterprise database planning and design; creating and maintaining the database and its objects; and storing, retrieving, and manipulating data utilizing SQL. Oracle Certified Associates are also responsible for resolving technical issues and providing application and user support; as well as creating PL/SQL application code that can be shared by multiple forms, reports, and data management applications.

#### PROGRAM NOTES

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

#### PROGRAM PREREQUISITES: 3 CREDITS

In lieu of the course listed below, students with experience in the information technology field may meet this program prerequisite requirement with the permission of the division.

CIS105	Survey of Computer Information Systems (3) OR Permission of the Division.....	0-3
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#### REQUIRED COURSES: 12 CREDITS

+ CIS119DO	Introduction to Oracle: SQL .....	3
+ CIS119DP	Oracle: Database Administration .....	3
+ CIS154	Database Modeling and Design.....	3
+ CIS164AB	Oracle: PL/SQL Programming .....	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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



## Computer Hardware Maintenance and Desktop Support

### Computer Hardware and Desktop Support

#### CERTIFICATE OF COMPLETION: CCL 5026

20-25 Credits

#### PROGRAM CONTACT:

TOM PEARSON  
(480) 726-4131

[tom.pearson@cgcc.edu](mailto:tom.pearson@cgcc.edu)

#### PROGRAM DESCRIPTION

The Certificate of Completion in Computer Hardware and Desktop Support is designed to provide training to work in an entry-level computer maintenance and help-desk position. Students will be provided the opportunity to apply technical concepts, fundamentals, and interpersonal skills in a help-desk environment.

#### PROGRAM NOTES

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.

++ indicates any module/suffixed courses.

Overall program minimum G.P.A. = 2.00.

#### REQUIRED COURSES: 21-22 CREDITS

BPC110	Computer Usage and Applications (3) OR
CIS105	Survey of Computer Information Systems (3).....3

CIS121AH	Microsoft PowerShell/ Command Line Operations (3) OR
CIS126DL +BPC170	Linux Operating System (3) .....3 Computer Maintenance: A+ Exam Prep Level I .....3
+BPC270	A+ Exam Prep: Operating System Configuration and Support .....3
CIS102DA CIS102	Customer User Support (3) OR Interpersonal and Customer Service Skills for IT Professionals (1) ..... 1-3
+CIS190	Introduction to Local Area Networks (3) OR
CNT140AA MST140	Introduction to Networks (4) OR Microsoft Networking Essentials (3)..... 3-4
MST150++	Microsoft Windows (any suffixed course) .....3

#### RESTRICTED ELECTIVES: 1-3 CREDITS

+BPC171	Recycling Used Computer Technology .....3
+CIS290AA-AC	Computer Information Systems Internship..... 1-3
+MST141	Enterprise Desktop Support Technician.....3



## Computer Information Technology Information Technology

### ASSOCIATE IN APPLIED SCIENCE: AAS 3023

60 Credits

#### PROGRAM CONTACTS:

PATRICIA BAKER ~  
(480) 732-7392

[patricia.baker@cgc.edu](mailto:patricia.baker@cgc.edu)

TOM PEARSON  
(480) 726-4131

[tom.pearson@cgc.edu](mailto:tom.pearson@cgc.edu)

#### PROGRAM DESCRIPTION

The Associate in Applied Science (AAS) in Information Technology program is designed to provide students with skills to meet the changing employment needs of the information technology (IT) industry. With the flexibility of elective course offerings in this degree, students are able to custom design a program that prepares them for depth of understanding in distinct IT areas or prepares them for a breadth of understanding across an IT field. A variety of opportunities also exist to complete course work that will prepare students for industry-recognized examinations and certifications. Students are encouraged to work closely with the division chair to plan their programs of study.

#### PROGRAM NOTES

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

#### PROGRAM PREREQUISITES: 0-3 CREDITS

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

#### REQUIRED COURSES: 15-28 CREDITS

CIS224 Project Management Microsoft  
Project for Windows .....3

Complete one of the following certificates. Some certificates may contain additional course requirements.

Certificate of Completion in Network Administration: Microsoft  
Windows Server (5124) ..... 18  
Certificate of Completion in Oracle Database Operations (5183) ..... 12  
Certificate of Completion in Computer Hardware and Desktop Support (5026)..... 20-25  
Certificate of Completion in Networking Administration: Cisco (5969) ..... 14-18  
Certificate of Completion in Linux Professional (5204)..... 12  
Certificate of Completion in Programming and System Analysis (5048) ..... 24  
Certificate of Completion in Web Design (5159) ..... 18

#### RESTRICTED ELECTIVES: 9-27 CREDITS

Students must choose 9-27 specific IT elective credits approved by the division chair. Selected courses will not apply in both Required Courses and Restricted Electives area.

**GENERAL EDUCATION: 22 CREDITS**

**CORE: 12 CREDITS**

**FIRST-YEAR COMPOSITION**

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

**ORAL COMMUNICATION**

Any approved general education course in the Oral Communication area.....3

**CRITICAL READING**

Met by CRE101 in the Program  
Prerequisites area.....0

**MATHEMATICS**

Any approved general education course in the Mathematics area.....3

**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course in the Humanities and Fine Arts 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

## Computer Programming Programming and System

**CERTIFICATE OF COMPLETION: CCL 5048**

24 Credits

**PROGRAM CONTACT:**

PATRICIA BAKER ~  
(480) 732-7392

[patricia.baker@cgcc.edu](mailto:patricia.baker@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) program provides an in-depth exploration of different computer language and technical skills.

The program includes, but is not limited to the following: operating systems, local area networks, business communication, team roles, and dynamics.

**PROGRAM NOTES**

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Consultation with an academic advisor is recommended for course selection.

**REQUIRED COURSES: 21 CREDITS**

CIS105	Survey of Computer Information Systems.....	3
CIS224	Project Management Microsoft Project for Windows .....	3
CIS126DA	UNIX Operating System (3) OR	
CIS126DL	Linux Operating System (3) OR	
MST150	Microsoft Windows Professional (3) OR	

MST150VI	Microsoft Windows Vista Administration(3) OR	
MST150XP	Microsoft Windows XP Professional (3).....	3
+CIS150	Programming Fundamentals (3) OR	
+CIS150AB	Object-Oriented Programming Fundamentals (3).....	3
+CIS151	Computer Game Development-Level I (3) OR	
+CIS159	Visual Basic Programming I (3) OR	
+CIS162++	Any C Programming: Level 1 course (3) OR	
+CIS163AA	Java Programming: Level I (3).....	3
+CIS225	Business Systems Analysis and Design (3) OR	
+CIS225AB	Object Oriented Analysis and Design (3) OR	
+CIS250	Management of Information Systems (3).....	3
+CIS217AM	Advanced Microsoft Access: Database Management (3) OR	
+CIS119DO	Introduction to Oracle: SQL (3) OR	
+CIS276DA	My SQL Database (3).....	3

**RESTRICTED ELECTIVES: 3 CREDITS**

+CIS251	Computer Game Development-Level II.....	3
+CIS259	Visual Basic Programming II.....	3
+CIS262++	Any C Programming: Level II Course.....	3
+CIS263AA	Java Programming: Level II.....	3

## Creative Writing Creative Writing

### ACADEMIC CERTIFICATE: AC 6224

24 Credits

#### PROGRAM CONTACT:

MARY ZIMMERER ~  
(480) 857-5441

[mary.zimmerer@cgcc.edu](mailto:mary.zimmerer@cgcc.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 used to seek admittance to a bachelor or master level creative writing program or that may include work to 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 serves many students, especially women, minorities, seniors, and working adults, who are under-represented in traditional creative writing programs because of cultural, dialect or language differences, scheduling difficulties, financial need, or lack of academic experience. 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

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 module/suffixed courses.

### ADMISSION CRITERIA

Students wishing to enroll in the Creative Writing program must complete a formal application; contact Program Director.

### REQUIRED COURSES: 21 CREDITS

ENG210 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 (1).....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

+CRW275 Writing the Mystery Story.....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

ENG235 Magazine Article Writing.....3

ENG/THE260 Film Analysis.....3

+ENH++++ Any ENH English Humanities prefixed course .....3

HUM/THF210 Contemporary Cinema .....3

## Early Learning and Development

### Early Learning and Development

#### ASSOCIATE IN APPLIED SCIENCE: AAS 3124

63-68 Credits

#### PROGRAM CONTACT:

JONI BURRIS ~  
(480) 857-5526

[joni.burris@cgcc.edu](mailto:joni.burris@cgcc.edu)

#### PROGRAM DESCRIPTION

The Associate in Applied Science (AAS) in Early Learning and Development program is designed to prepare individuals to enter the workforce as Early Childhood Professionals and to assist individuals employed in the field to upgrade and expand their skills. The program emphasizes the roles of early care and education professionals, families and the wider society as they together meet the contemporary needs of young children. Course work includes the principles of developmental science, professionalism in early childhood work, philosophies and methods of early learning, and the impact of standards on practice. To apply planning, management and evaluation skills, students will observe, participate, and intern in state licensed early childhood programs.

#### PROGRAM NOTES

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.

++ indicates any module/suffixed courses.

#### PROGRAM PREREQUISITES: NONE

#### REQUIRED COURSES: 32 CREDITS

ECH128	Early Learning: Play and the Arts.....	3
EED200	Foundations of Early Childhood Education.....	3
EED212	Guidance, Management and the Environment.....	3
EED215	Early Learning: Health, Safety, Nutrition and Fitness.....	3
EED220	Child, Family, Community and Culture.....	3
EED222	Introduction to the Exceptional Young Child: Birth to Age Eight.....	3
EED245	Early Learning: Language Acquisition and Literacy Development.....	3
+EED255	Portfolio Development and Writing for the Profession.....	3
+EED260	Early Childhood Infant/ Toddler Internship.....	1
+EED261	Early Childhood Preschool Internship.....	1
+EED278	Early Learning: Curriculum and Instruction - Birth/Preschool.....	3
+EED280	Standards, Observation and Assessment of Typical/Atypical Behaviors of Young Children Birth to Age Eight.....	3

#### RESTRICTED ELECTIVES: 9 CREDITS

Students must complete one of the following Blocks:

Block One:

Infant and Toddler Development:

ITD200	The Physical Child: Birth to Age Three.....3
ITD210	Early Attachments, Relationships and Families: Birth to Age Three.....3
ITD220	Cognition and Communication: Birth to Age Three.....3

**Block Two: Family Child Care Management:**

CFS163	Family Child Care: Introduction to Business Management .....3
CFS164	Family Child Care: Curriculum and Environment.....3
CFS207	Organization and Community Leadership in Child and Family Organizations.....3

**Block Three: Early Childhood Business  
Management:**

CFS206	Child and Family Organizations: Management and Administration.....3
CFS207	Organization and Community Leadership in Child and Family Organizations.....3
CFS208	Child and Family Organizations: Fiscal Management and Grant Writing.....3

**Block Four: Any CFS, ECH, EED, ITD or FCS  
prefixed courses not listed in the Required  
Courses Area**

CFS++++	Any CFS Child/Family Studies course(s) ..... 1-9
ECH++++	Any ECH Early Childhood Education course(s) except courses used to satisfy Required Courses area..... 1-9
EED++++	Any EED Early Education course(s) except courses used to satisfy Required Courses area..... 1-9

ITD++++	Any ITD Infant/Toddler Development course(s) ..... 1-9
FCS++++	Any FCS Family and Consumer Science course(s) ..... 1-9

**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 in the  
Oral Communication area.....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 in the  
Mathematics area.....3

**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved General Education course in the  
Humanities and Fine Arts area .....3

**SOCIAL AND BEHAVIORAL SCIENCES**

CFS/ECH176	Child Development (3) OR
EED205	The Developing Child: Prenatal to Age Eight (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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



CFS235 Developing Child: Theory into Practice, Prenatal - Age 8 (3) .....3

**NATURAL SCIENCES**

Any approved General Education course in the Natural Sciences area.....4

**Electric Utility Technology**  
**Electric Utility Design Technology**

**ASSOCIATE IN APPLIED SCIENCE: AAS 3117**

64 Credits

**PROGRAM CONTACT:**

MARK WEAVER ~  
 (480) 988-8255

[mark.weaver@cgc.edu](mailto:mark.weaver@cgc.edu)

**PROGRAM DESCRIPTION**

The Electric Utility Design Technology program will prepare students for an entry level position with utility companies throughout the United States. The courses will introduce the students to both overhead and underground power line construction, theory, and applications. Once a basic knowledge is learned the student will be able to draw and design new constructions in AutoCAD.

**PROGRAM NOTES**

+ indicates course has prerequisites and/or corequisites.

Students must earn a grade of "C" or better for all courses required within the program.

**ADMISSION CRITERIA**

Application and admission into the Electric Utility Technology Program is required.

**PROGRAM PREREQUISITES: 11-13 CREDITS**

Student must pass a physical examination in the twelve month period prior to acceptance into the program.

- +ENG091 Fundamental of Writing (3) OR Appropriate English placement test score .....3
- +MAT090 Developmental Algebra (5) OR
- +MAT091 Introductory Algebra (4) OR
- +MAT092 Introductory Algebra (3) OR Satisfactory score on District placement exam OR
- +MAT093 Introductory Algebra/ Math Anxiety Reduction (5).... 3-5
- +RDG091 College Reading Skills I (3) OR Appropriate Reading placement test score OR Permission of instructor .....3
- +CAD162 Architectural CAD.....2

**REQUIRED COURSES: 33 CREDITS**

Students must obtain First Aid/ Cardiopulmonary Resuscitation (CPR) certification by the completion of EUT230.

- +ENG101 First-Year Composition .....3
- +ENG102 First-Year Composition (3) OR
- +ENG111 Technical and Professional Writing (3).....3
- +MAT122 Intermediate Algebra .....3
- +EUT110 Line Work I.....2
- +EUT112 Basic Electricity: AC and DC .....4
- +CAD101 Elements of CAD Graphics (AutoCAD) .....3
- +EUT210 Line Work II .....2
- +EUT211 Electrical Apparatus.....4
- +CAD164 Residential Working Drawings.....3
- +EUT 130 CAD for Electric Utility Technology I.....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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



+EUT 230 CAD for Electric Utility  
Technology II .....3

Met by ENG101 AND ENG102 OR ENG111 in  
Required Courses area .....0

**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.

- ACC++++ Any ACC Accounting courses
- BPC++++ Any BPC Business-Personal  
Computer courses
- CAD++++ Any CAD Computer-Aided  
Drafting courses
- CIS++++ Any CIS Computer-Information  
Systems courses
- COM++++ Any COM Communication  
courses
- DFT++++ Any DFT Drafting courses
- EEE++++ Any EEE Electrical  
Engineering courses
- ELE++++ Any ELE Electronic courses
- ELT++++ Any ELT Electronics Technology
- EMT++++ Any EMT Emergency Medical  
Technology courses
- HES++++ Any HES Health Science courses
- GBS++++ Any GBS General Business  
courses
- MET++++ Any MET Manufacturing  
Technology courses
- NET++++ Any NET Networking  
Technology courses
- PED++++ Any PED Physical Education  
courses
- PHY++++ Any PHY Physics courses
- SPA++++ Any Spanish Courses..... 15

**GENERAL EDUCATION: 16 CREDITS**

**CORE: 6 CREDITS**

**FIRST-YEAR COMPOSITION**

**ORAL COMMUNICATION**

Any approved general education course in the  
Oral Communication area.....3

**CRITICAL READING**

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

**MATHEMATICS**

Met by MAT102 in Required Courses area.....0

**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course in the  
Humanities and Fine Arts 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**

**ASSOCIATE IN APPLIED SCIENCE:  
AAS 3855**

61-64 Credits

**PROGRAM CONTACT:**

MARK WEAVER ~  
(480) 988-8255

[mark.weaver@cgcc.edu](mailto:mark.weaver@cgcc.edu)

**PROGRAM DESCRIPTION**

The Associate in Applied Science (AAS)  
in Electric Utility Technology program is

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

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.

**PROGRAM NOTES**

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.

**ADMISSION CRITERIA**

Formal application and admission into the Electric Utility Technology program.

PROGRAM PREREQUISITES: .....0-8 CREDITS

Students must obtain a Commercial Drivers' License from the state of Arizona prior to completion of the Required Courses.

- +ENG091 Fundamental of Writing (3) OR  
Appropriate English placement test score .....3
  - +MAT090 Developmental Algebra (5) OR
  - +MAT091 Introductory Algebra (4) OR
  - +MAT092 Introductory Algebra (3) OR
  - +MAT093 Introductory Algebra/Math  
Anxiety Reduction (5) OR
- Satisfactory score on District  
placement exam..... 0-5

**REQUIRED COURSES: 33 CREDITS**

Students must obtain First Aid/  
Cardiopulmonary Resuscitation (CPR)

certification by the completion of EUT215.

- +ENG101 First-Year Composition .....3
- +ENG111 Technical Writing (3) OR
- +ENG102 First-Year Composition (3).....3
- EUT110 Line Work I.....2
- +EUT112 Basic Electricity: AC and DC .....4
- +EUT115 Field Training I .....6
- +EUT210 Line Work II .....2
- +EUT211 Electrical Apparatus.....4
- +EUT215 Field Training II .....6
- +MAT122 Intermediate Algebra .....3

**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.

- ACC++++ Any ACC Accounting courses
- BPC++++ Any BPC Business-Personal  
Computer courses
- CAD++++ Any CAD Computer-Aided  
Drafting courses
- CIS++++ Any CIS Computer-Information  
Systems courses
- COM++++ Any COM Communication  
courses
- DFT++++ Any DFT Drafting courses
- EEE++++ Any EEE Electrical  
Engineering courses
- ELE++++ Any ELE Electronic courses
- ELT++++ Any ELT Electronics Technology
- EMT++++ Any EMT Emergency Medical  
Technology courses
- HES++++ Any HES Health Science courses
- GBS++++ Any GBS General  
Business courses
- MET++++ Any MET Manufacturing  
Technology courses
- NET++++ Any NET Networking  
Technology courses
- PED++++ Any PED Physical Education

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

	courses
PHY+++++	Any PHY Physics courses
PPT+++++	Any Power Plant Tech. courses
SPA+++++	Any Spanish Courses

**GENERAL EDUCATION: 13-16 CREDITS**

**CORE: 3-6 CREDITS**

**FIRST-YEAR COMPOSITION**

Met by ENG101 AND ENG102 OR ENG111 in  
Required Courses area .....0

**ORAL COMMUNICATION**

Any approved general education course in the  
Oral Communication area.....3

**CRITICAL READING**

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

**MATHEMATICS**

Met by MAT122 in Required Courses area .....0

**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course in the  
Humanities and Fine Arts 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 Credits

**PROGRAM CONTACT:**

MARK WEAVER ~  
(480) 988-8255

[mark.weaver@cgc.edu](mailto:mark.weaver@cgc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion 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.

**PROGRAM NOTES**

Students must earn a grade of "C" or better in all courses within the program.

+ 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(tm) License from 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**

Math assessment:  
Placement into MAT090 or higher on District  
placement exam OR  
Satisfactory completion of MAT090  
Developmental Algebra (5) OR  
Satisfactory completion of a higher level  
mathematics course OR  
Permission of Department or Division ..... 0-5

English assessment:  
Current English assessment reflecting eligibility  
for ENG101 OR ENG107 OR  
Satisfactory completion of:  
+ENG101 First-Year Composition (3) OR  
+ENG107 First-Year Composition for ESL (3) OR  
Permission of Department or Division ..... 0-3

**REQUIRED COURSES: 30 CREDITS**

EUT103	Introduction to Rigging .....	2
EUT104	Equipment Safety & 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
+MAT122	Intermediate Algebra .....	3
PPT120	Energy Industry Fundamentals .	3

**Engineering  
Engineering Technology**

**ASSOCIATE IN APPLIED SCIENCE:  
AAS 3228**

63-93 Credits

**PROGRAM CONTACT:**

BASSAM MATAR ~  
(480) 732-7139

[b.matar@cgcc.edu](mailto:b.matar@cgcc.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**

+ 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 G.P.A. = 3.00.

**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.

+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
CHM130	Fundamental Chemistry (3) AND	
CHM130LL	Fundamental Chemistry Lab (1) 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

#### 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) .....	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	





**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

**Emergency Medical Technology**

**Emergency Medical Technology**

**CERTIFICATE OF COMPLETION: CCL 5643N**

9-16 Credits

**PROGRAM CONTACT:**

SHERRICK BADER ~ (480) 988-8101

[sherrick.bader@cgcc.edu](mailto:sherrick.bader@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in Emergency Medical Technology program includes techniques of emergency care, stabilization, and immobilization of victims of illness and injury. Recognition and documentation of signs and symptoms of illness and injury, intervention, and evaluation of the intervention, techniques for assessment, administration of oxygen, use of specific immobilization devices, and preparation for transportation are other areas of the program. This program is a prerequisite to other emergency response programs.

**PROGRAM NOTES**

Students must earn a grade of "C" or better in all courses within the program.

+ 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 EMT104AB or program director-approved rotation.

Overall program minimum G.P.A. = 2.50

**REQUIRED COURSES: 9-16 CREDITS**

- +CRE101 College Critical Reading and Critical Thinking .....3
- AND
- +ENG101 First-Year Composition (3) OR
- +ENG107 First-Year Composition for ESL (3) .....6
- OR
- +CRE111 Critical Reading for Business and Industry (3) OR
- Equivalent as indicated by assessment ..... 0-6
- EMT101 Cardiopulmonary Resuscitation/ Basic Cardiac Life Support (0.5)
- OR
- Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer (0)
- OR
- Permission of Program Director (0) ..... 0-0.50
- +EMT/FSC104 Emergency Medical Technology (9) AND
- +EMT/FSC104AB Applied Practical Studies for Emergency Medical Technology (0.5) OR
- +EMT/FSC104 Emergency Medical Technology (9) .....9-9.5

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



## Linux Networking Linux Professional

### CERTIFICATE OF COMPLETION: CCL 5204

12 Credits

#### PROGRAM CONTACT:

TOM PEARSON ~  
(480) 726-4131

[tom.pearson@cgcc.edu](mailto:tom.pearson@cgcc.edu)

#### PROGRAM DESCRIPTION

The Certificate of Completion (CCL) in Linux Professional program is designed to help to prepare students for a variety of industry-recognized Linux certification exams as well as provide practical hands-on skills for the work place. The program includes a core of Linux classes including Linux operating system basics, System Administration, Network Administration and Network Security. These classes will help develop a student's knowledge and skill level in preparation for employment or to improve current professional skills. Objectives for a variety of industry certifications are encompassed within course and program objectives.

#### PROGRAM NOTES

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 module/suffixed courses.

Overall program minimum G.P.A. = 2.00.

#### REQUIRED COURSES: 6 CREDITS

CIS126DL	Linux Operating System.....	3
+CIS238DL	Linux System Administration.....	3

#### RESTRICTED ELECTIVES: 6 CREDITS

+BPC170	A+ Exam Prep: Computer Hardware Configuration and Support .....	3
+BPC270	A+ Exam Prep: Operating System Configuration and Support.....	3
CIS105	Survey of Computer Information Systems .....	3
+CIS197	VMware ESXI Server Enterprise .....	4
CIS121AH	Microsoft PowerShell/ Command Line Operations .....	3
+CIS226AL	Internet/Intranet Server Administration-Linux .....	3
+CIS239DL	Linux Shell Scripting .....	3
+CIS240DL	Linux Network Administration .....	3
+CIS241DL	Apache Web Server Administration (Linux/Unix) .....	3
+CIS270	Essentials of Network and Information Security .....	3
+CIS271DL	Linux Security .....	3
+CIS190	Introduction to Local Area Networks (3) OR	
CNT140AA	Introduction to Networks (4) OR	
MST140	Microsoft Networking Essentials (3) .....	3-4
+CNT150AA	Cisco - Routing and Switching Essentials .....	4
MST150++	Microsoft Windows (any suffixed course) .....	3
CIS280	Current Topics in Computing .....	3
+CIS290++	Computer Information Systems Internship (any suffixed course) .....	1-3

## Massage Massage Therapy

### ASSOCIATE IN APPLIED SCIENCE: AAS 3144

61-68 Credits

#### PROGRAM CONTACT:

DR. GREGORY TRONE ~  
(480) 732-7289

[gregory.trone@cgcc.edu](mailto:gregory.trone@cgcc.edu)

#### PROGRAM DESCRIPTION

The Associate in Applied Science (AAS) in Massage Therapy program is designed to provide students with the philosophical foundation and technical skills required to perform therapeutic massage. The program is designed to develop knowledge and skills to manage a private massage practice and/or work in collaboration with other health field professionals. In addition, the program is designed to meet the State of Arizona licensure qualifications. Students in the Massage Therapy program may be exposed to potentially infectious blood, tissues, and body fluids. A Certificate of Completion (CCL) is also available.

#### PROGRAM NOTES

Students must earn a grade of C or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Students must attend an orientation prior to applying to the program and be advised by the Program Director.

A special application must be completed to be officially accepted in the program.

Contact the Program Director or Advisement to obtain the Massage Therapy Program packet.

Overall program minimum G.P.A. = 2.00.

#### ADMISSION CRITERIA

High school diploma or GED. Completion of Program Prerequisites courses with a grade of "C" or better. Proof of current immunization: Measles, Mumps, and Rubella (MMR), tuberculosis skin test (TB), varicella, tetanus, diphtheria, and Hepatitis B vaccine (HEB). Successful completion of interview process. Have the ability to fully participate in classroom, laboratory, or clinical setting program activities. Submit current CPR card for Health Care Provider and maintain current status throughout the practicum(s). Complete and submit the health declaration form signed by a licensed health care provider. Submit to a drug screening and demonstrate negative results. Formal application and admission to the program are required.

#### BACKGROUND CHECK REQUIREMENTS

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 MCCCC background check policy.

**PROGRAM PREREQUISITES: 11-15 CREDITS**

Students must earn a grade of "C" or better for all courses in the Program Prerequisites area. Students must select Option 1 or Option 2.

OPTION 1:	15 CREDITS
BIO160	Introduction to Human Anatomy and Physiology.....4
HCC130	Fundamentals in Health Care Delivery .....3
HCC145AA	Medical Terminology for Health Care Professionals I .....1
WED151	Introduction to Alternative Medicine.....3
WED165	Overview of Massage Therapy.....2
WED215	Self-Care for Health Care Providers .....2

**OPTION 2: 11 CREDITS**

Option 2 is for students who have completed an Associate in Applied Science degree or higher degree in a health science discipline from a regionally accredited institution of higher education recognized by The Maricopa Community Colleges.

BIO160	Introduction to Human Anatomy and Physiology.....4
WED151	Introduction to Alternative Medicine.....3
WED165	Overview of Massage Therapy ...2
WED215	Self-Care for Health Care Providers .....2

**REQUIRED COURSES: 24 CREDITS**

MGT253	Owning and Operating a Small Business (3) OR	
WED204	Establishing a Massage Practice (3) .....	3
+WED230	Therapeutic Massage Practices I .....	6
+WED231	Therapeutic Massage Practices II .....	6
+WED232	Therapeutic Massage Practices III .....	6
+WED250	Clinical Practicum (3) OR	
+WED250AA	Clinical Practicum: Part I (1.5) AND	
+WED250AB	Clinical Practicum: Part II (1.5) .....	3

**RESTRICTED ELECTIVES: 8 CREDITS**

Students must select a minimum of one (1) course from each category for a total of eight (8) credits.

**CATEGORY I: General**

Select a minimum of one (1) course from Category I.

HES100	Healthful Living .....	3
HES271	Prevention and Treatment of Athletic Injuries .....	3
WED297AC	Special Topics: Therapeutic Massage.....	3

**CATEGORY II: Hands-on**

Select a minimum of one (1) course from Category II. Permission of Program Director is required.

WED125	Reiki: Healing and Symbols.....	2
WED135	Gentle Touch for Individuals Living with Cancer.....	2
+WED210	Sports Massage .....	2
+WED225	Reiki: Master Level and Teacher Training .....	2
WED262	Acupressure/Shiatsu I.....	2

WED297AB Special Topics: Therapeutic  
Massage .....2

**CATEGORY III: Specialty Exploration**  
Select a minimum of one (1) course from  
Category III.

WED156 Humor and Play.....1  
WED160 Ethics of Touch Massage .....0.5  
WED162 Meditation and Wellness.....1  
WED170 Principles of Homeopathy.....1  
WED172 Overview of Herbal Remedies....1  
WED176 Flower Essences.....1  
WED182 Health Conditions and  
Popular Herbs.....2  
WED183 Introduction to Ayurvedic  
Principles .....2  
WED218 Aromatherapy.....1  
WED228 Aromatherapy: Therapeutic  
Applications .....2  
WED297AA Special Topics: Therapeutic  
Massage .....1

**CATEGORY IV: Physical Activity**  
Select a minimum of one (1) course from  
Category IV.

PED101AK Aikido (1) OR  
PED102AK Aikido - Intermediate (1) OR  
PED101PS Pilates (1) OR  
PED102PS Pilates - Intermediate (1) OR  
PED103PS Pilates (0.5)  
(May be repeated) (1) OR  
PED201PS Pilates - Advanced (1).....1  
PED101TC Tai Chi (1) OR  
PED102TC Tai Chi - Intermediate (1) OR  
PED103TC Tai Chi (0.5)  
(May be repeated) (1) OR  
PED201TC Tai Chi - Advanced (1) .....1  
PED101YO Yoga (1) OR  
PED102YO Yoga - Intermediate (1) OR  
PED103YO Yoga (0.5)  
(May be repeated) (1) OR

PED201YO Yoga - Advanced (1).....1  
PED/WED121 Physical Conditioning for  
Massage Therapists .....1

### GENERAL EDUCATION: 18-21 CREDITS

#### CORE:12-15 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 as indicated by assessment..... 0-3

#### MATHEMATICS

+Any approved general education course in the  
Mathematics area.....3

#### DISTRIBUTION: 6 CREDITS

#### HUMANITIES AND FINE ARTS

Any approved general education course in the  
Humanities and Fine Arts area .....3

#### SOCIAL AND BEHAVIORAL SCIENCES

REC120 Leisure and the Quality of Life ....3

#### NATURAL SCIENCES

Met by BIO160 in Program Prerequisites area .....0

## Massage Therapy

### CERTIFICATE OF COMPLETION: CCL 5144

39-43 Credits

#### PROGRAM CONTACT:

DR. GREGORY TRONE ~  
(480) 732-7289

[gregory.trone@cgcc.edu](mailto:gregory.trone@cgcc.edu)

#### PROGRAM DESCRIPTION

The Certificate of Completion (CCL) in Massage Therapy program is designed to provide students with the philosophical foundation and technical skills required to perform therapeutic massage. The program is designed to develop knowledge and skills to manage a private massage practice and/or work in collaboration with other health field professionals. In addition, the program is designed to meet the State of Arizona licensure qualifications. Students in the Massage Therapy program may be exposed to potentially infectious blood, tissues and body fluids. An Associate in Applied Science (AAS) degree is also available.

#### PROGRAM NOTES

Students must earn a grade of C or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Students must attend an orientation prior to applying to the program and be advised by the Program Director.

A special application must be completed to be officially accepted in the program.

Contact the Program Director or Advisement to obtain the Massage Therapy Program packet.

Overall program minimum G.P.A. = 2.00.

#### ADMISSION CRITERIA

High school diploma or GED. Completion of Program Prerequisites courses with a grade of "C" or better. Proof of current immunization: Measles, Mumps, and Rubella (MMR), tuberculosis skin test (TB), varicella, tetanus, diphtheria, and Hepatitis B vaccine (HEB). Successful completion of interview process. Have the ability to fully participate in classroom, laboratory, or clinical setting program activities. Submit current CPR card for Health Care Provider and maintain current status throughout the practicum(s). Complete and submit the health declaration form signed by a licensed health care provider. Submit to a drug screening and demonstrate negative results. Formal application and admission to the program are required.

#### BACKGROUND CHECK REQUIREMENTS:

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 MCCC background check policy.

#### PROGRAM PREREQUISITES: 11-15 CREDITS

Students must earn a grade of "C" or better for

all courses in the Program Prerequisites area.

Students must select Option 1 or Option 2.

**OPTION 1: 15 CREDITS**

BIO160	Introduction to Human Anatomy and Physiology .....	4
HCC130	Fundamentals in Health Care Delivery.....	3
HCC145AA	Medical Terminology for Health Care Professionals I .....	1
WED151	Introduction to Alternative Medicine .....	3
WED165	Overview of Massage Therapy ...	2
WED215	Self-Care for Health Care Providers .....	2

**OPTION 2: 11 CREDITS**

Option 2 is for students who have completed an Associate in Applied Science degree or higher degree in a health science discipline from a regionally accredited institution of higher education recognized by The Maricopa Community Colleges.

BIO160	Introduction to Human Anatomy and Physiology .....	4
WED151	Introduction to Alternative Medicine .....	3
WED165	Overview of Massage Therapy ...	2
WED215	Self-Care for Health Care Providers .....	2

**REQUIRED COURSES: 24 CREDITS**

MGT253	Owning and Operating a Small Business (3) OR	
WED204	Establishing a Massage Practice (3).....	3
+WED230	Therapeutic Massage Practices I.....	6
+WED231	Therapeutic Massage Practices II.....	6

+WED232	Therapeutic Massage Practices III .....	6
+WED250	Clinical Practicum (3) OR	
+WED250AA	Clinical Practicum: Part I (1.5) OR	
+WED250AB	Clinical Practicum: Part II (1.5).....	3

**RESTRICTED ELECTIVES: 4 CREDITS**

Students must select from different categories for a total of four (4) credits.

Student should select from the following categories in consultation with the Program Director.

**CATEGORY I: General**

HES100	Healthful Living .....	3
HES271	Prevention and Treatment of Athletic Injuries.....	3
WED297AC	Special Topics: Therapeutic Massage.....	3

**CATEGORY II: Hands-on**

Permission of Program Director is required.

WED125	Reiki: Healing and Symbols.....	2
WED135	Gentle Touch for Individuals Living with Cancer .....	2
+WED210	Sports Massage .....	2
+WED225	Reiki: Master Level and Teacher Training .....	2
WED262	Acupressure/Shiatsu I .....	2
WED297AB	Special Topics: Therapeutic Massage.....	2

**CATEGORY III: Specialty Exploration**

WED156	Humor and Play.....	1
WED160	Ethics of Touch Massage .....	0.5
WED162	Meditation and Wellness.....	1
WED170	Principles of Homeopathy.....	1
WED172	Overview of Herbal Remedies....	1
WED176	Flower Essences.....	1



WED182	Health Conditions and Popular Herbs.....2
WED183	Introduction to Ayurvedic Principles .....2
WED218	Aromatherapy.....1
WED228	Aromatherapy: Therapeutic Applications .....2
WED297AA	Special Topics: Therapeutic Massage.....1
<b>Category IV: Physical Activity</b>	
PED101AK	Aikido (1) OR
PED102AK	Aikido - Intermediate (1) OR
PED101PS	Pilates (1) OR
PED102PS	Pilates - Intermediate (1) OR
PED103PS	Pilates (0.5) (May be repeated)(1) OR
PED201PS	Pilates - Advanced (1).....1
PED101TC	Tai Chi (1) OR
PED102TC	Tai Chi - Intermediate (1) OR
PED103TC	Tai Chi (0.5) (May be repeated)(1) OR
PED201TC	Tai Chi - Advanced (1) .....1
PED101YO	Yoga (1) OR
PED102YO	Yoga - Intermediate (1) OR
PED103YO	Yoga (0.5) (May be repeated) (1) OR
PED201YO	Yoga - Advanced (1).....1
PED/WED121	Physical Conditioning for Massage Therapists .....1

.....

## Microsoft Networking Network Administration: Microsoft Windows Server

### CERTIFICATE OF COMPLETION: CCL 5124

18 Credits

#### PROGRAM CONTACT:

TOM PEARSON ~  
(480) 726-4131

[tom.pearson@cgc.edu](mailto:tom.pearson@cgc.edu)

### PROGRAM DESCRIPTION

The Certificate of Completion (CCL) in Network Administration: Microsoft Windows Server program provides students with background knowledge and skills required for learning the specific tasks and industry recognized standards associated with computer networks and data communications. This program also prepares students to complete the required certification tests for Microsoft Administrator.

### PROGRAM NOTES

Students must earn a grade of "C" or better for all courses within the program.

+ indicates course has prerequisites and/or corequisites.

++ indicates any module/suffixed courses.

The Network core courses will also prepare students towards certification in Microsoft and Novell.

Overall program minimum G.P.A. = 2.00.

### PROGRAM PREREQUISITES: NONE

### REQUIRED COURSES: 15 CREDITS

+MST150	Microsoft Windows Professional (3) OR	
+MST150++	Microsoft Windows Operating Systems (any suffixed course) (3).....3	
+MST155++	Windows Server Network (any suffixed course) .....4	
+MST157++	Windows Server (any suffixed course) .....4	
+MST158++	Windows Server (any suffixed course) .....4	

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



**RESTRICTED ELECTIVES: 3 CREDITS**

Students must select three (3) credits from the following courses:

CIS121AH	Microsoft PowerShell/ Command Line Operations .....	3
+CIS126++	Linux Operating System (any suffixed course) .....	1-3
+CIS166AC	Web Scripting with Active Server Pages (ASP).NET .....	3
+CIS197	VMware ESXI Server Enterprise .....	3
+CIS238++	UNIX/Linux System Administration (any suffixed course) .....	3
+CIS276DB	SQL Server Database .....	3
CNT++++	Any CNT Cisco Network Technology course .....	1-4
MST++++	Any MST Microsoft Technology course except courses used to satisfy Required Courses area .....	1-4

## Mortuary Science

### Mortuary Science

#### ASSOCIATE IN APPLIED SCIENCE: AAS 5258

69-70 Credits

#### PROGRAM CONTACTS:

DR. THOMAS R. TAGGART ~  
(480) 988-8501

[tom.taggart@cgcc.edu](mailto:tom.taggart@cgcc.edu)

DONNA G. BACKHAUS ~  
(480) 988-8503

[donna.backhaus@cgcc.edu](mailto:donna.backhaus@cgcc.edu)

#### PROGRAM DESCRIPTION

The Associate in Applied Science (AAS) in Mortuary Science program includes studies in public health; business management;

natural sciences; legal, ethical and regulatory concerns; and clinical requirements associated with the mortuary field. The curriculum combines coursework in mortuary science with a general education component. The AAS degree in Mortuary Science offered at Chandler-Gilbert Community College is accredited by the American Board of Funeral Service Education (ABFSE) 992 Mantua Pike, Suite 108, Woodbury Heights, N. J., 08097, 816-233-3747, [www.abfse.org](http://www.abfse.org). Completion of the courses in program prepares the student to sit for the National Board examination and begin state internship requirements.

#### PROGRAM NOTES

+ indicates course has prerequisite and/or corequisites.

Overall program minimum G.P.A. = 2.00.

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 G.P.A. of 2.5, and must have proof of high school graduation or GED or permission of Program Director.

**PROGRAM PREREQUISITES: 10-11 CREDITS**

ACC107	Bookkeeping Theory and Practice (4) OR	
ACC111	Accounting Principles I (3) .....	3-4
BPC/CIS+++++	Any BPC/CIS Business-Personal Computers or Computer Information Systems course.....	1
GBS205	Legal, Ethical, and Regulatory Issues in Business .....	3
MGT253	Owning and Operating a Small Business .....	3

**REQUIRED COURSES: 34 CREDITS**

MSP101	Orientation to Funeral Service .....	1
MSP201	History and Sociology of Funeral Service .....	3
MSP202	Embalming .....	4
MSP203	Microbiology for Funeral Service .....	3
MSP204	Chemistry for Funeral Service ....	3
MSP205	Mortuary Administration I .....	3
MSP206	Mortuary Administration II .....	3
MSP207	Restorative Art .....	4
MSP208	Legal, Regulatory, and Ethical Issues in Funeral Service .....	3
MSP209	Pathology for Funeral Service ....	3
MSP210	Counseling for Funeral Service ..	2
MSP211	Compendium for Funeral Service .....	2

**GENERAL EDUCATION: 25 CREDITS**

**CORE: 15 CREDITS**

First-Year Composition  
 +Any approved general education course from the First-Year Composition area.....6

**ORAL COMMUNICATION**

COM100	Introduction to Human Communication (3) OR	
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COM110	Interpersonal Communication (3).....	3
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**CRITICAL READING**

+Any approved general education course from the Critical Reading area.....3

**MATHEMATICS**

MAT112	Mathematical Concepts and Applications (3) OR Equivalent OR Satisfactory completion of a higher-level mathematics course .....	3
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**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course in the Humanities, Arts and Design area.  
 REL100 is recommended.....3

**SOCIAL AND BEHAVIORAL SCIENCES**

PSY101	Introduction to Psychology (3) OR	
PSY156	Understanding Death and Dying (3).....	3

**NATURAL SCIENCES**

BIO160	Introduction to Human Anatomy and Physiology .....	4
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.....  
**Music Business**  
**Music Business**

**ASSOCIATE IN APPLIED SCIENCE: AAS 3017**

60-63 Credits

**PROGRAM CONTACT:**

TED GODDARD ~  
 (480) 857-5182

[ted.goddard@cgcc.edu](mailto:ted.goddard@cgcc.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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

**PROGRAM DESCRIPTION**

The Associate in Applied Science (AAS) 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**

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisite and/or corequisites.

++ indicates any module/suffixed courses.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 14 CREDITS**

MUC109	Music Business: Merchandising and the Law.....3
MUC110	Music Business: Recording and Mass Media .....3
MUC293	Self Promotion for Music..... 1
+MUC209	Music Industry Entrepreneurship (3) OR
MGT253	Owning and Operating a Small Business (3) .....3
+MUC290AA	Music Business Internship ..... 1
MHL++++	Any MHL Music: History/ Literature course .....3

**RESTRICTED ELECTIVES: 12 CREDITS**

Students must select twelve (12) credits from the approved list of Restricted Elective courses to specialize in Music Production, Disc Jockey Techniques, Songwriting, Performance, Marketing, Business, or Communications. Students must consult with the Music Business Program Director, Music Department Chair or designee to select the Restricted Elective courses recommended for each specialization.

**FREE ELECTIVES: 12 CREDITS**

Students should choose twelve (12) credits from the following list of courses except courses used to satisfy the Restricted Electives area.

ACC111	Accounting Principles I .....3
BPC128	Introduction to Desktop Publishing ..... 1
CIS131AA	Doing Business on the Internet . 1
GBS151	Introduction to Business .....3
+GBS233	Business Communication .....3
MKT110	Marketing and Social Networking .....3
MKT271	Principles of Marketing .....3
MTC101	Introduction to Music Theory (3) OR higher level MTC Music: Theory/ Composition course (3).....3
MTC113	Songwriting Techniques ..... 1
+MUC111	Digital Audio Workstation I (DAWI) .....3
MUC135	Introduction to Disc Jockey Techniques .....3
MUC145	Recording Studio Business Operations.....2
+MUC180	Computer Literacy for the Music Business .....3

MUC195	Studio Music Recording I (3) OR	
MUC195AA	Studio Music Recording I (3).....	3
+MUC210	Advanced Industry Topics: Concert Promotion and Training .....	3
+MUC211	Advanced Industry Topics: Artist Management and Talent Development .....	3
MUC215	Music Industry Seminar: Innovation in Music Technology.....	1
+MUC240	Creative Music Production .....	4
+MUC241	Business Principles of Music Production.....	3
MUC274AB	Music Industry Study Tour.....	2
+MUC295AB	Portfolio for Music .....	1
+MUC298AA	Special Projects.....	1
+MUC298AB	Special Projects.....	2
+MUC298AC	Special Projects.....	3
SBS230	Financial and Tax Management for Small Business.....	2

**GENERAL EDUCATION: 22-25 CREDITS**

**CORE: 12-15 CREDITS**

**FIRST-YEAR COMPOSITION**

Any approved general education courses from the First-Year Composition area.....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 as indicated by assessment..... 0-3

**MATHEMATICS**

+Any approved general education course from the Mathematics area.....3

**DISTRIBUTION: 10 CREDITS**

**HUMANITIES AND FINE ARTS**

Any approved general education course from the Humanities and Fine Arts 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

.....  
**Music Business**

**CERTIFICATE OF COMPLETION:  
CCL 5258**

26 Credits

**PROGRAM CONTACT:**

TED GODDARD ~  
(480) 857-5182

[ted.goddard@cgcc.edu](mailto:ted.goddard@cgcc.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**

Students must earn a grade of "C" or better for all courses within the program.

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

+ indicates course has prerequisite and/or corequisites.

Overall program minimum G.P.A. = 2.00.

#### REQUIRED COURSES: 11 CREDITS

MUC109	Music Business: Merchandising and the Law.....3
MUC110	Music Business: Recording and Mass Media.....3
MUC293	Self Promotion for Music.....1
+MUC209	Music Industry Entrepreneurship (3) OR
MGT253	Owning and Operating a Small Business (3) .....3
+MUC290AA	Music Business Internship .....1

#### RESTRICTED ELECTIVES: 15 CREDITS

Students must select fifteen (15) credits from the approved list of Restricted Elective courses to specialize in Music Production, Disc Jockey Techniques, Songwriting, Performance, Marketing, Business or Communications. Students must consult with the Music Business Program Director, Music Department Chair or designee to select the Restricted Elective courses recommended for each specialization.

## Nursing

### Nursing

#### ASSOCIATE IN APPLIED SCIENCE: AAS 3812

62-75 Credits

**PROGRAM CONTACTS:**  
DIRECTOR OF NURSING  
KAREN FLANIGAN ~  
(480) 988-8884

[karen.flanigan@cgcc.edu](mailto:karen.flanigan@cgcc.edu)

NURSING ADVISOR  
MARIA DELA TORRE ~  
(480) 988-8880

NURSING OFFICE  
TERESA HULL ~  
(480) 988-8881

[teresa.hull@cgcc.edu](mailto:teresa.hull@cgcc.edu)

#### PROGRAM DESCRIPTION

The Associate in Applied Science (AAS) in Nursing Program is available at eight of the Maricopa Community Colleges. Clinical experiences are provided in a variety of healthcare settings. Nursing Program graduates are eligible to apply for the national exam for the registered nurse license. Licensing requirements are the exclusive responsibility of the State Board of Nursing.

The Associate in Applied Science (AAS) Nursing Program is approved by the Arizona State Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326; (404.975.5000); email: [info@acennursing.org](mailto:info@acennursing.org)

#### PROGRAM OFFERINGS

This program is offered at the following sites:

- Chandler-Gilbert Community College
- Estrella Mountain Community College
- Gateway Community College
- Glendale Community College
- Mesa Community College
- Paradise Valley Community College

- Phoenix College
- Scottsdale Community College

### **WAIVER OF LICENSURE/ CERTIFICATION GUARANTEE**

Admission or graduation from the Nursing Program does not guarantee obtaining a license to practice nursing. Licensure requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college or school requirements for graduation.

Pursuant to A.R.S. 32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

Level One Fingerprint Clearance is required for admission into the program. Applicants must present a Level One Fingerprint Clearance Card to be copied by the advisor or designee. For a Department of Public Safety Fingerprint Clearance Card application, contact MCCCDC Healthcare/Nursing Advisor. If there is any question about eligibility for licensure or certification, contact the nursing

education consultant at the Arizona State Board of Nursing (602.771.7800).

### **HEALTH DECLARATION**

It is essential that nursing students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours at a time and perform bending activities. Students who have a chronic illness or condition must be maintained on current treatment and be able to implement direct patient care. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients' lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give careful consideration to the mental and physical demands of the program prior to making application. All must provide documentation of compliance with all health and safety requirements required to protect patient safety. Only students in compliance are permitted to enroll in nursing courses. Students will meet these requirements by providing the required documentation for the Health/Safety Requirements Documentation Checklist and the signed Health Declaration Form.

### **HEALTH & SAFETY REQUIREMENTS FOR THE MARICOPANURSING 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 MCCCDC 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.

+ 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: 10-18 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
- +ENG101      First-Year Composition (3) OR
- +ENG107      First-Year Composition for ESL (3) .....3
- +MAT140      College Mathematics (5) OR
- +MAT141      College Mathematics (4) OR
- +MAT142      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**

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

**CORE: 3-6 CREDITS**

**FIRST-YEAR COMPOSITION**

Three (3) credits of First Year Composition are met by ENG101 or ENG107 in Program Prerequisites area.

+ENG102	First-Year Composition (3) OR	
+ENG108	First-Year Composition	
	for ESL (3).....	3

**ORAL COMMUNICATION**

Waived .....		0
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**CRITICAL READING**

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

Met by MAT140, OR MAT141, OR MAT142 OR Satisfactory completion of higher level mathematics course in Program Prerequisites area .....

		0
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**DISTRIBUTION:13 CREDITS**

**HUMANITIES AND FINE ARTS**

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

		2
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**SOCIAL AND BEHAVIORAL SCIENCES**

PSY101	Introduction to Psychology .....	3
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**NATURAL SCIENCES**

+BIO202	Human Anatomy and Physiology II (4) AND	
+BIO205	Microbiology (4).....	8

**Nutrition  
Dietetic Technology**

**ASSOCIATE IN APPLIED SCIENCE:  
AAS 3840**

63-72 Credits

**PROGRAM CONTACT:**

SUSAN GAUMONT ~  
(480) 732-7142

[susan.gaumont@cgcc.edu](mailto:susan.gaumont@cgcc.edu)

**PROGRAM DESCRIPTION**

The Dietetic Technology program is an Associate in Applied Science (AAS) degree emphasizing medical nutrition therapy and food service management. Students acquire the knowledge and skills foundation to work in dietetics through the integration of classroom learning and 466 hours of supervised practice. Emphasis is placed on the development of communication and human relations techniques that prepare the graduate for professional success.

Upon successful completion of the program, the graduate will be eligible to take the Dietetic Technician Registration Examination of the Commission on Dietetic Registration (CDR).

**JOB DESCRIPTION**

The Dietetic Technician, Registered is prepared to play a key role in providing quality, cost-effective client care and food service management in a variety of employment settings. Job responsibilities may include patient counseling and education in basic and therapeutic nutrition, medical record documentation, health promotion and

disease prevention, menu development, and supervisory and administrative skills related to nutrition services and institutional food production.

**OPPORTUNITIES**

Dietetic Technicians are an integral part of health care and food service management teams. They work independently or in partnership with Registered Dietitians in a variety of settings: Clinical, Hospitals, clinics, nursing homes, retirement centers, home health care programs, and research facilities; food service; schools, daycare centers, correctional facilities, restaurants, hospitals, and long-term care facilities; Community and Public Health; WIC programs; wellness; health clubs, and weight management clinics; business; food companies, food venders, and food distributors

**PROGRAM NOTES**

Students must earn a grade of "C" or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**PROGRAM PREREQUISITES: 0-4 CREDITS**

CPR/AED Certification for Health Care Providers must be completed prior to registering for FON244, FON245 or FON246 practicum courses.

Students selecting BIO201 in the Required Courses area must complete BIO156 or

BIO181 in consultation with a program advisor.

- +BIO156 Human Biology for Allied Health (4) OR
- BIO181 General Biology (Majors) I (4) OR
- Permission of Instructor ..... 0-4.

**REQUIRED COURSES: 41-45 CREDITS**

- BIO160 Introduction to Human Anatomy and Physiology (4) OR
- +BIO201 Human Anatomy and Physiology I (4) AND
- +BIO202 Human Anatomy and Physiology II (4)..... 4-8
- BPC110 Computer Usage and Application (3) OR
- BPC101AA Introduction to Computers I (1) AND
- +BPC101BA Introduction to Computers II (1) AND
- +BPC101CA Introduction to Computers III (1) OR
- CIS114AE-CE Spreadsheet Level I (any module.) (1) AND
- CIS117AM-CM Database Management Level I (any module) (1) AND
- BPC/  
OAS130D Beginning Word (1) OR
- CIS105 Survey of Computer Information Systems (3).....3
- FON104 Certification in Food Service Safety and Sanitation.....1
- FON125 Introduction to Professions in Nutrition and Dietetics.....1
- FON142AB Applied Food Principles.....3
- +FON207 Introduction to Nutrition Services Management .....3
- +FON210 Sports Nutrition and Supplements for Physical Activity (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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

+FON247	Weight Management Theory (3) .....	3
+FON225	Research in Complementary and Alternative Nutrition Therapies .....	3
FON241	Principles of Human Nutrition .....	3
+FON242	Introduction to Medical Nutrition Therapy .....	3
+FON244AA	Practicum I: Food Service Management - Lecture .....	2
+FON244AB	Practicum I: Food Service Management - Lab .....	2.5
+FON245AA	Practicum II: Medical Nutrition Therapy .....	2
+FON245AB	Practicum II: Medical Nutrition Therapy - Lab .....	2.5
+FON246AA	Practicum III: Community Nutrition - Lecture .....	2
+FON246AB	Practicum III: Community Nutrition - Lab .....	2
HCC145AA	Medical Terminology for Health Care Professionals I .....	1

**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) OR	
+ENG111	Technical 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

**CRITICAL READING**

+CRE101	College Critical Reading and Critical Thinking (3) OR	
+CRE111	Critical Reading for Business and Industry (3) OR	
	Equivalent as indicated by assessment .....	3

**MATHEMATICS**

+MAT120	Intermediate Algebra (5) OR	
+MAT121	Intermediate Algebra (4) OR	
+MAT122	Intermediate Algebra (3) OR	
	Equivalent as indicated by assessment OR	
	Satisfactory completion of any 3-5 credit mathematics course higher than MAT120. ....	3-5

**DISTRIBUTION: 10 CREDITS****HUMANITIES AND FINE ARTS**

	Any approved general education course in the Humanities and Fine Arts area .....	3
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**SOCIAL AND BEHAVIORAL SCIENCES**

PSY101	Introduction to Psychology (3) OR	
SOC101	Introduction to Sociology (3) .....	3

**NATURAL SCIENCES**

+CHM130	Fundamental Chemistry (3) AND	
+CHM130LL	Fundamental Chemistry Laboratory (1) .....	4

## Personal Training Exercise Science and Personal Training

### ASSOCIATE IN APPLIED SCIENCE: AAS 3059

64-69.5 Credits

#### PROGRAM CONTACT:

DR. KIM MCGEE, ACSM (EP-C) ~  
(480) 726-4246

[kimberly.mcgee@cgc.edu](mailto:kimberly.mcgee@cgc.edu)

#### PROGRAM DESCRIPTION

The Associate in Applied Science (AAS) in Exercise Science and Personal Training program is designed to prepare students with the knowledge and experience required to be eligible for the American College of Sports Medicine (ACSM) personal trainer certification, the National Strength and Conditioning Association (NSCA) personal trainer certification, the National Academy of Sports Medicine (NASM) personal trainer certification and the American Council on Exercise (ACE) personal trainer certification. The curriculum is designed to strengthen students' educational background in fitness and nutrition potentially increasing their marketability in these fields. This degree may also meet the needs of individuals with existing degrees in such fields as Exercise Physiology, Nutrition, Athletic Training and other health related disciplines. Registered dietitians, clinical exercise physiologists, personal trainers, exercise specialists, strength and conditioning specialists, coaches, athletes and others interested in acquiring knowledge

in exercise, nutrition and health may also find this program appropriate.

#### PROGRAM NOTES

Students must earn a grade of "C" or better required for all courses within the program.

+ indicates course has prerequisite and/or corequisites.

Overall program minimum G.P.A. = 2.00.

#### REQUIRED COURSES: 36-36.5 CREDITS

EMT101	Cardiopulmonary Resuscitation/Basic Cardiac Life Support (0.50) OR	
HES106	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) (0.5) OR	
	Current Basic Life Support (BLS) Health Care Provider/Professional Rescuer certification	.....0-0.50
EXS101	Introduction to Exercise Science, Kinesiology, and Physical Education	.....3
EXS112	Professional Applications of Fitness Principles	.....3
EXS125	Introduction to Exercise Physiology	.....3
EXS130	Strength Fitness-Physiological Principles and Training Techniques	.....3
EXS132	Cardiovascular Fitness: Physiological Principles and Training Techniques	.....3
EXS145	Guidelines for Exercise Testing and Prescription	.....3
EXS214	Instructional Competency: Flexibility and Mind-Body Exercises	.....2

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

EXS216	Instructional Competency: Muscular Strength and Conditioning .....2
EXS218	Instructional Competency: Cardiorespiratory Exercises and Activities .....2
+EXS239	Practical Applications of Personal Training Skills and Techniques Internship (3) OR
+EXS239AA	Practical Applications of Personal Training Skills and Techniques Internship (1) AND
+EXS239AB	Practical Applications of Personal Training Skills and Techniques Internship (2) .....3
FON100	Introductory Nutrition (3) OR
FON105	Nutrition Principles for Fitness Professionals (3) OR
FON241	Principles of Human Nutrition (3) .....3
+FON210	Sports Nutrition and Supplements for Physical Activity.....3
+FON247	Weight Management Theory.....3

**RESTRICTED ELECTIVES: 6 CREDITS**

Choose a total of six (6) credits from EXS, FON, HES, SPM, and/or WED courses except courses used to satisfy Required Courses area.

EXS++++	Any EXS Exercise Science courses
FON++++	Any FON Food and Nutrition courses
HES++++	Any HES Health Science courses
SPM++++	Any SPM Sports Management
WED++++	Any WED Wellness Education courses

**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**

+COM225	Public Speaking.....3
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**CRITICAL READING**

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

Any approved general education course from the Mathematics area except MAT112. The following courses or higher are recommended:

+MAT120	Intermediate Algebra (5) OR
+MAT121	Intermediate Algebra (4) OR
+MAT122	Intermediate Algebra (3)..... 3-5

**DISTRIBUTION: 10 CREDITS****HUMANITIES AND FINE ARTS**

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

**SOCIAL AND BEHAVIORAL SCIENCES**

HES100	Healthful Living (3) OR
PSY101	Introduction to Psychology (3)....3

**NATURAL SCIENCES**

BIO160	Introduction to Human Anatomy and Physiology (4) OR
+BIO156	Introductory Biology for Allied Health (4) OR
+BIO181	General Biology (Majors) I (4) .....4



## Personal Training Specialist

### CERTIFICATE OF COMPLETION: CCL 5445

32-34.5 Credits

#### PROGRAM CONTACT:

DR. KIM MCGEE, ACSM (EP-C) ~  
(480) 726-4246

[kimberly.mcgee@cgcc.edu](mailto:kimberly.mcgee@cgcc.edu)

#### PROGRAM DESCRIPTION

The Certificate of Completion (CCL) in Personal Training Specialist program is designed to help prepare students for employment in the fitness industry as a Personal Trainer. This curriculum provides students with a fundamental knowledge of human physiology and anatomy, introduction into career options in the field of Exercise Science, Kinesiology and Physical Education/Coaching, emergency response readiness, health appraisals and assessments; application of exercise fitness principles and strength and cardiorespiratory training techniques; a fundamental knowledge of nutrition, exercise physiology, and biomechanics; skills in exercise testing and fitness measures as well as writing exercise prescriptions and program designs for diverse populations.

#### PROGRAM NOTES

+ indicates course has prerequisites and/or corequisites.

++ indicates any module/suffixed courses.

Students must earn a grade of "C" or better in all courses within the program.

Overall program minimum G.P.A. = 2.00.

#### REQUIRED COURSES: 26-31 CREDITS

BIO160	Introduction to Human Anatomy and Physiology (4) OR	
+BIO156	Introductory Biology for Allied Health (4) OR	
+BIO181	General Biology (Majors) I (4).....4	
EMT101	Cardiopulmonary Resuscitation/ Basic Cardiac Life Support (0.50) OR	
HES106	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) (0.5) OR	
	Current Basic Life Support (BLS) Health Care Provider/Professional Rescuer certification .....	0-0.50
EXS101	Introduction to Exercise Science, Kinesiology and Physical Education .....	3
EXS112	Professional Applications of Fitness Principles.....	3
EXS125	Introduction to Exercise Physiology.....	3
EXS130	Strength Fitness: Physiological Principles and Training Techniques.....	3
EXS132	Cardiovascular Fitness: Physiological Principles and Training Techniques .....	3
EXS145	Guidelines for Exercise Testing and Prescription .....	3
FON100	Introductory Nutrition (3) OR	
FON105	Nutrition Principles for Fitness Professionals (3) OR	
FON241	Principles of Human Nutrition (3).....	3
+EXS239	Practical Applications of Personal Training Skills and Techniques Internship (3) OR	
+EXS239AA	Practical Applications of Personal Training Skills and Techniques Internship (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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).



+EXS239AB Practical Applications of Personal Training Skills and Techniques Internship (2) ..... 1-3

**RESTRICTED ELECTIVES: 4-6 CREDITS**

Choose a total of 4-6 credits from EXS, FON, HES, SPM, and/or WED courses except courses used to satisfy Required Courses area.

- EXS++++ Any EXS Exercise Science courses
- FON++++ Any FON Food and Nutrition courses
- HES++++ Any HES Health Science courses
- SPM++++ Any SPM Sports Management courses
- WED++++ Any WED Wellness Education courses

**Small Business  
Small Business Start-Up**

**CERTIFICATE OF COMPLETION:  
CCL 5706**

12 Credits

**PROGRAM CONTACTS:**

BETH NUNEVILLER ~  
(480) 857-5134

[beth.nuneviller@cgcc.edu](mailto:beth.nuneviller@cgcc.edu)

LEE GARZA ~  
(480) 732-7211

[lee.garza@cgcc.edu](mailto:lee.garza@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in Small Business Start-Up program is designed to meet the needs of individuals who wish to become entrepreneurs. Courses provide a background in marketing, management, finance, and a capstone course in which students complete a business plan. The goal

of the Small Business Start-Up certificate is to create a foundation for prospective small business owners and contribute to the long-term success of the business community.

**PROGRAM NOTES**

Students must earn a grade of "C" or better for all courses within the program.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 12 CREDITS**

- MGT253 Owning and Operating a Small Business.....3
- MKT271 Principles of Marketing .....3
- SBS213 Hiring and Managing Employees ..... 1
- SBS214 Small Business Customer Relations ..... 1
- SBS220 Internet Marketing for Small Business.....2
- SBS230 Financial and Tax Management for Small Business.....2

**Social Media  
Marketing**

**Social Media Marketing**

**CERTIFICATE OF COMPLETION:  
CCL 5830**

17-20 Credits

**PROGRAM CONTACTS:**

NICKI MAINES ~  
(480) 732-7394

[nicki.maines@cgcc.edu](mailto:nicki.maines@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in Social Media Marketing is designed to provide useful skills important in a variety of strategic

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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

marketing areas, e.g., social media, digital communications, integrated marketing, media relations, and brand management.

**PROGRAM NOTES**

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**PROGRAM PREREQUISITES: 0-3 CREDITS**

+ENG101 First-Year Composition (3) OR

+ENG107 First-Year Composition for ESL (3) OR

Permission of Department or Division (0)..... 0-3

**REQUIRED COURSES: 17 CREDITS**

CIS103 Introduction to Social Media .....3

+GBS233 Business Communication (3) OR

+JRN203 Writing for Online Media (3).....3

MKT271 Principles of Marketing.....3

MKT110 Marketing and Social Networking .....3

+MKT111 Applied Marketing and Social Networking.....3

+GBS282AB Volunteerism General Business: Service Learning Experience (2) OR

+MKT280AB Marketing Internship (2) OR

+MKT296WB Cooperative Education (2) OR

+MKT298AB Special Projects (2) .....2

**Sustainability  
Sustainability**

**ACADEMIC CERTIFICATE:  
AC 6240N**

15-17 Credits

**PROGRAM CONTACT:**

CHRIS SCHNICK ~  
(480) 732-7274

[chris.schnick@cgcc.edu](mailto:chris.schnick@cgcc.edu)

**PROGRAM DESCRIPTION**

The Academic Certificate (AC) in Sustainability is interdisciplinary and builds a strong academic expertise along one of five significant pillars of sustainability, where students will examine and assess how to minimize unintended consequences and enhance a mutually productive relationship between man and nature. The five pillars are organized into specialized tracks, including land use and human transformations of the earth, competition for water and other natural resources from the earth systems, political and economic treatment of the earth, coupled human-environment interactions, and entrepreneurship for transforming ideas for sustainable products/services into viable businesses.

**PROGRAM NOTES**

Students must earn a grade of "C" or better for all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

Overall program minimum G.P.A. = 2.00.

**PROGRAM PREREQUISITES: 0-6 CREDITS**

Students selecting GPH211 or GPH210 must complete the following prerequisites:

ENG101	First-Year Composition .....	3
ENG107	First-Year Composition for ESL .....	3
	or equivalent.....	3

ADD

Student selecting HRM290 must complete the following prerequisites:

HRM110	Introduction to Hospitality and Tourism Management.....	3
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**REQUIRED COURSES: 6 CREDITS**

SSH111	Sustainable Cities .....	3
SUS110	Sustainable World .....	3

**RESTRICTED ELECTIVES: 9-11 CREDITS**

Students must select one (1) of the following five (5) tracks:

Track I: Sustainability: Earth Systems..... 10-11

Students must choose two (2) courses from the following list:

+ AGS260	Soils .....	4
BIO105	Environmental Biology .....	4
BIO108	Plants and Society .....	4
+ BIO181	General Biology (Majors) I .....	4
+ BIO182	General Biology (Majors) II .....	4
GLG110	Geological Disasters and the Environment (3) and .....	4
GLG111	Geological Disasters and the Environment Lab (1) .....	4
GLG140	Introduction to Oceanography..	3
GPH111	Introduction to Physical Geography .....	4
+ GPH211	Landform Processes .....	4
GPH213	Climate and Weather (3) and	
+ GPH215	Climate and Weather Laboratory (1) .....	4

CHM107 + CHM107LL	Chemistry and Society (3) and Chemistry and Society Laboratory (1) .....	4
ASM104	Bones, Stones, and Human Evolution.....	4

Students will choose one (1) course from the following list:

ASB226	Human Impacts on Ancient Environment .....	3
COM263	Elements of Intercultural Communication .....	3
ENH206	Nature and Environmental Literature .....	3
ENH260	Literature of the Southwest .....	3
GCU102	Introduction to Human Geography.....	3
GCU141	Introduction to Economic Geography.....	3
HUM201	Humanities: Universal Themes.....	3
PHI216	Environmental Ethics.....	3
POS120	World Politics .....	3
+RDG112	Successful College Reading for Life Sciences, Mathematics, Physical Sciences or Technology.....	3
SBU200	Society and Business.....	3
SOC251	Social Problems .....	3
SUS100	Introduction to Sustainability.....	3

Track II: Sustainability: Social, Political, Economic Treatment of the Earth..... 9-10

Students will choose two (2) courses from the following list:

ASB102	Culture in a Globalizing World .....	3
SUS100	Introduction to Sustainability.....	3
COM263	Elements of Intercultural Communication .....	3

ECN212	Microeconomic Principles.....3
+ECN263	The Economics of Natural Resources, Population and the Environment.....3
GCU102	Introduction to Human Geography .....3
GCU141	Introduction to Economic Geography.....3
+HRM290	Ecotourism.....3
POS120	World Politics .....3
PSY132	Psychology and Culture .....3
SBU200	Society and Business.....3
SOC180	Social Implications of Technology.....3

Students must choose one (1) to two (2) courses from the following list:

BIO105	Environmental Biology .....4
+ BIO181	General Biology (Majors) I.....4
+ BIO182	General Biology (Majors) II .....4
CHM107	Chemistry and Society (3) and
CHM107LL	Chemistry and Society Laboratory (1) .....4
ENH206	Nature and Environmental Literature .....3
ENH260	Literature of the Southwest.....3
GLG110	Geological Disasters and the Environment (3) AND
GLG111	Geological Disasters and the Environment Lab (1).....4
+GPH210	Society and Environment .....3
HUM201	Humanities: Universal Themes...3
PHI216	Environmental Ethics.....3

Track III: Sustainability: Coupled Human-Environment Systems .....9-10

Students will choose two (2) courses from the following list:

ASB102	Culture in Globalization World .....3
ASB222	Buried Cities and Lost Tribes: Old World (3) OR

ASB223	Buried Cities and Lost Tribes: New World (3).....3
ASB226	Human Impacts on Ancient Environments .....3
COM263	Elements of Intercultural Communication .....3
ENH206	Nature and Environmental Literature .....3
ENH260	Literature of the Southwest.....3
HUM201	Humanities: Universal Themes.....3
PHI216	Environmental Ethics.....3
REC150AB	Outdoor Adventure Skills .....3

Students will choose one (1) to two (2) course from the following list:

ASM104	Bones, Stones, and Human Evolution.....4
BIO105	Environmental Biology .....4
BIO108	Plants and Society .....4
+ BIO181	General Biology (Majors) I .....4
+BIO182	General Biology (Majors) II .....4
CHM107	Chemistry and Society (3) and
CHM107LL	Chemistry and Society Laboratory (1)..... 4
GLG110	Geological Disasters and the Environment (3) AND
GLG111	Geological Disasters and the Environment Lab (1).....4
+GPH210	Society and Environment .....3
PHI104	World Philosophy .....3
POS120	World Politics.....3

Track IV: Sustainability: Human Transformation of the Earth 9-11

Students will choose 9-11 credits from the following list:

ASB100	Introduction to Global Health.....3
ASB226	Human Impacts on Ancient Environments .....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 [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

CNS205	Sustainable Construction/ LEED Certification.....3
ECE101	Origins of Science and Engineering.....3
ECE111	Bioengineering Systems.....3
FON135	Sustainable Cooking .....3
FON143	Food and Culture.....3
FON161	Sustainable Food Production Systems .....3
HES210	Cultural aspects of Health and Illness .....3
+INT170	Interior Materials.....3
SCT100	Introduction to Sustainable Built Environments.....3
+SCT271AA	Sustainable Design Internship (1) OR
+SCT271AB	Sustainable Design Internship (2) ..... 1-2
SOC180	Social Implications of Technology.....3
WED124	Environmental Wellness.....3
Track V: Sustainability: Business and Entrepreneurship ..... 10-11	

Students will choose one (1) option from the following list:

EPS150	Introduction to Entrepreneurship (3) AND
EPS195	Business Start-Up and Planning (2) .....5
MGT253	Owning and Operating a Small Business (3) AND
+MGT298AA	Special Project (1) OR
+SSH298AA	Special Project(1) .....4

Students will choose one (1) option from the following list:

GBS151	Introduction to Business (3) OR
GBS205	Legal, Ethical and Regulatory Environment of Business (3).....3

Students will choose one (1) option from the following list:

ECN212	Microeconomics (3) OR
SBU200	Society and Business (3) .....3

.....  
**Sustainability and Ecological Literacy**

**ACADEMIC CERTIFICATE:  
AC 6232N**

16 Credits

**PROGRAM CONTACT:**

CHRIS SCHNICK ~  
(480) 732-7274

[chris.schnick@cgcc.edu](mailto:chris.schnick@cgcc.edu)

**PROGRAM DESCRIPTION**

The interdisciplinary Academic Certificate (AC) in Sustainability and Ecological Literacy enhances students` understanding of sustainable living practices associated with economics, equity and the environment. Through a combination of coursework and experiential learning, students engage in critical thinking, inquiry, and discourse, skills necessary for becoming socially responsible citizens who are ecologically and environmentally aware. The certificate is designed for, although not limited to, students seeking an Associate in Arts Degree and planning transfer to four-year colleges and universities.

**PROGRAM NOTES**

+ indicates course has prerequisites and/or corequisites.

Students must earn a grade of "C" or better in

all courses within the program.

Overall program minimum G.P.A. = 2.00.

**PROGRAM PREREQUISITES: 3 CREDITS**

- +ENG101 First-Year Composition (3) OR
- +ENG107 First-Year Composition for  
ESL (3).....3

**REQUIRED COURSES: 7 CREDITS**

- +PHI216 Environmental Ethics.....3
- BIO105 Environmental Biology (4) OR
- GLG110 Geological Disasters and the  
Environment (3) AND
- GLG111 Geological Disasters and the  
Environment Lab (1).....4

**HUMANITIES, SOCIAL**

**SCIENCE AND WELLNESS: 9 CREDITS**

Students will choose 2 different courses from the following list:

- +ECN263 The Economics of Natural  
Resources, Population and the  
Environment (3)
- ENH206 Nature and Environmental  
Literature (3)
- ENH260 Literature of the Southwest (3)
- HUM201 Humanities:  
Universal Themes (3)
- REC150AB Outdoor Adventure Skills (3)
- SBU200 Society and Business (3) .....6

Students will choose 1 course from the following list:

- HIS110 World History to 1500 (3)
- HIS111 World History 1500 to the  
Present (3)
- HUM250 Ideas and Values in the  
Humanities (3)
- PHI104 World Philosophy (3)
- POS120 World Politics (3)
- PSY132 Psychology and Culture (3)
- SOC101 Introduction to Sociology (3).....3

**Web Design  
Web Design**

**CERTIFICATE OF COMPLETION:  
CCL 5159**

18 Credits

**PROGRAM CONTACT:**

PREMA RAYAPPA  
(480)-732-1230

[prema.rayappa@cgcc.edu](mailto:prema.rayappa@cgcc.edu)

**PROGRAM DESCRIPTION**

The Certificate of Completion (CCL) in Web Design is intended for those interested in designing and maintaining web pages for personal or small business use.

**PROGRAM NOTES**

Students must earn a grade of "C" or better in all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

++ indicates any module/suffixed courses.

Overall program minimum G.P.A. = 2.00.

**REQUIRED COURSES: 18 CREDITS**

- CIS120DC Adobe Animate: Digital  
Animation .....3
- CIS120DF Adobe Photoshop Level I:  
Digital Imaging (3) OR
- CIS120AF Computer Graphics: Adobe  
Photoshop: Level I (1) AND
- CIS120BF Computer Graphics: Adobe  
Photoshop: Level II (1) AND
- CIS120CF Computer Graphics: Adobe  
Photoshop: Level III (1) .....3
- CIS133DA Internet/Web Development  
Level I .....3
- +CIS166++ Web Scripting (any module).....3

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+CIS233DA	Internet/Web Development Level II .....	3
+CIS235	e-Commerce .....	3

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## Women's Studies

### Women's Studies

#### ACADEMIC CERTIFICATE: AC 6225N

15 Credits

#### PROGRAM CONTACT:

DONNA THOMPSON ~  
(480) 857-5534

[donna.thompson@cgcc.edu](mailto:donna.thompson@cgcc.edu)

#### PROGRAM DESCRIPTION

The Academic Certificate (AC) in Women's Studies is an intensive interdisciplinary liberal arts certificate program, provides students with tools and opportunities to discuss and critique historical and contemporary theories and practices of feminism(s). The curriculum enables students to write well, think critically and analyze problems effectively. Students complete a variety of courses focusing on women's experiences and perspectives, exploring topics such as history, culture, class, race, ethnicity, sexuality and gender in order to help bring about equality, understanding, and peace. These courses are culturally responsive to the diversity of one half of the world's people, their work, and their impact on multicultural societies.

#### PROGRAM NOTES

Students must earn a grade of "C" or better in all courses required within the program.

+ indicates course has prerequisites and/or corequisites.

++ indicates any module/suffixed courses.

Overall program minimum G.P.A. = 2.00.

#### REQUIRED COURSES: 3 CREDITS

WST100	Introduction to Women's and Gender Studies .....	3
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#### RESTRICTED ELECTIVES: 12 CREDITS

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
AJS/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

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## 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 on-line learning.

Workforce development at CGCC brings together employers, employees and

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education. Instruction is either at the company, at the college, or on-line. 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 or visit the Web site at <http://www.cgc.maricopa.edu/Academics/ESL/Pages/ESL.aspx>

## 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.cgcc.edu/honors](http://www.cgcc.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. There are many opportunities for students to develop skills leading to work in the performing arts, and related areas.

The Arnette Scott Ward Performing Arts Center (the PAC) is home to the CGCC's music, theatre, and dance faculty and staff. It houses a costume shop, scene shop, and its heart, a 299-seat performance venue. In addition, the program has brand new teaching facilities including two new dance studios, a revitalized black box theater, a new instrumental music room, choir room, music library, rehearsal rooms and studio recording space.

For more information on performing arts at CGCC, visit [www.cgcc.edu/arts](http://www.cgcc.edu/arts) or call:

Dance and Musical Theatre .....(480) 732-7136  
 Instrumental Music .....(480) 732-7290  
 Music Business.....(480) 857-5182  
 Theatre .....(480) 732-7040  
 Vocal Music and Musical Theatre ..(480) 732-7144



## ACADEMIC DIVISIONS

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## Academic Divisions

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

### Aviation & Applied Technology

**ERIC SNYDER, DIVISION CHAIR**  
(480) 988-8182

[eric.snyder@cgcc.edu](mailto:eric.snyder@cgcc.edu)

#### COURSES:

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

#### CAREER PROGRAMS:

- Administration of Justice Studies
  - Administration of Justice Studies
  - Correctional Studies
  - Forensic Science
  - Homeland Security
  - Justice Studies
  - Law Enforcement Training Academy
- Aircraft Flight Technology
  - Certified Flight Instructor Instrument
    - Airplane Rating
  - Flight Technology
    - Airway Science Technology,
      - Flight Emphasis
- Aircraft Maintenance Technology
  - Airframe Maintenance (Part 147)
  - Powerplant Maintenance (Part 147)
  - Aircraft Maintenance Technology
    - (Part 147)

Aircraft Maintenance Technology

Electric Utility Technology

Electric Utility Technology

Electric Utility Design Technology

Meter Technology

### Biological Sciences

**REGI MUNRO, DIVISION CHAIR**  
(480) 732-7109

[regi.munro@cgcc.edu](mailto:regi.munro@cgcc.edu)

#### COURSES:

- BIO - Biology
- SUS - Sustainability/Natural Sciences
- SSH - Sustainability Social Sciences

#### CAREER PROGRAMS:

Sustainability

### Business & Computing Studies

**THOMAS PEARSON, DIVISION CHAIR**  
(480) 726-4131

[tom.pearson@cgcc.edu](mailto:tom.pearson@cgcc.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

- Computer Programming
  - Programming and System Analysis
  - Computer Science
- Linux Networking
  - Linux Professional
- Microsoft Networking
  - Network Administration:
    - Microsoft Windows Server
- Small Business
  - Small Business Start-Up
- Web Design

**CAREER PROGRAMS:**

Accounting

Business

- General Business
- Organizational Leadership
- Organizational Management
- Retail Management
- Social Media Marketing

Cisco Networking

- Networking Administration: Cisco
- Networking Technology: Cisco

Business Applications

- Business Applications Specialist:
  - Office Specialist/ Core Level

Computer Database Administration and Development

- Oracle Database Operations

Computer Hardware Maintenance and Desktop Support

- Computer Hardware and Desktop Support

Computer Information Technology  
Information Technology

**Communication & Fine Arts**

**RANDY WRIGHT, DIVISION CHAIR**  
(480) 732-7290  
[randy.wright@cgc.edu](mailto:randy.wright@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:**

- Art: Computer Illustration  
Media Arts: Computer Art/Illustration
- Art: Digital Photography  
Media Arts: Digital Imaging
- Music Business

**Composition, Creative Writing & Literature**

**MARY ZIMMERER, DIVISION CHAIR**  
 (480) 857-5441  
[mary.zimmerer@cgc.edu](mailto:mary.zimmerer@cgc.edu)

**COURSES:**

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

**CAREER PROGRAMS:**

Creative Writing

**Library, Learning Center & Counseling**

**CAROL DICHTENBERG, DIVISION CHAIR**  
 (480) 857-5133  
[carol.dichtenberg@cgc.edu](mailto:carol.dichtenberg@cgc.edu)

**COURSES:**

- AAA - Advancing Academic Achievement
- BHS - Behavioral Health Services  
Technology
- CPD - Counseling and Personal  
Development
- IFS - Information Studies

**Health Sciences**

**GREGORY TRONE, DIVISION CHAIR**  
 (480) 782-7289  
[gregory.trone@cgc.edu](mailto:gregory.trone@cgc.edu)

**COURSES:**

- EMT - Emergency Medical Technology
- EXS - Exercise Science
- FON - Food and Nutrition
- HCC - Health Core Curriculum
- HCR - Health Care Related
- HES - Health Science
- MSP - Mortuary Science
- PED - Physical Education
- REC - Recreation
- WED - Wellness Education

**CAREER PROGRAMS:**

Fire Science



- Emergency Medical Technology
- Massage
  - Massage Therapy
- Mortuary Science
- Nursing
  - Practical Nursing
- Nutrition
  - Dietetic Technology
- Personal Training
  - Personal Training Specialist
  - Exercise Science and Personal Training

- REL - Religious Studies
- SLG - Sign Language
- SPA - Spanish
- SPH - Spanish Humanities
- WST - Women's Studies

**CAREER PROGRAMS:**

Sustainability and Ecological Literacy



## Nursing

**KAREN FLANIGAN, DIVISION CHAIR**  
(480) 988-8881

[karen.flanigan@cgc.edu](mailto:karen.flanigan@cgc.edu)

**COURSES:**

- HCC - Health Core Curriculum
- HCR - Health Care Related
- NCE - Nursing Continuing Education
- NUR - Nursing Science: Basic

**CAREER PROGRAMS:**

- Nursing
  - Registered Nurse



## Physical Sciences & Engineering

**ANGEL G. FUENTES, DIVISION CHAIR**  
(480) 732-7033

[angel.fuentes@cgc.edu](mailto:angel.fuentes@cgc.edu)

**COURSES:**

- AST - Astronomy
- CAD - Computer-Aided Drafting

## Mathematics

**FRANK WILSON, DIVISION CHAIR**  
(480) 988-8608

[frank.wilson@cgc.edu](mailto:frank.wilson@cgc.edu)

**COURSES:**

- MAT - Mathematics



## Modern Languages & Humanities

**VIRGINIA EDWARDS, DIVISION CHAIR**  
(480) 732-7342

[virginia.edwards@cgc.edu](mailto:virginia.edwards@cgc.edu)

**COURSES:**

- ESL - English as a Second Language
- GER - German
- HIS - History
- NAV - Navajo
- PHI - Philosophy

- CHM - Chemistry
- ECE - Engineering Science
- EEE - Electrical Engineering
- ELE - Electronic
- ELT - Electronics Technology
- GLG - Geology
- GPH - Physical Geography
- PHS - Physical Science
- PHY - Physics

#### **CAREER PROGRAMS:**

Engineering Technology



## **Social and Behavioral Sciences**

**DARBY HEATH, DIVISION CHAIR**

(480) 857-5442

[darby.heath@cgc.edu](mailto:darby.heath@cgc.edu)

#### **COURSES:**

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

#### **CAREER PROGRAMS:**

Child and Family Professional Development

Early Learning and Development



## **COURSE DESCRIPTIONS**

## 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.

**(1)ENG (2)101 / (5) 3 CREDITS / \* 3 PERIODS**

 ENG 1101

**(3)FIRST-YEAR COMPOSITION**

(4)Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. (6) Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG091 or ESL097.

**AAA - Advancing Academic Achievement**

**AAA115 / 1 CREDIT / 1 PERIOD**

**CREATING COLLEGE SUCCESS**

Strategies to create success in college.

Methods for selecting and developing effective academic strategies, increasing self-awareness and developing self-management strategies. Elements of college resources and relationships with others explored in support of students' educational experience. Prerequisites: None.

**ACC - Accounting**

**ACC105 / 3 CREDITS / 3 PERIODS**

**PAYROLL, SALES AND PROPERTY TAXES**

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

**ACC111 / 3 CREDITS / 3 PERIODS**

**ACCOUNTING PRINCIPLES I**

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

**ACC115 / 2 CREDITS / 3 PERIODS**

**COMPUTERIZED ACCOUNTING**

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

**ACC121 / 3 CREDITS / 3 PERIODS**

**INCOME TAX PREPARATION**

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



**ACC219 / 3 CREDITS / 3 PERIODS**

**INTERMEDIATE ACCOUNTING I**

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

**ACC220 / 3 CREDITS / 3 PERIODS**

**INTERMEDIATE ACCOUNTING II**

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

**ACC230 / 3 CREDITS / 3 PERIODS**

**USES OF ACCOUNTING INFORMATION I**

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

**ACC240 / 3 CREDITS / 3 PERIODS**

**USES OF ACCOUNTING INFORMATION II**

Introduction to the uses of accounting information for internal and external purposes with emphasis on analysis for use by

management. Prerequisites: ACC230.

**ACC296WA / 1 CREDIT / 5 PERIODS**

**COOPERATIVE EDUCATION**

Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor

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**AET - Aeronautics**

**AET100 / 1 CREDIT / 1 PERIOD**

**AVIATION ORIENTATION**

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

**AET107 / 5 CREDITS / 5 PERIODS**

**PRIVATE PILOT GROUND SCHOOL**

Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, airplane systems,

airports, airspace, communications, Federal Air Regulations, navigation, airplane performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam. Prerequisites: None. Corequisite: AET110.

**AET107HH / 5 CREDITS / 5 PERIODS**

**PRIVATE PILOT GROUND SCHOOL: HELICOPTER**

Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, helicopter systems, airports, airspace, communications, Federal Air Regulations, navigation, helicopter performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam. Prerequisites: None. Corequisites: AET110HH.

**AET110 / 2 CREDITS / 5 PERIODS**

**PRIVATE PILOT FLIGHT**

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

**AET110HH / 2 CREDITS / 5 PERIODS**

**PRIVATE PILOT FLIGHT: HELICOPTER**

Flight course in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate practical examination. Includes preflight preparation, preflight procedures, airport and heliport operations, hovering maneuvers, takeoffs, landings, and go-rounds, performance maneuvers, navigation, emergency operations, night operations, and post-flight procedures. Approximately 75-85 hours helicopter flight experience at student's expense required. Requires passing check ride similar to the FAA Private Pilot check ride. Prerequisites: None. Corequisites: AET107HH.

**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.

**AET203HH / 2 CREDITS / 2 PERIODS**

**BASIC HELICOPTER SYSTEMS**

Beginning commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examination. Discussions will include, but not be limited to reciprocating engines, engine systems, helicopter systems, altitude systems, and commercial regulations. Prerequisites: AET207HH, AET217HH and AET210HH or permission of Instructor. Corequisites: AET220HH and AET213HH.

**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.

**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.

**AET207HH / 2 CREDITS / 2 PERIODS**

**ATTITUDE INSTRUMENTS AND NAVIGATION: HELICOPTER**

Beginning instrument pilot ground course in preparation for the Federal Aviation Administration (FAA) Instrument Pilot Rating and Instrument rating written examinations. Includes preflight preparation, flight instruments, basic attitude instrument flying, radio navigation systems, and technically advanced helicopter systems. Prerequisites: AET110HH, or permission of Instructor. Corequisites: AET210HH and AET217HH.

**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: AET100.

**AET210 / 2 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.

**AET210HH / 2 CREDITS / 5 PERIODS****INSTRUMENT FLIGHT: HELICOPTER**

Initial helicopter flight course in preparation for the Federal Aviation Administration (FAA) Instrument rating practical examination. Emphasis on helicopter instrument operations. Student must fly approximately 75 hours at own expense. Requires passing operational phase checks. Prerequisites: AET110HH or permission of Instructor. Corequisites: AET207HH and AET217HH.

**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.

**AET213HH / 2 CREDITS / 2 PERIODS****AERODYNAMICS AND PERFORMANCE: HELICOPTER**

Advance commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examinations. Includes discussion of aerodynamic factors including lift, weight, drag, and thrust. Discussions will include, but are not limited to aerodynamics, performance, and safe and efficient helicopter operations. Prerequisites: AET207HH, AET217HH, and AET210HH. Corequisites: AET220HH and AET203HH.

**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.

**AET217HH / 2 CREDITS / 2 PERIODS**

### **INSTRUMENT PROCEDURES: HELICOPTER**

Advance helicopter instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Includes Federal Aviation Regulations, instrument approach procedures, and instrument enroute considerations.

Requires passing written exams similar to the Instrument pilot rating and Instrument rating written exams. Prerequisites: AET110HH or permission of Instructor. Corequisites: AET210HH and AET207HH.

**AET220 / 2 CREDITS / 5 PERIODS**

### **INSTRUMENT COMMERCIAL FLIGHT II**

Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examinations. Emphasis on commercial and high performance operations. Student must fly approximately 60 hours at own expense.

Requires passing instrument rating and commercial pilot stage checks similar to the FAA check rides. Prerequisites: AET210, AET207 and AET217. Corequisites: AET203 and AET213.

**AET220HH / 2 CREDITS / 5 PERIODS**

### **COMMERCIAL FLIGHT: HELICOPTER**

Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial and high performance helicopter operations. Student must fly approximately 60 hours at own expense. Requires passing instrument rating and commercial pilot stage checks similar to the FAA check rides. Prerequisites: AET210HH, AET207HH and AET217HH. Corequisites: AET203HH and AET213HH.

**AET225 / 4 CREDITS / 4 PERIODS**

### **ADVANCED AIRCRAFT SYSTEMS**

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

**AET226 / 2 CREDITS / 2 PERIODS**

### **INTRODUCTION TO UNMANNED AIRCRAFT SYSTEMS OPERATION**

Overview of the history of Unmanned Aircraft Systems (UAS), as well as regulatory issues

and both current and future applications.  
Prerequisites: AET100. Proof of U.S. Citizenship required per U.S. State Department International Traffic in Arms Regulations (ITAR) regulations.

**AET227 / 5 CREDITS / 5 PERIODS**

**CERTIFIED FLIGHT INSTRUCTOR:  
AIRPLANE, SINGLE ENGINE LAND  
GROUND SCHOOL**

Ground school in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor and Fundamentals of Instruction written examinations. Includes fundamentals of instruction, aerodynamics, airplane performance, systems, operations, weight and balance, weather, federal regulations, navigation, maneuvers, pilot physiology, ethics, and aeronautical decision making. Requires passing written exams similar to the FAA Certified Flight Instructor: Airplane, and Fundamentals of Instruction written exams. Prerequisites: AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisite: AET230.

**AET227HH / 4 CREDITS / 4 PERIODS**

**CERTIFIED FLIGHT INSTRUCTOR:  
HELICOPTER GROUND SCHOOL**

Ground school in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor and Fundamentals of Instruction written examinations. Includes fundamentals of instruction, aerodynamics, helicopter performance, systems, operations, weight

and balance, weather, federal regulations, navigation, maneuvers, pilot physiology, ethics, and aeronautical decision making. Requires passing written exams similar to the FAA Certified Flight Instructor: Helicopter, and Fundamentals of Instruction written exams. Prerequisites: FAA Commercial Pilot Certificate. Corequisites: AET230HH.

**AET228 / 3 CREDITS / 3 PERIODS**

**PUBLIC SAFETY AVIATION**

Organization, operations, tactics and techniques related to air support operations within law enforcement, fire protection and resource protection agencies. Includes Use of Unmanned Aircraft System (UAS) within the United States, Airborne law enforcement patrol, surveillance, special operations and Special Weapons and Tactics (SWAT); fire operations including fire chemistry and behavior, fire department organization and tactics, airborne firefighting equipment, fire extinguishment tactics and air ambulance operations; and, resource protection air operations including wildlife surveys, hunting and fishing enforcement patrols, search and rescue, and operations from unimproved landing sites and seaplane operations. Prerequisites: AET107 and AET110. Corequisites: AET260. Course Notes: International Traffic in Arms Regulations (ITAR) Defined: U.S. State Department regulations that govern the export of restricted technology to foreign states. United States Munitions List (USML) of restricted

articles and services. ITAR Compliance: Due to the ITAR requirements surrounding the UAS Operations, only United States Citizens will have access to the operating system, simulators, related documentation, and Learning Management System (LMS). Students/Instructors must not disclose ITAR sensitive information or materials to any foreign person at any time whether in the U.S. or abroad. A Foreign Person is defined by ITAR as any natural person who is not a lawful permanent resident as defined by 8 U.S.C.1101(a)(20) or who is not a protected individual as defined by 8 U.S.C. 1324b(a)(3). It also means any foreign corporation, business association, partnership, trust, society or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments and any agency or subdivision of foreign governments (e.g. diplomatic missions).Export control violations can result in civil and criminal personal liability of up to \$100,000 per violation, imprisonment, or fines and imprisonment. If the violation is determined to be knowingly or willfully committed the personal liability is up to \$250,000 per violation, imprisonment, or fines and imprisonment.

**AET229 / 3 CREDITS / 3 PERIODS**

### CREW RESOURCE MANAGEMENT

Crew communications, teamwork, leadership, "followership," decision-making, and situational awareness; also the benefits of diversity, and the role diversity plays in

the modern aerospace industry. Emphasis on utilization of all available resources in order to conduct a safe and efficient flight. Prerequisites: AET217.

**AET230 / 1 CREDIT / 3 PERIODS**

### CERTIFIED FLIGHT INSTRUCTOR: AIRPLANE, SINGLE ENGINE LAND

Flight course in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor: Airplane practical examination. Emphasis on demonstration and analysis of flight maneuvers. Includes preflight, ground operations, airport operations, takeoffs, climbs, flight fundamentals, stalls, spins, slow flight, basic instrument operations, performance maneuvers, ground reference maneuvers, emergency operations, approaches, landings, and postflight procedures. Requires approximately 25 hours of flight that includes high performance operations at student's expense. Also requires passing check ride similar to the FAA Certified Flight Instructor check ride. Prerequisites: AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisite: AET227.

**AET230HH / 1 CREDIT / 3 PERIODS**

### CERTIFIED FLIGHT INSTRUCTOR: HELICOPTER

Flight course in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor: Helicopter practical examination. Emphasis on demonstration and analysis of flight maneuvers. Includes preflight

procedures, airport and heliport operations, hovering maneuvers, takeoffs, landings, and go-arounds, fundamentals of flight, performance maneuvers, emergency operations, special operations, and postflight procedures. Requires approximately 60 hours of flight at student's expense. Also requires passing check ride similar to the FAA Certified Flight Instructor check ride. Prerequisites: FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET227HH.

**AET237 / 2 CREDITS / 2 PERIODS**

**MULTIENGINE AIRPLANE PILOT GROUND SCHOOL**

Aeronautical knowledge necessary to meet requirements for a multiengine airplane rating including orientation, aerodynamics, airplane systems, airplane performance, flight planning, and emergency procedures. Prerequisites: AET220 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET240.

**AET240 / .5 CREDIT / 1.5 PERIODS**

**MULTIENGINE AIRPLANE PILOT FLIGHT**

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

**AET257 / 3 CREDITS / 4 PERIODS**

**READINGS IN AVIATION**

Critical inquiry of a particular aviation theme from a wide variety of sources. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. International data communication facilities and equipment made available for student use. Prerequisites: ENG102 or ENG111, and permission of instructor.

**AET258 / 3 CREDITS / 3 PERIODS**

**CERTIFIED FLIGHT INSTRUCTOR: INSTRUMENT AIRPLANE GROUND SCHOOL**

Aeronautical knowledge and practical teaching ability necessary to obtain an Instrument Flight Instructor Certificate with an Airplane-Single-Engine rating and necessary to satisfactorily pass the Flight Instructor Instrument knowledge test. Prerequisites: Valid FAA Commercial Pilot Certificate, or Airline Transport Pilot Certificate with instrument rating and the appropriate category and class of airplane used in the course; and Flight Instructor Certificate-Airplane. Corequisites: AET270.

**AET258HH / 3 CREDITS / 3 PERIODS**

**CERTIFIED FLIGHT INSTRUCTOR: INSTRUMENT HELICOPTER, GROUND SCHOOL**

Aeronautical knowledge and practical teaching ability necessary to obtain an



Instrument Flight Instructor Certificate with a Helicopter rating and necessary to satisfactorily pass the Helicopter 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 helicopter used in the course; and Flight Instructor Certificate-Helicopter. Corequisites: AET270HH.

**AET260 / 1 CREDIT / 3 PERIODS**

### **PUBLIC SAFETY AVIATION APPLICATIONS IN UNMANNED AIRCRAFT SYSTEMS FLIGHT LAB**

Knowledge and skills needed to safely employ small unmanned aircraft systems. Includes aircraft operating software, launch and recovery operations, payload operations, normal and emergency procedures, and mission planning and execution. Emphasis on use of small Unmanned Aircraft Systems (UAS) operations conducted by non-military governmental organizations, such as law enforcement and resource protection agencies. Students must complete the appropriate flight lessons to satisfactorily complete the course. Prerequisites: AET226. Corequisites: AET228. Course Notes: Due to U.S. State Department regulations that govern the export of restricted technology to foreign states, only United States Citizens will have access to the operating systems, simulators, and related documentation. Students/Instructors must not disclose sensitive information or materials to any foreign person at any time whether in the U.S.

or abroad. A Foreign Person is defined as any natural person who is not a lawful permanent resident as defined by 8 U.S.C. 1101(a)(20) or who is not a protected individual as defined by 8 U.S.C. 1324b(a)(3). It also means any foreign corporation, business association, partnership, trust, society or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments and any agency or subdivision of foreign governments (e.g. diplomatic missions). Export control violations can result in civil and criminal personal liability of up to \$100,000 per violation, imprisonment, or fines and imprisonment. If the violation is determined to be knowingly or willfully committed the personal liability is up to \$250,000 per violation, imprisonment, or fines and imprisonment.

**AET270 / 1 CREDIT / 3 PERIODS**

### **CERTIFIED FLIGHT INSTRUCTOR: INSTRUMENT AIRPLANE FLIGHT LAB**

Flight experience in an airplane to meet flight proficiency and aeronautical experience requirements necessary to add an Instrument Airplane Rating to an existing Flight Instructor-Airplane certificate. Prerequisites: Valid FAA Commercial Pilot Certificate, or Airline Transport Pilot Certificate with instrument rating and the appropriate category and class of airplane used in the course; and Flight Instructor Certificate-Airplane. Corequisites: AET258.



**AET270HH / 1 CREDIT / 3 PERIODS****CERTIFIED FLIGHT INSTRUCTOR:  
INSTRUMENT HELICOPTER LAB**

Flight experience in a helicopter designed to provide flight proficiency and aeronautical experience requirements necessary to pursue adding an Instrument Helicopter Rating to an existing Flight Instructor-Helicopter certificate. Prerequisites: Valid FAA Commercial Pilot Certificate, or Airline Transport Pilot Certificate with instrument rating and the appropriate category and class of helicopter used in the course; and Flight Instructor Certificate-Helicopter. Corequisites: AET258HH.

**AET273 / 2 CREDITS / 2 PERIODS****MULTI-ENGINE FLIGHT  
INSTRUCTOR: AIRPLANE-GROUND  
SCHOOL**

Aeronautical knowledge and practical teaching necessary for the addition of a multi-engine rating Flight Instructor Certificate, as set forth in the current Private and Commercial Multi-Engine and Flight Instructor Multi-Engine Practical Test Standards. 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: AET280.

**AET280 / 1 CREDIT / 3 PERIODS****MULTI-ENGINE FLIGHT INSTRUCTOR:  
AIRPLANE-FLIGHT LAB**

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

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**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.

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## AJS - Administration of Justice Studies

**AJS101 / 3 CREDITS / 3 PERIODS**

 AJS 1101

### INTRODUCTION TO CRIMINAL JUSTICE

An introduction to crime and society's responses to it. Examines the nature and causes of crime, the criminal law, constitutional safeguards, and the organization and operation of the criminal justice system including the police, courts, jails, prisons, probation and parole departments, and community corrections agencies. Covers the history of the criminal justice system, terminology and career opportunities. Prerequisites: None.

**AJS102 / 17 CREDITS / 30 PERIODS**

### PEACE OFFICER CERTIFICATION I

Training program for limited authority peace officers, leading to certification by the Arizona Peace Officer Standards and Training Board

(AzPOST - The statutory agency for certifying peace officers - all person with arrest powers - in Arizona.) Includes introduction to Law Enforcement, Law and legal matters, patrol procedures, traffic control, and police proficiency skills. Prerequisites: Student must comply with AzPOST employment standards for peace officers.

**AJS109 / 3 CREDITS / 3 PERIODS**

### SUBSTANTIVE CRIMINAL LAW

Covers philosophy of legal sanctions and historical development from the common law to modern American criminal law, classifications of crimes, elements of and parties to crimes, general definition of crimes, common defenses utilized. Includes specific offenses and the essential elements of each offense. Required in AJS curriculum. Prerequisites: None.

**AJS113 / 3 CREDITS / 3 PERIODS**

### CRIMINAL JUSTICE CRIME CONTROL POLICIES AND PRACTICES

Focus on changing the distribution of crime opportunities rather than offender motivation. Topics include application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, defensible space, and crime prevention through defensible space. Prerequisites: None.

**AJS119 / 3 CREDITS / 4 PERIODS****COMPUTER APPLICATIONS IN JUSTICE STUDIES**

Provides literacy in microcomputer applications in major areas of the criminal justice system. Examines availability and uses of current software packages in criminal justice work. Provides hands-on experience with appropriate integrated software packages pertaining to justice studies.

Prerequisites: None.

**AJS123 / 3 CREDITS / 3 PERIODS****ETHICS AND THE ADMINISTRATION OF JUSTICE**

Introduces and explores ethical issues and the justice system. Focuses on ethics and the law, the police, courts and corrections. Reviews ethical theory, concepts and practices as they relate to administration of justice. Encourages critical thinking and value decision making in criminal justice system situations.

Prerequisites: None.

**AJS139 / 3 CREDITS / 3 PERIODS****EMERGENCY RESPONSE TO TERRORISM**

Fundamentals of emergency response to suspected terrorist events. Historical perspective of terrorist activities and methods by which responders can identify and protect themselves and the public from these threats. Coordination of responding agencies.

Prerequisites: None.

**AJS195 / 3 CREDITS / 3 PERIODS****INTERNATIONAL AND DOMESTIC TERRORISM**

An overview of the history, structure, goals, and activities of domestic and international terrorist groups. Explores theories explaining terrorism and reviews methods used to combat it. Prerequisites: None.

**AJS200 / 3 CREDITS / 3 PERIODS****CURRENT ISSUES IN CRIMINAL JUSTICE**

Examines current issues, techniques and trends in the Criminal Justice System.

Prerequisites: None.

**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, and recordings; corpus delicti; opinion evidence, circumstantial evidence, evidential privileges. Required in AJS curriculum. Prerequisites: None.

**AJS202 / 13 CREDITS / 22.5 PERIODS****PEACE OFFICER CERTIFICATION II**

A continuation of the basic, entry-level training program leading to full authority peace officer certification as required by the Arizona Peace Officer Standards and Training

Board I (AzPOST). Subjects to include: Patrol Procedure, Accident Investigation, Records and Report Writing, Community Relations, Criminal Investigations, and Officer Survival. Prerequisites: Grade of "C" or better in AJS/LEO102 or AzPOST Limited Authority Peace Officer certification.

**AJS212 / 3 CREDITS / 3 PERIODS**

### JUVENILE JUSTICE PROCEDURES

Examines the history and development of juvenile justice theories, procedures, and institutions. Prerequisites: None.

**AJS213 / 3 CREDITS / 3 PERIODS**

### EVIDENCE TECHNOLOGY/ FINGERPRINTS

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.

**AJS215 / 3 CREDITS / 3 PERIODS**

### CRIMINALISTICS: PHYSICAL EVIDENCE

The scientific analysis and examination of physical evidence with emphasis on scientific investigation, recognition, collection, and preservation of evidence. Topics include fingerprints, shoe prints, tool marks, firearms identification, paint chips and arson. Prerequisites: None.

**AJS216 / 3 CREDITS / 3 PERIODS**

### CRIMINALISTICS: BIOLOGICAL EVIDENCE

The scientific analysis and examination of biological evidence with emphasis on collection and preservation of evidence. Topics discussed include blood, drugs, blood alcohol, hairs and fibers, and topics of special interest in criminalistics. Prerequisites: None.

**AJS225 / 3 CREDITS / 3 PERIODS**

### CRIMINOLOGY

Study of deviance, society's role in defining behavior; theories of criminality and the economic, social, and psychological impact of crime; relationships between statistics and crime trends. Examines crime victimization and the various types of crime and categories of offenders. Required in the AJS curriculum. Prerequisites: None.

**AJS230 / 3 CREDITS / 3 PERIODS**

### THE POLICE FUNCTION

Theories of procedures and methods of operations of public police with emphasis on discretionary powers available to the working police officer. Career opportunities and current trends in law enforcement presented. Prerequisites: None.

**AJS240 / 3 CREDITS / 3 PERIODS**

### THE CORRECTION FUNCTION

Examines the history and development of correctional theories and institutions. Prerequisites: None.

**AJS241 / 3 CREDITS / 3 PERIODS****POLICE PHOTOGRAPHY**

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

**AJS258 / 3 CREDITS / 3 PERIODS****VICTIMOLOGY AND CRISIS MANAGEMENT**

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 CREDITS / 3 PERIODS****PROCEDURAL CRIMINAL LAW**

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

**AJS270 / 3 CREDITS / 3 PERIODS****COMMUNITY RELATIONS**

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

**AJS275 / 3 CREDITS / 3 PERIODS****CRIMINAL INVESTIGATION I**

Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, and basic investigative techniques. Prerequisites: None.

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## **AMT - Aircraft Maintenance Technology**

**AMT124 / 5 CREDITS / 9 PERIODS****AIRCRAFT FORMS AND REGULATIONS, WEIGHT AND BALANCE, DRAWINGS, AND GROUND OPERATIONS**

Federal Aviation maintenance publications, forms and records. Overview of technician's privileges and limitations. Perform aircraft weight and balance, aircraft ground operations and fuel servicing techniques. Drawings, symbols and schematic diagrams.

Prerequisites: ENG071, RDG091, (MAT091 or MAT092), and permission of the Department or Division.

**AMT126 / 9 CREDITS / 12 PERIODS**

**FUNDAMENTALS OF MATHEMATICS AND ELECTRICITY**

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

**AMT128 / 5 CREDITS / 9 PERIODS**

**FUNDAMENTALS OF AVIATION PHYSICS, CORROSION CONTROL, MATERIALS AND PROCESSES, FLUID LINES AND FITTINGS**

Basic concepts of motion, fluid dynamics, heat and sound, aerodynamics, aircraft structure and theory of flight. Fluid lines and fittings, component identification, function, inspection, and installation. Cleaning and corrosion control, materials and processes, non-destructive testing, and precision measurement techniques. Prerequisites: ENG071, RDG091, (MAT091 or MAT092), and permission of the Department or Division.

**AMT220 / 3 CREDITS / 6 PERIODS**

**FUNDAMENTALS OF AIRCRAFT WOOD STRUCTURES, COVERING AND FINISHING, AND BONDED STRUCTURES**

Theories and techniques of aircraft wood structures. Inspection, test and repair of aircraft fabric and wood structures. Aircraft structural design and methods of working with selected materials. Characteristics of composites, inspections and repairs. Prerequisites: Admission to the program.

**AMT220AA / 3 CREDITS / 6 PERIODS**

**FUNDAMENTALS OF AIRCRAFT WOOD STRUCTURES, COVERING AND FINISHING, AND BONDED STRUCTURES: PART 65**

Theories and techniques of aircraft wood structures. Inspection, test and repair of aircraft fabric and wood structures. Aircraft structural design and methods of working with selected materials. Characteristics of composites, inspections and repairs. Prerequisites: Permission of Program Director.

**AMT222 / 4 CREDITS / 6 PERIODS**

**ATMOSPHERE CONTROL, FIRE DETECTION, ICE AND RAIN PROTECTION SYSTEMS**

Operation and maintenance of aircraft auxiliary systems. Inspection, servicing, troubleshooting and repair of environmental control, ice and rain control, fire protection and warning systems. Prerequisites: Admission to the program.

**AMT222AA / 4 CREDITS / 6 PERIODS****ATMOSPHERE CONTROL, FIRE DETECTION, ICE AND RAIN PROTECTION SYSTEMS: PART 65**

Operation and maintenance of aircraft auxiliary systems. Inspection, servicing, troubleshooting and repair of environmental control, ice and rain control, fire protection and warning systems. Prerequisites: Permission of Program Director.

**AMT224 / 5 CREDITS / 11 PERIODS****AIRCRAFT SHEET METAL**

Inspection, fabrication, and repair techniques of aircraft structural and nonstructural components. Sheet metal heat-treating techniques. Prerequisites: Admission to the program.

**AMT224AA / 5 CREDITS / 11 PERIODS****AIRCRAFT SHEET METAL: PART 65**

Inspection, fabrication, and repair techniques of aircraft structural and nonstructural components. Sheet metal heat-treating techniques. Prerequisites: Permission of Program Director.

**AMT226 / 7 CREDITS / 12 PERIODS****AIRCRAFT LANDING GEAR, HYDRAULIC, PNEUMATIC, FUEL, POSITION AND WARNING SYSTEMS**

Identification, inspection, repair, and troubleshooting techniques of aircraft landing gear, hydraulic, fuel, pneumatic, and position and warning system components. Prerequisites: Admission to the program.

**AMT226AA / 7 CREDITS / 12 PERIODS****AIRCRAFT LANDING GEAR, HYDRAULIC, PNEUMATIC, FUEL, POSITION AND WARNING SYSTEMS: PART 65**

Identification, inspection, repair, and troubleshooting techniques of aircraft landing gear, hydraulic, fuel, pneumatic, and position and warning system components. Prerequisites: Permission of Program Director.

**AMT228 / 7 CREDITS / 12 PERIODS****AIRCRAFT ELECTRICAL SYSTEMS, INSTRUMENTS, FUEL INDICATING, COMMUNICATION AND NAVIGATION SYSTEMS**

Proper operation, inspection, servicing and troubleshooting of DC (Direct Current) and AC (Alternating Current) sources, systems, and components. Mechanical and electrical sensing and information display systems. Fuel indicator system inspections, repairs, and troubleshooting. Transmitter and receiver fundamentals. Avionics installation, inspection and testing. Prerequisites: Admission to the program.

**AMT228AA / 7 CREDITS / 12 PERIODS****AIRCRAFT ELECTRICAL SYSTEMS, INSTRUMENTS, FUEL INDICATING, COMMUNICATION AND NAVIGATION SYSTEMS: PART 65**

Proper operation, inspection, servicing and troubleshooting of DC (Direct Current) and AC (Alternating Current) sources, systems, and components. Mechanical and electrical



sensing and information display systems. Fuel indicator system inspections, repairs, and troubleshooting. Transmitter and receiver fundamentals. Avionics installation, inspection and testing. Prerequisites: Permission of Program Director.

**AMT230 / 6 CREDITS / 11 PERIODS**

### **AIRFRAME ASSEMBLY, INSPECTION AND WELDING**

Aircraft assembly and rigging. Flight control balancing and rigging. Airframe inspection techniques, reporting procedures, and aircraft jacking. Welding techniques, theory, and materials identification. Prerequisites: Admission to the program.

**AMT230AA / 6 CREDITS / 11 PERIODS**

### **AIRFRAME ASSEMBLY, INSPECTION AND WELDING: PART 65**

Aircraft assembly and rigging. Flight control balancing and rigging. Airframe inspection techniques, reporting procedures, and aircraft jacking. Welding techniques, theory, and materials identification. Prerequisites: Permission of Program Director.

**AMT263 / 5 CREDITS / 9 PERIODS**

### **AIRCRAFT TURBINE ENGINES**

Historical development and application of turbine engines. Theory of thrust and the design and environmental factors which influence thrust. Turbine engine troubleshooting, inspection, service, repair and overhaul. Operational characteristics and

engine test techniques on the aircraft and in test cells. Prerequisites: Admission to the program.

**AMT264 / 7 CREDITS / 11 PERIODS**

### **AIRCRAFT RECIPROCATING ENGINES**

Historical development and application of reciprocating engines, theory, design, and operations. Techniques used in troubleshooting, overhaul, inspection, and repair of opposed and radial engines. Prerequisites: Admission to the program.

**AMT264AA / 7 CREDITS / 11 PERIODS**

### **AIRCRAFT RECIPROCATING ENGINES: PART 65**

Historical development and application of reciprocating engines, theory, design, and operations. Techniques used in troubleshooting, overhaul, inspection, and repair of opposed and radial engines. Prerequisites: Permission of Program Director.

**AMT266 / 6 CREDITS / 9 PERIODS**

### **ENGINE FUEL SYSTEMS, FUEL METERING AND INDUCTION SYSTEM**

Inspection, servicing, troubleshooting, overhaul, and repair of aircraft fuel systems and components, fuel metering devices, injection systems, turbochargers, and superchargers. Induction system principles of operation and design. Prerequisites: Admission to the program.

**AMT268 / 6 CREDITS / 12 PERIODS****ENGINE ELECTRICAL, IGNITION AND STARTER SYSTEMS**

Inspect, service, troubleshoot, overhaul, and repair of engine electrical, ignition, starter systems, and components. Prerequisites: Admission to the program.

**AMT268AA / 6 CREDITS / 12 PERIODS****ENGINE ELECTRICAL, IGNITION AND STARTER SYSTEMS: PART 65**

Inspect, service, troubleshoot, overhaul, and repair of engine electrical, ignition, starter systems, and components. Prerequisites: Permission of Program Director.

**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.

**AMT270AA / 5 CREDITS / 8 PERIODS****ENGINE INSTRUMENTS, FIRE PROTECTION AND LUBRICATION, COOLING AND EXHAUST SYSTEMS: PART 65**

Operation, maintenance, servicing, inspection, repair, and troubleshooting of engine instruments, fire detection and extinguishing,

engine lubrication, cooling, and exhaust systems. Prerequisites: Permission of Program Director.

**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.

**ARH - Art Humanities****ARH100 / 3 CREDITS / 3 PERIODS****INTRODUCTION TO ART**

Understanding and enjoyment of art through study of painting, sculpture, architecture design, photography, and decorative arts. Emphasis on contemporary topics and cultural diversity in the arts. Prerequisites: None.

**ARH101 / 3 CREDITS / 3 PERIODS**

 **SUN** ART 1101

**PREHISTORIC THROUGH GOTHIC ART**

History of art from prehistoric through medieval period. Prerequisites: None.

**ARH102 / 3 CREDITS / 3 PERIODS**

 ART 1102

**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.

**ARH112 / 3 CREDITS / 3 PERIODS**

**HISTORY OF MODERN ART**

Development and significant aspects of modern art, including comparisons of relationships in expressionism, abstractions, fantasy, and art since mid-century. Prerequisites: None.

**ARH145 / 3 CREDITS / 3 PERIODS**

**HISTORY OF AMERICAN INDIAN ART**

Survey of American Indian Art from precontact to present. Reviews the impact of these art forms on contemporary American society, other world societies and on the visual arts. Explores characteristics, cultural influences and concerns represented in various art forms past and present. Features field trips to galleries and collections. Prerequisites: None.

**ARH203 / 3 CREDITS / 3 PERIODS**

**ART OF ANCIENT EGYPT**

The art and culture of ancient Egypt from prehistoric through the Greco-Roman period. Prerequisites: None.

**ARH204 / 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.

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**ART - Art**

**ART100 / 1 CREDIT / 2 PERIODS**

**INTRODUCTION TO COMPUTER GRAPHIC ART**

Conceptualization, visualization, and production of art using the computer. Prerequisites: None.

**ART106 / 3 CREDITS / 6 PERIODS**

**GALLERY OPERATIONS**

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

**ART111 / 3 CREDITS / 6 PERIODS**
 ART 1111
**DRAWING I**

Fundamental principles of drawing. Emphasis on composition and facility in objective and expressive representation, using variety of drawing media. Prerequisites: None.

**ART112 / 3 CREDITS / 6 PERIODS**
 ART 1112
**TWO-DIMENSIONAL DESIGN**

Study of fundamental elements and principles of two-dimensional design. Prerequisites: None.

**ART113 / 3 CREDITS / 6 PERIODS****COLOR**

Investigation seeking visual solutions to a variety of problems concerning color in two and three dimensions and modes of color appearances, including light and effects in design and theory of design. Prerequisites: None.

**ART115 / 3 CREDITS / 6 PERIODS**
 ART 1115
**THREE-DIMENSIONAL DESIGN**

Fundamental principles of three-dimensional design. Prerequisites: None.

**ART116 / 3 CREDITS / 6 PERIODS****LIFE DRAWING I**

Use of form, structure and anatomy of draped and undraped human figure to develop

basic principles of sound draftsmanship.

Prerequisites: None.

**ART117 / 3 CREDITS / 6 PERIODS****LIFE DRAWING II**

Further study of form, structure, and anatomy of the draped and undraped human figure with emphasis on composition. Prerequisites: ART116.

**ART122 / 3 CREDITS / 6 PERIODS****DRAWING AND COMPOSITION II**

Emphasis on composition and exploration of drawing media. Prerequisites: ART111.

**ART131 / 3 CREDITS / 6 PERIODS****PHOTOGRAPHY I**

Basic photographic principles and techniques. Basic camera functions and controls. Experience in the image-making process by creating and editing photographs for various display environments. Introduction to the photographic aesthetic and photography's role in society. Prerequisites: None. Course Note: Camera required.

**ART132 / 3 CREDITS / 6 PERIODS****PHOTOGRAPHY II**

Advanced camera and darkroom techniques. Aesthetic awareness with personal expression. Prerequisites: ART131 or permission of instructor.

**ART142 / 3 CREDITS / 6 PERIODS**

**INTRODUCTION TO DIGITAL PHOTOGRAPHY**

Fundamentals of digital photography. Includes camera operations, exposure techniques, introduction to digital output, and theory of digital photography. Prerequisites: None. Course Note: Digital camera required.

**ART143 / 3 CREDITS / 6 PERIODS**

**INTERMEDIATE DIGITAL PHOTOGRAPHY**

Intermediate theory and techniques of digital photography. Aesthetic awareness and personal expression from image capture through intermediate techniques in the digital darkroom. Introduction to high-resolution digital output. Prerequisites: ART142 or permission of instructor.

**ART151 / 3 CREDITS / 6 PERIODS**

**SCULPTURE I**

Exploration of sculptural form and expression in clay, plaster, stone, wood and metal. Prerequisites: or Corequisites: ADA/ART115 or permission of Instructor.

**ART161 / 3 CREDITS / 6 PERIODS**

**CERAMICS I**

Introduction to ceramic materials and techniques of hand construction, decorating, glazing and throwing on potters' wheel. Prerequisites: None.

**ART162 / 3 CREDITS / 6 PERIODS**

**CERAMICS II**

Major emphasis on wheel throwing, glaze making and decorating techniques. Prerequisites: ART161.

**ART165 / 3 CREDITS / 6 PERIODS**

**WATERCOLOR PAINTING I**

Transparent and Gouache watercolor painting. Prerequisites: (ART111 and ART112), or permission of instructor.

**ART166 / 3 CREDITS / 6 PERIODS**

**WATERCOLOR PAINTING II**

Painting in water soluble media. Emphasis on individual techniques and design. Prerequisites: ART165.

**ART167 / 3 CREDITS / 6 PERIODS**

**PAINTING I**

Exploration of technical and expressive possibilities of various painting media in easel painting. Prerequisites: (ART111 and ART112), or permission of instructor.

**ART168 / 3 CREDITS / 6 PERIODS**

**PAINTING II**

Continued refinement of painting skills and investigation of new possibilities in painting. Prerequisites: ART167 or permission of instructor.

**ART169 / 3 CREDITS / 6 PERIODS****TWO-DIMENSIONAL  
COMPUTER DESIGN**

Generation of electronic two-dimensional images and traditional methods of visual problem solving. Understanding of computer techniques and art presentation methods. Prerequisites or Corequisites: ART100 or permission of instructor.

**ART173 / 3 CREDITS / 6 PERIODS****COMPUTER ART**

Introduction to the multiple elements of paint software programs using the microcomputer. Basic foundation in the use of computer techniques including color paint programs for the production of computer images. Use of electronic input and output devices. Prerequisites: ART100, or permission of instructor.

**ART177 / 3 CREDITS / 6 PERIODS****COMPUTER-PHOTOGRAPHIC  
IMAGING**

Introduction to the multiple elements of microcomputer-photographic imaging. Basic foundation in the use of the photographic manipulation of images using software programs. Special attention to aesthetic foundations underlying photographic composition. Prerequisites or Corequisites: ART100 or permission of instructor.

**ART190 / 3 CREDITS / 6 PERIODS****ART OF WEB SITE DESIGN**

Introduction to design production for websites. Layout, typography and presentation style for HTML (Hyper Text Markup Language). Design of mock-ups using digital design software to produce artistic form and content for the Web using Hyper Text Markup Language (HTML), digital text, and graphics. Discussion of color, proportion, typography and Web-specific design principles. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability. Prerequisites: ART100, or permission of Instructor. CIS133DA recommended.

**ART255AA / 1 CREDIT / 1 PERIOD****SELF PROMOTION**

Career goals, presentation of artist, communication skills, keeping files and records, developing self-promotional materials. Prerequisites: None.

**ART255AB / 1 CREDIT / 1 PERIOD****THE PORTFOLIO**

Choosing the right pieces to include, presenting art work, developing the portfolio. Prerequisites: ART182, or ART/MMT185, or ART255AA, or permission of Instructor.

**ART255AC / 1 CREDIT / 1 PERIOD****MARKETING FINE ART**

Exhibitions and galleries, establishing a studio, alternative markets. Prerequisites: ART255AB or permission of Instructor.

**ART270 / 3 CREDITS / 6 PERIODS****INTERMEDIATE COMPUTER PHOTOGRAPHIC IMAGING**

Intermediate microcomputer-based photographic imaging techniques. Refinement of aesthetic awareness and personal expression. Prerequisites: ART177 or (ART177AA and ART177AB).

**ART274 / 3 CREDITS / 6 PERIODS****ADVANCED COMPUTER PHOTOGRAPHIC IMAGING**

Advanced microcomputer-based photographic imaging techniques. Advanced manipulation techniques of photographic images. Continued development of aesthetic awareness and personal expression. Prerequisites: ART270.

**ART289 / 3 CREDITS / 6 PERIODS****COMPUTER ILLUSTRATION**

Introduction to the multiple elements of commercial illustration using the microcomputer. Basic foundation in the use of computer techniques including color paint and draw programs for the production of commercial illustrations for publications and printed matter. Use of input and output

devices. Prerequisites or Corequisites: ART100 or permission of instructor.

**ART290AA / 1 CREDIT / 2 PERIODS****ART290AB / 2 CREDITS / 4 PERIODS****ART290AC / 3 CREDITS / 6 PERIODS****STUDIO ART**

Studio course for art majors allowing continuation in a subject field. Prerequisites: Permission of instructor. Course Notes: ART290AC students must have completed advanced courses in the subject field.

**ART290BC / 3 CREDITS / 6 PERIODS****STUDIO ART: DRAWING**

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

**ART290BC / 3 CREDITS / 6 PERIODS****STUDIO ART: LIFE DRAWING**

Studio course for art majors allowing continuation in a subject field. Prerequisites: ART117 or permission of Instructor. Course Notes: ART290DC may be repeated for credit.

**ART290EC / 3 CREDITS / 6 PERIODS****STUDIO ART: PHOTOGRAPHY**

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



**ART290GC / 3 CREDITS / 6 PERIODS****STUDIO ART: CERAMICS**

Studio course for art majors allowing continuation in a subject field. Prerequisites: ART162 or permission of Instructor. Course Notes: ART290GC may be repeated for credit.

**ART290JC / 3 CREDITS / 6 PERIODS****STUDIO ART: COLOR**

Studio course for art majors allowing continuation in a subject field. Prerequisites: ART113 or permission of Instructor. Course Notes: ART290JC may be repeated for credit.

**ART290MC / 3 CREDITS / 6 PERIODS****STUDIO ART:  
DIGITAL PHOTOGRAPHY**

Studio course for art majors allowing continuation in a subject field. Prerequisites: ART143 or permission of Instructor. Course Notes: ART290MC may be repeated for credit.

**ART290PC / 3 CREDITS / 6 PERIODS****STUDIO ART: PAINTING**

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

**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.

**ART295HA / 1 CREDIT / 2 PERIODS****ART WORKSHOP/SEMINAR:  
MIXED MEDIA**

Advanced level workshop seminar in art disciplines. Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field, or permission of Department/Division Chair.

**ART295LB / 2 CREDITS / 4 PERIODS****ART WORKSHOP/SEMINAR:  
GLAZING TECHNIQUES**

Advanced level workshop seminar in art

disciplines. Prerequisites: Permission of Instructor.

**ART295LC / 3 CREDITS / 6 PERIODS**

**ART WORKSHOP/SEMINAR: GLAZING TECHNIQUES**

Advanced level workshop seminar in art disciplines. Prerequisites: Permission of Instructor.

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**ASB - Anthropology**

**ASB102 / 3 CREDITS / 3 PERIODS**

**CULTURE IN A GLOBALIZING WORLD**

Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture; social, political, and economic systems; religion, aesthetics and language. Prerequisites: None.

**ASB211 / 3 CREDITS / 3 PERIODS**

**WOMEN IN OTHER CULTURES**

Cross-cultural analysis of the economic, social, political, and religious factors that affect women’s status in traditional and modern societies. Prerequisites: None.

**ASB214 / 3 CREDITS / 3 PERIODS**

**MAGIC, WITCHCRAFT, AND HEALING: AN INTRODUCTION TO COMPARATIVE RELIGION**

Origins, elements, and forms of religion; a comparative survey of religious beliefs, myths, rituals and symbolism including magic, witchcraft and healing as practiced in selected

regions of the world; the place of religion in the total culture. Prerequisites: None.

**ASB222 / 3 CREDITS / 3 PERIODS**

**BURIED CITIES AND LOST TRIBES: OLD WORLD**

Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which tend to fragment societies. Examples drawn from Africa, Asia, Europe, the Pacific Islands, and Australia. Prerequisites: None.

**ASB223 / 3 CREDITS / 3 PERIODS**

**BURIED CITIES AND LOST TRIBES: NEW WORLD**

Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces

which fragment societies. Examples drawn from North America, Central America, and South America. Prerequisites: None.

**ASB245 / 3 CREDITS / 3 PERIODS**

**INDIANS OF THE SOUTHWEST**

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

**ASB253 / 3 CREDITS / 3 PERIODS**

**DEATH AND DYING ACROSS CULTURES**

Responses to death and dying in cultures around the world. Explanations for particular cultural responses to death and dying. Examples drawn from ancient and contemporary cultures. Prerequisites: None

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**AST - Astronomy**

**AST111 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO SOLAR SYSTEM ASTRONOMY**

Introduction to astronomy for the non-science major. History of astronomy, properties of light, instruments, the solar system and nearby stars. Prerequisites: MAT092 or equivalent.

**AST112 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO STARS, GALAXIES, AND COSMOLOGY**

Introduction to astronomy for the non-science major. Structure and evolution of stars; star

clusters; galaxies; cosmology. Prerequisites: MAT092 or equivalent.

**AST113 / 1 CREDIT / 3 PERIODS**

**INTRODUCTION TO SOLAR SYSTEM ASTRONOMY LABORATORY**

Astronomical observations and exercises to supplement AST111. Prerequisites or Corequisites: AST111.

**AST114 / 1 CREDIT / 3 PERIODS**

**INTRODUCTION TO STARS, GALAXIES, AND COSMOLOGY LABORATORY**

Astronomical observations and exercises to supplement AST112. Prerequisites or Corequisites: AST112.

**AST294 / 3 CREDIT / 3 PERIODS**

**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.

**AST294AA / 2 CREDITS / 2 PERIODS**

**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.

**AST294AB / 1 CREDIT / 1 PERIOD****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.

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## BIO - Biology

**BIO100 / 4 CREDITS / 6 PERIODS****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.

**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 an 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**

 BIO 1181

**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 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 biology and chemistry is strongly recommended.

**BIO182 / 4 CREDITS / 6 PERIODS**
 BIO 1182
**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**
 BIO 2201
**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 RDG091 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**
 BIO 2202
**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**
 BIO 2205
**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 RDG091 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.

**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)

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## **BHS - Behavioral Health Sciences**

**BHS101 / 1 CREDIT / 2 PERIODS****INTRODUCTION TO ETHICAL COUNSELING ISSUES**

Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of

individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: None.

## **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.

**BPC111AA / 1 CREDIT / 1.7 PERIODS**

### **COMPUTER KEYBOARDING I**

Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols. Prerequisites: None.

**BPC111AB / 1 CREDIT / 1.7 PERIODS**

### **COMPUTER KEYBOARDING II**

Further development of microcomputer keyboard speed and accuracy. Emphasis on touch typing with speed and accuracy

development of numerals as related to preparation and handling of documents. Prerequisites: BPC/OAS111AA or permission of instructor.

**BPC115AA / 1 CREDIT / 2 PERIODS**

### **PERSONAL FINANCE SOFTWARE: QUICKEN - LEVEL I**

Introduction to the basic features of Quicken, a computerized personal finances software program. Prerequisites: None.

**BPC128 / 1 CREDIT / 2 PERIODS**

### **INTRODUCTION TO DESKTOP PUBLISHING**

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

**BPC128AF / 1 CREDIT / 2 PERIODS**

### **INTRODUCTION TO DESKTOP PUBLISHING: MS PUBLISHER**

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



**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 troubleshooting. Helps prepare students for the CompTIA A+ examinations. Prerequisites: CIS105 or permission of Instructor.

**BPC171 / 1 CREDIT / 2 PERIODS****RECYCLING USED COMPUTER TECHNOLOGY**

Use of hardware maintenance knowledge and skills to refurbish used computers. May be repeated for a total of three (3) credits. Prerequisites or Corequisites: 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: BPC170 with grade of C or better, or permission of Instructor.

**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

**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**

 CHM 1130

**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 (MAT092AA and MAT092AB) or MAT093 or (MAT103AA and MAT103AB) or higher or satisfactory score on math placement exam] and [RDG091 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score].

**CHM130AA / 4 CREDIT / 6 PERIODS**

**FUNDAMENTAL CHEMISTRY WITH LAB**

A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. 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 (MAT092AA and MAT092AB) or MAT093 or (MAT103AA and MAT103AB) or higher or satisfactory score on math placement exam] and [RDG091 or

higher or eligibility for CRE101 as indicated by appropriate reading placement test score]. Course Notes: Student may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA.

**CHM130LL / 1 CREDIT / 3 PERIODS**

 CHM 1130

**FUNDAMENTAL CHEMISTRY LABORATORY**

Laboratory experience in support of CHM130. Prerequisites or Corequisites: A grade of "C" or better in CHM130.

**CHM138 / 3 CREDITS / 3 PERIODS**

**CHEMISTRY FOR ALLIED HEALTH**

Elements of fundamental and organic chemistry. Includes the general chemical behavior of inorganic matter and the structure of organic and biochemical systems. Course designed for specific allied health programs at MCCD. May not be applicable to other allied health programs or transferable. Prerequisites: A grade of "C" or better in CHM090, or one year of high school chemistry with a grade of "C" or better, or MAT092, or satisfactory score on placement exam.

**CHM138LL / 1 CREDIT / 3 PERIODS**

**CHEMISTRY FOR ALLIED HEALTH LAB**

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

**CHM151 / 3 CREDITS / 3 PERIODS**
 CHM 1151
**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 (MAT151 or higher level mathematics course). Completion of all prerequisites within the last two years is recommended. Course Notes: Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

**CHM151AA/ 4 CREDIT / 6 PERIODS****GENERAL CHEMISTRY I**

Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry with a grade of C or better taken within the last five years], and completion of MAT151 or higher level mathematics course with grade of C or better. Completion of all prerequisites within the last two years is recommended. Course Notes: Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

**CHM151LL / 1 CREDIT / 3 PERIODS**
 CHM 1151
**GENERAL CHEMISTRY I  
LABORATORY**

Laboratory experience in support of CHM150 or CHM151. Prerequisites or Corequisites: A grade of "C" or better in CHM150 or CHM151. Course Notes: Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

**CHM152 / 3 CREDITS / 3 PERIODS**
 CHM 1152
**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. Completion of prerequisites within the last two years recommended. Course Notes: Completion of CHM152LL required to meet the Natural Science requirement. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.

**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. Completion of prerequisites within the last two years recommended. Course Notes: Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.

**CHM152LL / 1 CREDIT / 3 PERIODS**

 CHM 1152

**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**

 CHM 2230

**FUNDAMENTAL ORGANIC CHEMISTRY**

Chemistry of representative groups of organic compounds, emphasizing biological applications. Prerequisites: (CHM130 and CHM130LL), or (CHM151 and CHM151LL). Completion of (CHM130 and CHM130LL) or (CHM151 and CHM151LL) within the last two years recommended. Course Note: Course content designed to meet the needs of students in agriculture home economics, nursing, pre-physician assistant, and physical education among others.

**CHM230LL / 1 CREDIT / 3 PERIODS**

 CHM 2230

**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**

 CHM 2235

**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). Completion of prerequisites within the last two years recommended.

**CHM235LL / 1 CREDIT / 4 PERIODS**

 CHM 2235

**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**

 CHM 2236

**GENERAL ORGANIC CHEMISTRY IIA**

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. 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. Designed for students in agriculture, dental hygiene, home economics, nursing, and physical therapy. Prerequisites: A grade of "C" or better in (CHM230 and CHM230LL) or (CHM235 and CHM235LL). Completion of prerequisites within the last two years recommended.

**CHM260LL / 1 CREDIT / 3 PERIODS**

**FUNDAMENTAL BIOCHEMISTRY LABORATORY**

Laboratory experience in support of CHM260. Prerequisites or Corerequisites: 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

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**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**

 CIS 1120

**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.

**CIS113DE / 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.

**CIS114DE / 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: CIS105 or permission of instructor.

**CIS119DP / 3 CREDITS / 4 PERIODS****ORACLE: DATABASE ADMINISTRATION**

Basic administrative tasks performed by a database administrator (DBA). Conceptual understanding and hands-on applications of the Oracle database architecture and interaction of its components. Prerequisites: CIS119DO and (CIS126++ or CIS121++ or MST152++), or permission of Instructor.

**CIS120DP / 3 CREDITS / 4 PERIODS****ADOBE ACROBAT PRO: PORTABLE DOCUMENT FORMAT (PDF) FILES**

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. Prerequisites: None.

**CIS120AF / 1 CREDIT / 2 PERIODS****COMPUTER GRAPHICS: ADOBE PHOTOSHOP: LEVEL I**

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

**CIS120DB / 3 CREDITS / 4 PERIODS****COMPUTER GRAPHICS: ADOBE ILLUSTRATOR**

Provides students with the capability 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****ADOBE ANIMATE: DIGITAL ANIMATION**

Focuses on entry-level skill expectations for digital animation using Adobe Animate. Covers basic animation techniques used in the creation, manipulation, and editing of animation graphics. Helps students prepare for the Adobe certifications related to Adobe Animate. Prerequisites: None.



**CIS120DF / 3 CREDITS / 4 PERIODS****COMPUTER GRAPHICS:  
ADOBE PHOTOSHOP**

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

**CIS121AB / 1 CREDIT / 2 PERIODS****MICROSOFT COMMAND LINE  
OPERATIONS**

Use of the Microsoft command line interface: basic concepts, internal and external commands, subdirectories, and editor. Prerequisites: None.

**CIS121AE / 1 CREDIT / 2 PERIODS****WINDOWS OPERATING SYSTEM:  
LEVEL I**

Specific topics include booting and shutting down the computer, navigating the desktop, start button features, taskbar status, and receiving on-line help support. Exploring and managing folders and files, running programs, and learning about Wordpad and Paint application programs. Prerequisites: None.

**CIS121AH / 3 CREDIT / 4 PERIODS****MICROSOFT POWERSHELL/  
COMMAND LINE OPERATIONS**

Day-to-day command line administration tasks of Microsoft Windows. PowerShell used to create scripts to administer Microsoft

windows environment. Prerequisites: None. MST150 recommended but not required.

**CIS126DL / 3 CREDITS / 4 PERIODS****LINUX OPERATING SYSTEM**

Introduction to the Linux Operating system. Develop knowledge and skills required to install, configure and troubleshoot a Linux-based workstation including basic network functions. Learn basic command line and Graphical User Interface (GUI) desktop environment utilities and applications. Fundamental abilities to achieve the entry-level industry certification covered. Prerequisites: None.

**CIS133DA / 3 CREDITS / 4 PERIODS****INTERNET/WEB DEVELOPMENT  
LEVEL I**

Overview of the Internet/WWW and its resources. Hands-on experience with various Internet/WWW communication, resource discovery, and information retrieval tools. Web page development also included. Prerequisites: None.

**CIS150AB / 3 CREDITS / 4 PERIODS****OBJECT-ORIENTED PROGRAMMING  
FUNDAMENTALS**

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



**CIS151 / 3 CREDITS / 4 PERIODS****COMPUTER GAME DEVELOPMENT - LEVEL I**

Introduction to object-oriented game development, game design, and game theory. Use of computer software to demonstrate and teach concepts using an appropriate game development platform to model real-time simulations and create computer games using object oriented tools. Introduction to developing PC games, educational software, and training software using windows based object oriented developments tools. Prerequisites: CIS105 or permission of Instructor.

**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.

**CIS159 / 3 CREDITS / 4 PERIODS****VISUAL BASIC PROGRAMMING I**

Use of the Visual Basic programming language to solve problems using suitable examples from business or other disciplines.

Prerequisites: CIS105, or permission of instructor.

**CIS162AB / 3 CREDITS / 4 PERIODS****C++: LEVEL I**

Introduction to C++ programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: CIS105, or permission of instructor.

**CIS162AD / 3 CREDITS / 4 PERIODS****C#: LEVEL I**

Introduction to C# programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: CIS105, or permission of instructor.

**CIS163AA / 3 CREDITS / 4 PERIODS****JAVA PROGRAMMING: LEVEL I**

Introduction to Java programming. Includes features needed to construct Java Applets, Java Applications, control structures, methods, arrays, character and string manipulation, graphics, and object-oriented programming. Prerequisites: CIS105.

**CIS164AB / 3 CREDITS / 4 PERIODS****ORACLE: PL/SQL PROGRAMMING**

Writing PL/SQL procedures, functions, and packages. Creating and managing PL/SQL program units and database triggers in Oracle development environment. Managing dependencies and manipulating large objects. Prerequisites: CIS119DO, or permission of the instructor.

**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 Web sites, including client-side script and Common Gateway Interface (CGI) scripting. Covers Web-based transaction processing and use of databases in conjunction with the Web. Includes security issues. Prerequisites: CIS133CA or CIS133DA or permission of instructor.

**CIS166AA / 3 CREDITS / 4 PERIODS****INTRODUCTION TO JAVASCRIPTING**

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 LOCAL AREA NETWORKS**

Overview of local area networks. Emphasis on the elements of a local area network, current issues and products, and use of a local area network. Includes terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Prerequisites: CIS105, or permission of instructor.

**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.

**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.

**CIS217AM / 3 CREDITS / 5 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.

**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.

**CIS235 / 3 CREDITS / 4 PERIODS****E-COMMERCE**

Introduction to Electronic Commerce on the Internet. Designing an electronic storefront including web page content and development, e-commerce site marketing, advertisement, legal and security considerations, credit card and other debit transaction covered. Also includes current issues in e-commerce. Prerequisites: CIS133CA, or CIS133DA, or permission of instructor.

**CIS238DL / 3 CREDITS / 4 PERIODS****LINUX SYSTEM ADMINISTRATION**

Managing Linux Operating Systems including sophisticated manipulation of file structures, backup systems, printing processes,

troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, kernel customization, and system resource control. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS126AL, CIS126BL and CIS126CL; or CIS126DL or Permission of instructor.

**CIS239DL / 3 CREDITS / 4 PERIODS**

### LINUX SHELL SCRIPTING

Linux Shell Scripting syntax and methods including the automation of system tasks as well as interpreted user-level programming. Course includes the Linux Borne Again Shell (BASH) as well as a variety of industry competitors. Prerequisites: CIS126DL or permission of Instructor.

**CIS240DL / 3 CREDITS / 4 PERIODS**

### LINUX NETWORK ADMINISTRATION

In depth networking based on Linux servers and the Transmission Control Protocol/ Internet Protocol (TCP/IP) protocol suite. Integrating Linux servers and workstations into a network environment with multi-platform network operating systems including a variety of open-standard and proprietary protocols. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and

LPIC. Prerequisites: CIS126AL, CIS126BL and CIS126CL; or CIS126DL or instructor approval.

**CIS250 / 3 CREDITS / 4 PERIODS**

### MANAGEMENT OF INFORMATION SYSTEMS

The study of business information systems and its management, communication, e-business strategies, emerging technologies, database concepts, and project management. Overview of systems analysis and design. Learn about the competitive and strategic uses of information systems and how they are transforming organizations and their management. Prerequisites: CIS105.

**CIS259 / 3 CREDITS / 4 PERIODS**

### VISUAL BASIC PROGRAMMING II

Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines. Prerequisites: CIS159 or permission of instructor.

**CIS263AA / 3 CREDITS / 4 PERIODS**

### JAVA PROGRAMMING: LEVEL II

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

**CIS271DL / 3 CREDITS / 4 PERIODS****LINUX SECURITY**

Implementing in-depth security methods and techniques in a Linux-based network environment. Utilize programs, utilities and configuration techniques to provide user-level, file system, and network security. Gain knowledge in a variety of security cracking techniques and how to guard against them. In all aspects of security, the standard of practicing professional ethics seriously emphasized. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS240DL or Permission of Instructor.

**CIS276DA / 3 CREDITS / 4 PERIODS****MYSQL DATABASE**

A broad overview of the MySQL database. Includes Structured Query Language (SQL) instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install MySQL, model and create new databases, manage users, authentication, and stored procedures, and develop backup/restore strategies. Prerequisites: CIS105 or permission of instructor.

**CIS280 / 3 CREDITS / 4 PERIODS****CIS280AA / 1 CREDIT / 2 PERIODS****CURRENT TOPICS IN COMPUTING**

Critical inquiry of current topics in computing. Application of industry trends

to solve problems and/or investigate issues. Prerequisites: None.

**CIS290AA / 1 CREDIT / 6 PERIODS****CIS290AB / 2 CREDITS / 12 PERIODS****CIS290AC / 3 CREDITS / 18 PERIODS****COMPUTER INFORMATION SYSTEMS INTERNSHIP**

Work experience in business or industry. Prerequisites: Permission of instructor.

**CIS296WA / 1 CREDIT / 5 PERIODS****CIS296WB / 2 CREDITS / 10 PERIODS****CIS296WC / 3 CREDITS / 15 PERIODS****COOPERATIVE EDUCATION**

Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.

**CNT - Cisco Network Technology****CNT140AA / 4 CREDITS / 6 PERIODS****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 fundamentals of Ethernet concepts, media, and operations are introduced. Students will build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Preparation for Cisco certification examination. Prerequisites: None.

**CNT150AA / 4 CREDITS / 6 PERIODS**

### CISCO - ROUTING AND SWITCHING ESSENTIALS

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. Prerequisites: CNT140AA or permission of Instructor.

**CNT160AA / 4 CREDITS / 6 PERIODS**

### SCALING NETWORKS

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. Prerequisites: CNT150AA or permission of Instructor.

**CNT170AA / 4 CREDITS / 6 PERIODS**

### CISCO - CONNECTING NETWORKS

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. Prerequisites: CNT160AA or permission of Instructor.

**CNT185 / 4 CREDITS / 5 PERIODS**

### CISCO NETWORK SECURITY

Applications of Cisco Networking technologies in designing and implementing security solutions to reduce risk of revenue loss and vulnerability. Hands-on experience and skills in security policy design and management, security technologies, products and solutions, 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.

**CNT200 / 4 CREDITS / 6 PERIODS**

### CCNP ROUTE: IMPLEMENTING CISCO IP ROUTING

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

**CNT202 / 4 CREDITS / 5 PERIODS**

### CISCO SECURE FIREWALL APPLIANCE CONFIGURATION

Applications of Cisco Networking

technologies in designing and implementing security solutions to reduce risk of revenue loss and vulnerability. Hands-on experience and skills in security policy design and management, security technologies, products and solutions, secure firewall design, installation, configuration and maintenance, Authentication, Authorization, and Accounting (AAA), Failover, and Virtual Private Network (VPN) implementation using firewalls. Prerequisites: 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: CNT170AA, or CCNA industry certification, or permission of Instructor. Corequisites: CNT200. Course Notes: Preparation for Cisco Certified Network Professional (CCNP) exam.

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**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.

For the most current information regarding course descriptions, log on to [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

**COM100 / 3 CREDITS / 3 PERIODS**

 COM 1100

**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**

 COM 1110

**INTERPERSONAL COMMUNICATION**

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

**COM207 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO COMMUNICATION INQUIRY**

Overview of theory and methodological practice in communication with particular attention to scholarly writing skills. Emphasis on development of critical thinking skills through active participation in the research process. Prerequisites: ENG101 or ENG107 or equivalent, and COM100 or equivalent, or permission of instructor. Course Note: Recommended for the communication major.

**COM225 / 3 CREDITS / 3 PERIODS****PUBLIC SPEAKING**

Designed to enhance the student's ability to present public speeches confidently and competently. Also designed to improve information literacy and critical thinking skills. Prerequisites: ENG101 or ENG107, or equivalent.

**COM230 / 3 CREDITS / 3 PERIODS**

 **SUN** COM 2271

**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 CREDITS / 3 PERIODS****INTRODUCTION TO ORGANIZATIONAL COMMUNICATION**

Introduction to the study of communication in organizations including identification of variables, roles and patterns influencing communication in organizations. Prerequisites: None.

**COM259 / 3 CREDITS / 3 PERIODS****COMMUNICATION IN BUSINESS AND PROFESSIONS**

Interpersonal, group, and public communication in business and professional organizations. Emphasis on oral communication. Prerequisites: ENG101, or ENG107, or equivalent.

**COM263 / 3 CREDITS / 3 PERIODS****ELEMENTS OF INTERCULTURAL COMMUNICATION**

Basic concepts, principles, and skills for improving oral communication between persons from different minority, racial, ethnic, and cultural backgrounds. Prerequisites: None

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**CPD - Counseling and Personal Development**

**CPD101 / 2 CREDITS / 2 PERIODS****PERSONAL DEVELOPMENT**

Designed to assist students in developing confidence in making personal, social, and educational decisions. Examination and assessment of individual needs, interests, abilities and values to develop and strengthen interpersonal communication, enhance transitional skills and identify realistic life planning goals. Prerequisites: None.

**CPD102AB / 2 CREDITS / 2 PERIODS****CAREER EXPLORATION**

Designed to assist students make informed career decisions. Focuses on current occupational trends and outlook. 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 CREDITS / 2 PERIODS****HUMAN SEXUALITY**

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

**CPD102AH / 2 CREDITS / 2 PERIODS****STRESS MANAGEMENT**

Reviews the sources of stress, the physiological effects and the psychological impact of stress on the individual. Provides strategies to reduce stress. Prerequisites: None.

**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 process of career/life planning through self-awareness and understanding. Focus on specific skill development such as dealing with

change, decision making, goal setting and understanding lifestyles. Provides opportunity to evaluate interests, skills and values. Emphasis on the development of a comprehensive career search process which includes current occupational information, specific tools for researching the job market and acquiring employment. Prerequisites: None.

**CPD150 / 3 CREDITS / 3 PERIODS****STRATEGIES FOR COLLEGE SUCCESS**

Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning. Prerequisites: None.

**CPD150AA / 1 CREDIT / 1 PERIOD****COLLEGE ORIENTATION & PERSONAL GROWTH**

Emphasis on increasing student success through college orientation, identification of learning style and the use of time management, goal-setting, and interpersonal communication strategies. Prerequisites: None.

**CPD150AB / 1 CREDIT / 1 PERIOD****STUDY SKILLS DEVELOPMENT**

Emphasis on increasing student success through the use of study strategies including materials organization, note-taking, reading, test-taking, memory, and critical and creative thinking. Prerequisites: None.

**CPD150AC / 1 CREDIT / 1 PERIOD**

### EDUCATIONAL AND CAREER PLANNING

Emphasis on increasing student success through educational and career planning.

Prerequisites: None.

**CPD160 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO MULTICULTURALISM

Examination of the multiple cultures and subcultures within the contemporary United States. Personal exploration of awareness and appreciation of multiculturalism. Activities for experiencing diverse cultural perspectives.

Critical thinking skills for recognizing, analyzing, and mediating cultural and psychological factors impacting conflict and accord between diverse cultures through written and oral discourse. Prerequisites: ENG101, or ENG107, or permission of Instructor.

### CRE - Critical Reading

**CRE101 / 3 CREDITS / 3 PERIODS**

### COLLEGE CRITICAL READING 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 (appropriate reading placement test score or a grade of "C" or better in RDG091 or RDG095 or RDG100 or RDG111 or RDG112 or RDG113 or permission of Instructor).

ALSO SEE READING (RDG).

### CRW - Creative Writing

**CRW150 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO CREATIVE WRITING

Introduces the student to elements and techniques of creative writing in a variety of genres; teaches terminology and concepts needed for successful participation in writing workshops; facilitates writing practice and evaluation; offers individual guidance on the student's development as a writer.

Prerequisites: None.

**CRW160 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO WRITING POETRY

Prewriting (invention and discovery); writing; analyzing and evaluating (in workshop); and revising to practice manipulating various elements of poetry, critique one's own and the poetry of others, and produce a portfolio of finished, marketable poems. Prerequisites: None. CRW150 recommended but not required.

**CRW170 / 3 CREDITS / 3 PERIODS****INTRODUCTION TO WRITING FICTION**

Practice in writing fiction through a process of prewriting (invention and discovery), writing, analysis and evaluation (in workshop), and revision; practice in manipulating various elements and forms of fiction. Prerequisites: None. CRW150 recommended but not required.

**CRW190 / 3 CREDITS / 3 PERIODS****INTRODUCTION TO SCREENWRITING**

Overview of screenwriting elements; introduction to screenwriting techniques. Prerequisites: None. CRW150 recommended but not required.

**CRW200 / 1 CREDIT / 1 PERIOD****READINGS FOR WRITERS**

Close analysis and interpretation of selected literary texts designed to strengthen the students' own writing by extending their familiarity with the genre in which they write and their knowledge of selected literary elements. One-on-one meetings between student and instructor. Prerequisites: CRW150, or permission of Instructor. Course Notes: CRW200 may be repeated for a total of six (6) credits.

**CRW201 / 1 CREDIT / 1 PERIOD****PORTFOLIO**

Close analysis of the creative writing portfolio culminating in selection, revision, editing, and

compiling of the student's own literary work in a portfolio. Students meet individually with instructor to choose, prepare, and compile their work. Prerequisites: (Acceptance into Creative Writing Certificate Program and completion of at least nine (9) credit hours in creative writing (CRW)), or permission of Program Director. Course Notes: CRW201 may be repeated for a total of two (2) credit hours.

**CRW270 / 3 CREDITS / 3 PERIODS****INTERMEDIATE FICTION WRITING**

Writing original short stories; analysis of works of fiction; concentration on revising students' fiction through intensive workshopping. Prerequisites: CRW170.

**CRW272 / 3 CREDITS / 3 PERIODS****PLANNING AND STRUCTURING THE NOVEL**

Focus on planning, structuring, and beginning a novel; prewriting, writing, analysis, evaluation, and revision of novel plans and excerpts. Prerequisites: CRW150 or permission of instructor.

**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.

## CSC - Computer Science

**CSC100 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO COMPUTER SCIENCE (C++)

Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: MAT120, or MAT121, or MAT122.

**CSC100AA / 3 CREDITS / 4 PERIODS**

### INTRODUCTION TO COMPUTER SCIENCE (C++)

Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: MAT120, or MAT121, or MAT122.

**CSC110AA / 3 CREDITS / 4 PERIODS**

### INTRODUCTION TO COMPUTER SCIENCE (JAVA)

Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering Majors. Prerequisites: MAT120 or MAT121 or MAT122.

**CSC110AB / 4 CREDITS / 4 PERIODS**

### INTRODUCTION TO COMPUTER SCIENCE (JAVA)

Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering Majors. Prerequisites: MAT120 or MAT121 or MAT122

**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.



**CSC120 / 4 CREDITS / 6 PERIODS****DIGITAL DESIGN FUNDAMENTALS**

Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, ROMs, PLDs, synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: CSC100, or CSC110, or CSC181, or ELE181, or NET181, or equivalent, or permission of instructor.

**CSC180AB / 4 CREDITS / 4 PERIODS****COMPUTER LITERACY**

Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e-mail and text files, and use of Internet browsers. Prerequisites: None.

**CSC181 / 3 CREDITS / 3 PERIODS****APPLIED PROBLEM SOLVING WITH VISUAL BASIC**

Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.

**CSC181AA / 3 CREDITS / 4 PERIODS****APPLIED PROBLEM SOLVING WITH VISUAL BASIC**

Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.

**CSC182AA / 3 CREDITS / 4 PERIODS****PRINCIPLES OF PROGRAMMING WITH C#.NET**

Introduction to object-oriented program analysis, design, and development using Visual C#.NET. Includes general concepts, data types, expressions, flow control, methods, classes, arrays, event-driven models, Windows applications, and Web applications. Prerequisites: None.

**CSC220 / 4 CREDITS / 5 PERIODS****PROGRAMMING FOR COMPUTER ENGINEERING**

Introduction to procedural programming (C/C++) and hardware description language (VHDL). Prerequisites: ((EEE120 or CSC120) and CSC205) or permission of Instructor.

**CSC225 / 4 CREDITS / 5 PERIODS****ASSEMBLY LANGUAGE PROGRAMMING ON MOTOROLA MICROPROCESSORS**

Assembly language programming including input/output programming and exception/interrupt handling. Register-level computer



organization, I/O interfaces, assemblers, and linkers. Macintosh-based assignments. Prerequisites: [(CSC100 or CSC110 or CSC200) and CSC/EEE120] or permission of instructor.

**CSC230 / 4 CREDITS / 5 PERIODS**

### COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE

Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: [(CSC100 or CSC110) and CSC/EEE120], or permission of instructor.

**CSC240 / 3 CREDITS / 5 PERIODS**

### INTRODUCTION TO DIFFERENT PROGRAMMING LANGUAGES

Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages. Prerequisites: CSC205 or permission of instructor.

## DAH - Dance Humanities

**DAH100 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO DANCE

Overview of the field of dance focusing on origins, historical development, and cultural

characteristics of the various styles of dance. Prerequisites: None.

**DAH190 / 1 CREDIT / 1 PERIOD**

### DISCOVERING DANCE CAREERS

An overview of the professional opportunities available in dance and dance related fields. Prerequisites: None.

**DAH201 / 3 CREDITS / 3 PERIODS**

### WORLD DANCE STUDIES

Exploration, analysis, synthesis, and evaluation of the role of dance in various cultures around the world. Prerequisites: None. DAH100 strongly suggested but not required.

## DAN - Dance

**DAN102AA / 1 CREDIT / 3 PERIODS**

### HIP HOP I

Theory and practice of Hip Hop dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN102AA may be repeated for credit.

**DAN102AB / 1 CREDIT / 3 PERIODS**

### HIP HOP II

Theory and practice of Hip Hop dance at the advanced beginning level. Development of movement quality and performance skills. Prerequisites: DAN102AA or permission of

Instructor. Course Notes: DAN102AB may be repeated for credit.

**DAN115 / 1 CREDIT / 3 PERIODS**

**DANCE TRENDS**

Theory and practice of current social dance trends. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN115 may be repeated for credit.

**DAN120AA / 1 CREDIT / 3 PERIODS**

**WORLD DANCE: AFRICAN DANCE**

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

**DAN120AB / 1 CREDIT / 3 PERIODS**

**WORLD DANCE: FLAMENCO**

Theory and practice of Flamenco. Development of movement quality and performance skills, individually, with a partner or in a group setting. Prerequisites: None. Course Notes: DAN120AB may be repeated for credit.

**DAN120AC / 1 CREDIT / 3 PERIODS**

**WORLD DANCE: IRISH DANCE**

Theory and practice of Irish Dance. Development of movement quality and performance skills, individually or in a group

setting. Prerequisites: None. Course Notes: DAN120AC may be repeated for credit.

**DAN120AD / 1 CREDIT / 3 PERIODS**

**WORLD DANCE: MEXICAN FOLKLORIC DANCE**

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

**DAN120AE / 1 CREDIT / 3 PERIODS**

**WORLD DANCE: MIDDLE EASTERN DANCE**

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

**DAN120AF / 1 CREDIT / 3 PERIODS**

**WORLD DANCE: AFRO-BRAZILIAN DANCE**

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

**DAN120AG / 1 CREDIT / 3 PERIODS**

**WORLD DANCE: EAST INDIAN DANCE**

Theory and practice of East Indian dance. Development of movement quality and

performance skills. Prerequisites: None.  
Course Notes: DAN120AG may be repeated for credit.

**DAN120AH / 1 CREDIT / 3 PERIODS**

**WORLD DANCE:  
NATIVE AMERICAN DANCE**

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

**DAN120AI / 1 CREDIT / 3 PERIODS**

**WORLD DANCE:  
EUROPEAN FOLK DANCE**

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

**DAN120AJ / 1 CREDIT / 3 PERIODS**

**WORLD DANCE: ASIAN DANCE FORMS**

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

**DAN120AK / 1 CREDIT / 3 PERIODS**

**WORLD DANCE: CAPOEIRA**

Theory and practice of Capoeira.  
Development of movement quality and

performance skills. Prerequisites: None.  
Course Notes: DAN120AK may be repeated for credit.

**DAN129 / 1 CREDIT / 3 PERIODS**

**MUSICAL THEATRE DANCE I**

Introduction to the theory and practice of musical theatre dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None.  
Course Notes: DAN129 may be repeated for credit.

**DAN131 / 1 CREDIT / 3 PERIODS**

**BALLET I**

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.

**DAN132 / 1 CREDIT / 3 PERIODS**

**MODERN DANCE I**

Introduction to the theory and practice of modern dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None.  
Course Notes: DAN132 may be repeated for credit.

**DAN132PA / .5 CREDITS / 1.5 PERIODS**

**MODERN DANCE BASIC LEVEL**

Dance training for personal skill development and interest. Introduction to the theory and

practice of modern dance at the basic level. Prerequisites: None. Prior dance experience suggested but not required. Course Notes: DAN132PA may be repeated for credit. Course is not intended for dance majors.

**DAN133 / 1 CREDIT / 3 PERIODS**

**JAZZ DANCE I**

Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills. Prerequisites: Prerequisites: None. Corequisites: DAN138 for dance majors. Course Notes: DAN133 may be repeated for credit.

**DAN134 / 1 CREDIT / 3 PERIODS**

**BALLET II**

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.

**DAN135 / 1 CREDIT / 3 PERIODS**

**MODERN DANCE II**

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.

**DAN136 / 1 CREDIT / 3 PERIODS**

**JAZZ DANCE II**

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.

**DAN138 / 1 CREDIT / 1 PERIOD**

**DANCE SEMINAR I**

Level I scientific evaluation and in-depth discussion of the theory and practice of work done in dance technique class. Prerequisites: None. Corequisites: Any ballet, modern dance, or modern jazz dance technique course.

**DAN140 / 1 CREDIT / 3 PERIODS**

**TAP DANCE I**

An introduction to the theory and practice of tap dance. Prerequisites: None. Course Notes: DAN140 may be repeated for credit.

**DAN141 / 1 CREDIT / 3 PERIODS**

**DANCE WORKSHOP**

An intensive experience in the process of choreography, performance, and production elements. Prerequisites: None. Course Notes: DAN141 may be repeated for credit.

**DAN150 / 1 CREDIT / 3 PERIODS****DANCE PERFORMANCE I**

An introduction to the process and practice of dance performance. Prerequisites: None. Course Notes: DAN150 may be repeated for credit.

**DAN155 / 1 CREDIT / 3 PERIODS****DANCE PERFORMANCE II**

Continued study of the process and practice of dance performance at a level II. Prerequisites: DAN150 or permission of Instructor. 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.

**DAN164 / 1 CREDIT / 3 PERIODS****IMPROVISATION**

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

**DAN210 / 3 CREDITS / 3 PERIODS****DANCE PRODUCTION I**

Introduction to the elements of light, sound, and scenery as they relate to the art of dance. Prerequisites: None.

**DAN211 / 3 CREDITS / 3 PERIODS****DANCE PRODUCTION II**

Introduction to the theory and practice of

makeup and costuming as they relate to dance. Prerequisites: None.

**DAN221 / 3 CREDITS / 3 PERIODS****RHYTHMIC AWARENESS I**

Exploration of rhythm in dance performance, choreography and pedagogy. Emphasis on the basic understanding of rhythm and cultivating awareness of rhythm in everyday life. Prerequisites: None.

**DAN222 / 3 CREDITS / 3 PERIODS****RHYTHMIC AWARENESS II**

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.

**DAN231 / 1 CREDIT / 3 PERIODS****BALLET III**

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

**DAN232 / 1 CREDIT / 3 PERIODS****MODERN DANCE III**

Theory and practice of modern dance at the beginning intermediate level. Development

of movement quality and performance skills. Prerequisites: DAN135 or permission of Instructor. Course Notes: DAN232 may be repeated for credit.

**DAN232AA / 2 CREDITS / 5 PERIODS**

**MODERN DANCE III: INTENSIVE**

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

**DAN233 / 1 CREDIT / 3 PERIODS**

**JAZZ DANCE III**

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.

**DAN234 / 1 CREDIT / 3 PERIODS**

**BALLET IV**

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

**DAN235 / 1 CREDIT / 3 PERIODS**

**MODERN DANCE IV**

Theory and practice of modern dance at the intermediate level. Development of movement quality and performance skills. Prerequisites: DAN232 or permission of Instructor. Course Note: DAN235 may be repeated for credit.

**DAN235AA / 2 CREDITS / 5 PERIODS**

**MODERN DANCE IV: INTENSIVE**

Theory and intensive practice of modern dance at the advanced intermediate level. Development of movement quality and performance skills. Prerequisites: DAN232AA or permission of Instructor. Course Notes: DAN235AA may be repeated for credit.

**DAN236 / 1 CREDIT / 3 PERIODS**

**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.

**DAN238 / 1 CREDIT / 1 PERIOD**

**DANCE SEMINAR II**

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

**DAN264 / 3 CREDITS / 3 PERIODS****CHOREOGRAPHY I**

Study of basic dance choreography to include construction of a phrase, structure and form in a composition, and the basic elements of time, space and energy. Prerequisites: None.

**DAN265 / 3 CREDITS / 3 PERIODS****CHOREOGRAPHY II**

Exploration of 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.

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## 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: Two years of high school algebra or MAT122 or departmental approval. Corequisites: MAT151 or MAT182 or MAT187.

**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: (ECE102 or ECE102AA) and (high school physics, or PHY111, or PHY111AA).

**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: ECE103, (MAT230 or MAT231), and (PHY115 or PHY121). Corequisites: MAT241.

#### **ECE212 / 3 CREDITS / 5 PERIODS**

### **ENGINEERING MECHANICS-DYNAMICS**

Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles. Prerequisites: ECE211 and (MAT240 or MAT241).

#### **ECE214 / 4 CREDITS / 6 PERIODS**

### **ENGINEERING MECHANICS**

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

#### **ECE215 / 3 CREDITS / 5 PERIODS**

### **MECHANICS OF MATERIALS**

Designed to provide students with a strong fundamental foundation in the mechanics of solids. Includes the concepts of stress and strain applied to the analysis and design of members subjected to axial and torsional loads and members subjected to shear and bending, applications and transformation of plane stress and plane strain, deformation of beams, and elastic buckling of columns. Prerequisites:[ECE214 or (ECE211 and ECE212)] and (MAT262 or MAT276 or MAT277).

#### **ECE216 / 2 CREDITS / 2 PERIODS**

### **COMPUTER-AIDED ENGINEERING**

Introduction to engineering graphics, including tolerancing and fasteners, as well as creation and use of engineering drawings.

Prerequisites or Corequisites: ECE214 or (ECE211 and ECE212). Corequisites: ECE216LL.

**ECE216LL / 1 CREDITS / 2 PERIODS**

**COMPUTER-AIDED ENGINEERING LABORATORY**

Laboratory experience in support of ECE216. Prerequisites or Corequisites: ECE214 or (ECE211 and ECE212). Corequisites: ECE216.

**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**

 ECN 2201

### 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**

 ECN 2202

### MICROECONOMIC PRINCIPLES

Microeconomic analysis including the theory of consumer choice, price determination, resource allocation and income distribution. Includes non-competitive market structures such as monopoly and oligopoly; and the effects of government regulation. Prerequisites: None.

**ECN213 / 3 CREDITS / 3 PERIODS**

### THE WORLD ECONOMY

An analysis of the economic interdependence among nations, with emphasis on international trade and finance. Consideration given to the role and function of the multinational enterprise. Prerequisites: None.

**ECN263 / 3 CREDITS / 3 PERIODS**

### THE ECONOMICS OF NATURAL RESOURCES, POPULATION AND THE ENVIRONMENT

Applies economic analysis to both the causes and possible remedies of the problems of environmental deterioration and natural resource depletion. Includes discussion of the economic problems of urban communities and the relationship between population and economic growth and the depletion of natural resources and environmental pollution.

Prerequisites: ECN100, or ECN211, or ECN212

## EDU - Education

**EDU220 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO SERVING ENGLISH LANGUAGE LEARNERS (ELL)

Rationale for and current educational and legal issues for serving English Language Learners (ELL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), English as a Second Language (ESL) and bilingual/Dual Language Immersion (DLI). Includes SEI, ESL, and bilingual/DLI strategies. Prerequisites: None. Course Notes: Approved school-based practicum is required. EDU220 incorporates the 45-clock hour curricular framework for SEI endorsement through the Arizona Department of Education.

**EDU221 / 3 CREDITS / 3 PERIODS****INTRODUCTION TO EDUCATION**

Overview of the historical, political, economic, social, and philosophical factors that influence education and make it so complex. Opportunity for students to assess their interest and suitability for teaching.

Prerequisites: None. Course Note: Requires minimum of 30 hours of field experience in elementary or secondary classroom environment.

**EDU222 / 3 CREDITS / 3 PERIODS****INTRODUCTION TO THE EXCEPTIONAL LEARNER**

Overview of the exceptional learner with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mild disabilities, severe disabilities, emotional and behavioral disorders, intellectual disabilities, and students who are gifted.

Prerequisites: None. EDU222 requires an approved field experience.

**EDU230 / 3 CREDITS / 3 PERIODS****CULTURAL DIVERSITY IN EDUCATION**

Examination of the relationship of cultural values to the formation of self-concept and learning styles. Examination of the role of prejudice, stereotyping and cultural incompatibilities in education. Emphasis on teacher preparation (preservice and/or inservice) to offer an equal educational

opportunity to students of all cultural groups. Prerequisites: None.

**EDU233 / 3 CREDITS / 3 PERIODS****STRUCTURED ENGLISH IMMERSION, ENGLISH AS A SECOND LANGUAGE, AND BILINGUAL TEACHING METHODS**

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

**EDU236 / 3 CREDITS / 3 PERIODS****CLASSROOM RELATIONSHIPS**

Analysis of K-12 classroom interactions, classroom environment, and classroom

management skills from a teacher's point of view. Focus on classroom as a multidimensional environment in which principles of classroom design, communication, management, and resources determine effectiveness. Prerequisites: None. EDU221 suggested but not required. Course Note: Requires a 20-hour field experience in a K-12 classroom.

**EDU250 / 3 CREDITS / 3 PERIODS**

### OVERVIEW OF THE COMMUNITY COLLEGES

The history, functions, organization and current issues in the community/junior college with emphasis on the Arizona community colleges. Prerequisites: None.

**EDU291 / 3 CREDITS / 3 PERIODS**

### CHILDREN'S LITERATURE

Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children. Prerequisites: None.

## EED - Early Education

**EED205 / 3 CREDITS / 3 PERIODS**

### THE DEVELOPING CHILD: PRENATAL TO AGE EIGHT

Examination of process of physical, social, emotional, cognitive, language, and literacy development of typical and atypical young children; prenatal through age eight.

Includes practical application and fieldwork experience. Prerequisites: None.

**EED212 / 3 CREDITS / 3 PERIODS**

### GUIDANCE, MANAGEMENT AND THE ENVIRONMENT

Principles for guiding young children in early care and education environments. Exploration of guidance, management, and how the environment impacts the lives of young children. Includes observation of classrooms of children ages birth to age eight. Prerequisites: None.

**EED215 / 3 CREDITS / 3 PERIODS**

### EARLY LEARNING: HEALTH, SAFETY, NUTRITION AND FITNESS

Consideration of public health issues and safety procedures within early childhood settings, serving young children birth to age eight. Overview of nutritional needs and issues of physical fitness and well-being in young children. Includes field experiences. Prerequisites: None.

**EED220 / 3 CREDITS / 3 PERIODS**

### CHILD, FAMILY, COMMUNITY AND CULTURE

Examines family, community and cultural influences on development of the young child (birth to age eight). Considers trends and threats to attachment, relationships and cultural identity. Includes social and emotional experiences and their impact on the developing brain. Prerequisites: None.

**EED261 / 1 CREDIT / 1 PERIOD****EARLY CHILDHOOD  
PRESCHOOL INTERNSHIP**

Work experience with preschoolers in early care and education settings. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: EED261 may be repeated for a total of six (6) credit hours.

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## **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: CSC100, or CSC110 or CSC181, or ELE181, or NET181, or equivalent, or permission of instructor.

**EEE202 / 5 CREDITS / 7 PERIODS****CIRCUITS AND DEVICES**

Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks. Prerequisites: ECE103 or ECE103AB. Corequisites: (MAT276 or MAT277) and (PHY116 or PHY131).

**EEE220 / 4 CREDITS / 5 PERIODS****PROGRAMMING FOR  
COMPUTER ENGINEERING**

Introduction to procedural programming (C/C++) and hardware description language (VHDL). Prerequisites: ((EEE120 or CSC120) and CSC205) or permission of Instructor.

**EEE230 / 4 CREDITS / 5 PERIODS****COMPUTER ORGANIZATION AND  
ASSEMBLY LANGUAGE**

Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: [(CSC100 or CSC110) and CSC/EEE120], or permission of instructor.

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## **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: ELE105 or 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 / .45 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.

**EMT104 / 9 CREDITS / 11.4 PERIODS**

### EMERGENCY MEDICAL TECHNOLOGY

Techniques of Techniques of emergency medical care in accordance with national and state curriculum. Study of the human body, patient assessment, treatment of medically or traumatically compromised patients, special hazards, and medical operations, IV monitoring, patient-assisted medication administration, automated external defibrillators (AEDs), and blood-glucose monitoring. Prerequisites: EMT101 or a current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and (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 are required to complete additional hours in a competency-based clinical, vehicular, and/or scenario based experience. This may be completed through EMT104AB or program director-approved rotation. Students must meet National Registry of EMTs requirements for certification. Additional information available at [nremt.org](http://nremt.org). EMT/FSC104 may be repeated for credit.

**EMT104AB / .5 CREDITS / .5 PERIODS**

### APPLIED PRACTICAL STUDIES FOR EMERGENCY MEDICAL TECHNOLOGY

Simulation of actual emergency responses,

with practical application of techniques and skills covered in EMT curricula. Scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum. Practical application of anatomy, physiology, patient assessment, and treatment of medically or traumatically compromised patients, special hazards and medical operations. Also includes patient-assisted medication administration, semi-automatic external defibrillator and blood glucose monitoring. Students function in outside, scenario based environment.

Prerequisites: None. Corequisites: EMT/FSC104, or EMT200, or (EMT272AA, EMT272AB, and EMT272LL), or EMT273, or certified EMT Basic, IEMT, or Paramedic in the State of Arizona, or permission of Instructor. Course Notes: EMT/FSC104AB may be repeated for credit.

**EMT200 / 2 CREDITS / 2.7 PERIODS**

### REFRESHER COURSE FOR CERTIFIED EMERGENCY MEDICAL TECHNICIANS

Designed to meet National and Arizona Department of Health Services (A-DHS) recertification for EMTs. Enhances the knowledge base of the Emergency Medical Technician (EMT) and reinforces basic skills competencies. Prerequisites: Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer or permission of Instructor. Course Notes: EMT200 may be repeated for credit.

## ENG - English

**ENG081 / 3 CREDITS / 3 PERIODS**

### PREPARATORY ACADEMIC WRITING II

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 a grade of "C" or better in ENG071 or ESL077, or permission of Department or Division.

**ENG091 / 3 CREDITS / 3 PERIODS**

### PREPARATORY ACADEMIC WRITING III

Emphasizes preparation for first year composition with a focus on critical writing, reading, and thinking skills and processes at an increased level of academic complexity. Prerequisites: Appropriate writing placement test score, or a grade of "C" or better in ENG081 or ESL087, or permission of Department or Division.

**ENG101 / 3 CREDITS / 3 PERIODS**

 ENG 1101

### FIRST-YEAR COMPOSITION

Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. Prerequisites: Appropriate writing

placement test score, or a grade of C or better in ENG091 or ESL097.

**ENG102 / 3 CREDITS / 3 PERIODS**

 ENG 1102

**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 understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG091 or ESL097.

**ENG108 / 3 CREDITS / 3 PERIODS**

**FIRST-YEAR COMPOSITION FOR ESL**

Equivalent of ENG102 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process.

Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total. Prerequisites: Grade of C or better in ENG107.

**ENG111 / 3 CREDITS / 3 PERIODS**

**TECHNICAL WRITING**

Covers analyzing, planning, organizing, researching, and writing correspondence, reports, and presentations for specific work-related audiences. Includes integrating data and graphics into work-related documents and presentations. Prerequisites: ENG101 with a grade of "C", or better, or permission of instructor.

**ENG200 / 3 CREDITS / 3 PERIODS**

**READING AND WRITING ABOUT LITERATURE**

Emphasis on critical analysis of various genres of literature; includes study of necessary terminology, introduction to methods of literary criticism, and practice in interpretation and evaluation. Prerequisites: ENG102

**ENG216 / 3 CREDITS / 3 PERIODS**

**PERSUASIVE WRITING ON PUBLIC ISSUES**

Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers research based. Prerequisites: ENG102.

**ENG217 / 3 CREDITS / 3 PERIODS**

**PERSONAL AND EXPLORATORY WRITING**

Using writing to explore one’s self and the world one lives in; emphasis on journal writing as a source and inspiration for public writing. Prerequisites: ENG101 or ENG107 or equivalent.

**ENG270 / 3 CREDITS / 3 PERIODS**

**WORKPLACE WRITING**

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

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**ENH - English Humanities**

**ENH110 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO LITERATURE**

Introduction to international literature through various forms of literary expression; e.g., poetry, drama, essay, biography, autobiography, short story, and novel. Provides a global overview of literature

with special emphasis on diverse cultural contributions of women, African Americans, Asian Americans, Hispanic Americans, and Native Americans. Prerequisites: None.

**ENH114 / 3 CREDITS / 3 PERIODS**

**AFRICAN-AMERICAN LITERATURE**

Survey of major African-American writers from Colonial period through the present; analysis of trends and movements within African-American literary history; analysis of literary types and selected works. Prerequisites: None.

**ENH206 / 3 CREDITS / 3 PERIODS**

**NATURE AND ENVIRONMENTAL LITERATURE**

Investigates major themes in nature and environmental writing. Explores relationship between humanity and the environment as expressed through fiction, non-fiction, and poetry. Examines how literature drives attitudes and policies. Prerequisites: None.

**ENH221 / 3 CREDITS / 3 PERIODS**

**SURVEY OF ENGLISH LITERATURE BEFORE 1800**

Emphasizes the social and political backgrounds as well as the form and content of English literature from Anglo-Saxon times to the end of the eighteenth century. Prerequisites: (ENG101 or ENG107) or equivalent.

**ENH222 / 3 CREDITS / 3 PERIODS****SURVEY OF ENGLISH LITERATURE AFTER 1800**

Emphasizes the social and political backgrounds as well as the form and content of English literature in the nineteenth and twentieth centuries. Prerequisites: (ENG101 or ENG107) or equivalent.

**ENH241 / 3 CREDITS / 3 PERIODS****AMERICAN LITERATURE BEFORE 1860**

Includes literature written prior to 1860 in the United States. Prerequisites: None.

**ENH242 / 3 CREDITS / 3 PERIODS****AMERICAN LITERATURE AFTER 1860**

Includes literature written after 1860 in the United States. Prerequisites: None.

**ENH251 / 3 CREDITS / 3 PERIODS****MYTHOLOGY**

Deals with the myths and legends of civilizations with the greatest influence upon the development of the literature and culture of the English speaking people, and compares those myths with myths from other cultures. Prerequisites: None.

**ENH253 / 3 CREDITS / 3 PERIODS****CONTEMPORARY GLOBAL LITERATURE AND FILM**

Characteristics of literary and cinematic mediums. Challenges of adapting literature to film. Global examination of historical,

religious, socio-economic, political, and colonial/post colonial themes depicted in Western and non-Western literature and film (e. g., Africa, Asia, and Latin America) outside the United States. Use of narrative in each medium and how it translates various global/international perspectives and cultural assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film. Prerequisites: ENG101.

**ENH254 / 3 CREDITS / 3 PERIODS****LITERATURE AND FILM**

Presents works of literature and their film versions and analyzes distinguishing techniques of each medium. Prerequisites: ENG101, or ENG107, or equivalent.

**ENH255 / 3 CREDITS / 3 PERIODS****CONTEMPORARY U.S. LITERATURE AND FILM**

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

**ENH259 / 3 CREDITS / 3 PERIODS**

**AMERICAN INDIAN LITERATURE**

Contemporary American Indian forms of literary expression. Selected oral traditions of American Indians. Trends and movements within American Indian literary history. Prerequisites: None.

**ENH260 / 3 CREDITS / 3 PERIODS**

**LITERATURE OF THE SOUTHWEST**

Investigates major themes in Southwestern American literature including the Western myth, minority roles in the region's literature, control of nature versus primacy of nature, and growth. Both prose and poetry are examined with an emphasis on contemporary Southwestern writing. Prerequisites: None.

**ENH284 / 3 CREDITS / 3 PERIODS**

**19TH CENTURY WOMEN WRITERS**

Investigates major themes in literature by women writing in the 19th century including the nature of women's lives in the family, in work situations, and in society. Poetry, prose, essays and drama are examined with an emphasis on common themes. Prerequisites: None.

**ENH285 / 3 CREDITS / 3 PERIODS**

**CONTEMPORARY WOMEN WRITERS**

Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women's lives regardless of age,

creed, or ethnic background. Prerequisites: None.

**ENH291 / 3 CREDITS / 3 PERIODS**

**CHILDREN'S LITERATURE**

Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children. Prerequisites: None.

**ENH295 / 3 CREDITS / 3 PERIODS**

**BANNED BOOKS AND CENSORSHIP**

History, motivations, and effects of censorship in a democratic society. Censorship and book banning as a method of silencing diverse voices. Critical analysis of banned or challenged literature for children and adults. Prerequisites: None.

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**ESL - English as a Second Language**

**ESL001BA / 2 CREDITS / 2 PERIODS**

**BASIC ESL I: PERSONAL HEALTH & SAFETY**

Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to personal health and safety when living in the United States. Introduction to elementary grammatical patterns. Prerequisites: None.

**ESL001BB / 2 CREDITS / 2 PERIODS****BASIC ESL I:  
SERVICES & EMPLOYMENT**

Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to services and employment when living in the United States. Introduction to elementary grammatical patterns.

Prerequisites: ESL001BA or permission of instructor.

**ESL001BC / 2 CREDITS / 2 PERIODS****BASIC ESL I:  
SHOPPING & EVERYDAY LIFE**

Listening, speaking, reading and writing in English at a basic level. Focus on survival skills related to shopping and everyday life when living in the United States. Introduction to elementary grammatical patterns.

Prerequisites: ESL001BB or permission of instructor.

**ESL010 / 3 CREDITS / 3 PERIODS****ENGLISH AS A SECOND  
LANGUAGE I: GRAMMAR**

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

**ESL011 / 3 CREDITS / 3 PERIODS****ENGLISH AS A SECOND LANGUAGE I:  
LISTENING AND SPEAKING**

Emphasis on listening and speaking skills involving survival skills. Asking and answering questions related to work, shopping, and personal safety. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score or ESL002.

**ESL013 / 1 CREDIT / 1 PERIOD****VOCABULARY FOR ESL I**

Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities. Prerequisites: Appropriate ESL placement test score or permission of Instructor. Course Notes: ESL013 may be repeated for a maximum of two (2) credits.

**ESL016 / 3 CREDITS / 3 PERIODS****READING ENGLISH AS A  
SECOND LANGUAGE I**

Designed for students who are learning English as a second language. Skills needed to become proficient readers in English. Sound symbol relationships of the English alphabet. Essential vocabulary for daily communication both in isolation and context. Development of reading comprehension skills. Prerequisites: Appropriate ESL placement test score.



**ESL020 / 3 CREDITS / 3 PERIODS****ENGLISH AS A SECOND LANGUAGE II: GRAMMAR**

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

**ESL021 / 3 CREDITS / 3 PERIODS****ENGLISH AS A SECOND LANGUAGE II - LISTENING AND SPEAKING**

Emphasis on listening and speaking skills involving social exchange. Asking and answering questions, using tag questions. Practice with question and answer patterns. Polite questions and responses. Prerequisites: Appropriate ESL placement test score or ESL010 or ESL011 or ESL012 or RDG/ESL016. Course Notes: ESL021 may be repeated for a maximum of six (6) credits.

**ESL022 / 3 CREDITS / 3 PERIODS****ESL II-WRITING WITH ORAL PRACTICE**

Emphasis on basic writing skills, accompanied by recitation of short writings. Sentence patterns and introduction of paragraph writing. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL012, or permission of instructor.

**ESL026 / 3 CREDITS / 3 PERIODS****READING ENGLISH AS A SECOND LANGUAGE II**

Designed for students who are learning English as a second language. Continued development of vocabulary and reading comprehension skills. Prerequisites: Appropriate ESL placement test score, or grade of "C" or better in ESL/RDG016, or permission of Instructor.

**ESL030 / 3 CREDITS / 3 PERIODS****ENGLISH AS A SECOND LANGUAGE III: GRAMMAR**

Third-level of English as a Second Language (ESL). Emphasis on sentence structure and paragraph building. Extensive grammar study and writing practice. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL020.

Course Notes: ESL030 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.

**ESL031 / 3 CREDITS / 3 PERIODS****ENGLISH AS A SECOND LANGUAGE III - LISTENING AND SPEAKING**

Emphasis on listening and speaking skills related primarily to academic environment. Asking questions, working in small groups,

using college resources, informal oral presentation. Prerequisites: Appropriate ESL placement test score or ESL020 or ESL021 or ESL022 or RDG/ESL026. Course Notes: ESL031 may be repeated for a total of six (6) credit hours.

**ESL032 / 3 CREDITS / 3 PERIODS**

**ESL III-WRITING WITH ORAL PRACTICE**

Emphasis on complex sentence patterns in writing and speech. Introduction to the prewriting and writing process in a college setting. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL022, or permission of instructor.

**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.

**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 ENG071, or permission of Department or Division.

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## **EUT - Electric Utility Technology**

**EUT110 / 2 CREDITS / 2 PERIODS****LINE WORK I**

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

**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.

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**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 disciplines, professions and research areas

associated with the field of Exercise Science. Basic history, philosophy, theory, educational pathways and career options will 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.

**EXS132 / 3 CREDITS / 3 PERIODS**

**CARDIOVASCULAR FITNESS: PHYSIOLOGICAL PRINCIPLES AND TRAINING TECHNIQUES**

Covers principles and techniques of aerobic training and the application of these to the development of aerobic training programs. Includes instructional techniques and safety, and stresses injury prevention. Prerequisites: None.

**EXS145 / 3 CREDITS / 4.5 PERIODS**

**GUIDELINES FOR EXERCISE TESTING AND PRESCRIPTION**

Follows the current ACSM guidelines for health appraisal, risk assessment, safety of exercise, exercise testing, and exercise prescription. Prerequisites: None.

**EXS214 / 2 CREDITS / 3 PERIODS**

**INSTRUCTIONAL COMPETENCY: FLEXIBILITY AND MIND- BODY EXERCISES**

Fundamental methods of instructing and leading fitness activities including flexibility activities. Core competencies identified by professional certification agencies. Prerequisites: None.

**EXS215 / 3 CREDITS / 3 PERIODS**

**FITNESS FOR LIFE**

Lifetime health and skill-related components

of fitness to achieve total wellness. Topics include health and skill-related components of fitness, guidelines for health and fitness assessment, exercise safety and precautions, nutrition, weight control, cardiovascular risk reduction, psychology of fitness and wellness, consumerism, and overall self-management of personal health and lifestyle habits to achieve the highest potential for well-being. Prerequisites: None.

**EXS216 / 2 CREDITS / 3 PERIODS**

**INSTRUCTIONAL COMPETENCY:  
MUSCULAR STRENGTH AND  
CONDITIONING**

Fundamental methods of instructing and leading fitness activities including strength and conditioning activities. Core competencies identified by professional certification agencies. Prerequisites: None.

**EXS218 / 2 CREDITS / 3 PERIODS**

**INSTRUCTIONAL COMPETENCY:  
CARDIORESPIRATORY EXERCISES  
AND ACTIVITIES**

Fundamental methods of instructing and leading fitness activities including cardiorespiratory exercises and activities. Core competencies identified by professional certification agencies. Prerequisites: None.

**EXS230 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO RESEARCH  
METHODS IN HEALTH AND  
EXERCISE SCIENCE**

Introduction to the general nature of research

with specific application to accessing, reading, evaluating, and reporting research in health and exercise science. Introduce students to select, data-based literature in order to engender an appreciation for and ability to critically evaluate health/exercise science research. Prerequisites: (ENG101 or ENG107) and MAT082 or permission of Instructor.

**EXS239 / 3 CREDITS / 5.4 PERIODS**

**PRACTICAL APPLICATIONS OF  
PERSONAL TRAINING SKILLS AND  
TECHNIQUES INTERNSHIP**

Work experience in a fitness or health related facility. Eighty (80) hours of designated work per credit. Prerequisites: 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.

**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.

**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: EXS101 and (ENG101 or ENG107), or permission of Instructor.

## FON - Food and Nutrition

**FON100 / 3 CREDITS / 3 PERIODS**

### INTRODUCTORY NUTRITION

Introduction to the science of food and human nutrition. Current sustainable dietary recommendations and applications for maximizing well-being and minimizing risk of chronic disease throughout the life cycle. An overview of the nutrients, emphasizing the importance of energy and fluid balance, and optimal functioning of the digestive system. Understanding factors that influence food intake in different cultures. Methods for evaluating credibility of nutrition claims, a focus on modern food safety and technology

practices, and a worldview of nutrition are included. Emphasis is on personal dietary behavior change for a holistic life of wellness. Prerequisites: None.

**FON104 / 1 CREDIT / 1 PERIOD**

### CERTIFICATION IN FOOD SERVICE SAFETY AND SANITATION

Preparation for and certification in a national food sanitation and safety program. Emphasis on food from purchasing, receiving, and storing to preparation, holding, and serving. Focuses on safe and sanitary food service facilities and equipment, employee habits and personal hygiene, and role of management in safety and sanitation. Includes time-temperature principles, foodborne illnesses, pest control, accident prevention, standards for cleaning and sanitizing, and regional regulations and standards. Prerequisites: None.

**FON125 / 1 CREDIT / 1 PERIOD**

### INTRODUCTION TO PROFESSIONS IN FOOD, NUTRITION, AND DIETETICS

Overview and discussion of career opportunities in the fields of food, nutrition, and dietetics. Includes information about history, ethics, standards of practice, communication and counseling skills. Emphasis on how to become a Registered Dietitian Nutritionist or a Dietetic Technician Registered. Prerequisites: None.



**FON142AB / 3 CREDITS / 5 PERIODS****APPLIED FOOD PRINCIPLES**

Exploration and applications of scientific principles involved in food preparation; experiences with basic cooking methods; emphasis on the rationale of cooking techniques. Prerequisites: None.

**FON143 / 3 CREDITS / 3 PERIODS****FOOD AND CULTURE**

Understanding diet in the context of culture. Historical, religious, and socio-cultural influences on the development of cuisine, meal patterns, eating customs, cooking methods, and nutritional status of various ethnic groups. Traditional and contemporary food habits. Health and social impact of changes in diet. Preparation and serving of foods from many cultures. Prerequisites: None.

**FON207 / 3 CREDITS / 3 PERIODS****INTRODUCTION TO NUTRITION SERVICES MANAGEMENT**

Principles, knowledge, and techniques required for effective nutrition services management. Includes nutrition service issues in relation to health care trends, leadership skills, management theories and styles, food service manager responsibilities, and laws which pertain to nutrition service operations. Prerequisites: MAT092 or equivalent, or satisfactory score on district placement exam.

**FON225 / 3 CREDITS / 3 PERIODS****RESEARCH IN COMPLEMENTARY AND ALTERNATIVE NUTRITION THERAPIES**

Introduction to basic research methods and statistics as applied to complementary and alternative nutrition therapies. Emphasis on the analysis and interpretation of health-related research. Prerequisites: MAT092 or equivalent, or satisfactory score on district placement exam.

**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 evaluate methodological applications. Prerequisites or Corequisites: FON241.

**FON242 / 3 CREDITS / 3 PERIODS****INTRODUCTION TO MEDICAL NUTRITION THERAPY**

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

**FON244AA / 2 CREDITS / 2 PERIODS****PRACTICUM I: FOOD SERVICE MANAGEMENT LECTURE**

Classroom preparation and training, under the instruction and supervision of a registered dietitian. Understanding of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Comprehension of nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention. Competencies in the classroom met prior to their application in supervised practice settings during the practicum lab (FON245AB). Prerequisites: FON125, FON242, HCE103 or equivalent, and MAT092 or equivalent, or satisfactory score on district placement exam. Corequisite: FON245AB.

**FON244AB / 2.5 CREDITS/ 10 PERIODS****PRACTICUM I: FOOD SERVICE MANAGEMENT LAB**

Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge, and skills required in the delivery of nutrition services for food service management including food service operations, quantity food production, procurement, organizing and management principles, facility design and equipment, financial management, food safety and sanitation, menu planning, and marketing. Prerequisites: FON104, FON125, FON142AB, FON207 and FON242. Corequisites: FON244AA.

**FON245AA / 2 CREDITS / 2 PERIODS****PRACTICUM II: MEDICAL NUTRITION THERAPY**

Classroom preparation and training, under the instruction and supervision of a registered dietitian. Understanding of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Comprehension of nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention. Prerequisites: FON125, FON242, HCE103 or equivalent, and MAT092 or equivalent, or satisfactory score on district placement exam. Corequisites: FON245AB.

**FON245AB / 2.5 CREDITS/ 10 PERIODS****PRACTICUM II:  
MEDICAL NUTRITION THERAPY LAB**

Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Perform nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention.

Prerequisites: FON125, FON242, HCC145AA, and MAT092 or equivalent, or satisfactory score on district placement exam.

Corequisites: FON245AA.

**FON246AA / 2 CREDITS / 2 PERIODS****PRACTICUM III:  
COMMUNITY NUTRITION LECTURE**

Classroom preparation and training, under the instruction of a registered dietitian. Understanding of principles, knowledge and skills required in the delivery of nutrition services in community-based agencies, outpatient health care settings, and social service agencies. Includes knowledge and understanding of nutrition intervention and wellness promotion for individuals and groups across the lifespan, i.e. infants through geriatrics with a diversity of cultural, religious and social backgrounds. Competencies in the classroom met prior to their application in supervised practice settings during the practicum lab (FON246AB). Prerequisites:

FON125 and FON242. Corequisite: FON246AB.

**FON246AB / 2 CREDITS / 10 PERIODS****PRACTICUM III:  
COMMUNITY NUTRITION LAB**

Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge and skills required in the delivery of nutrition services in community-based agencies, outpatient health care settings, and social service agencies. Includes nutrition intervention and wellness promotion for individuals and groups across the lifespan, i.e. infants through geriatrics with a diversity of cultural, religious and social backgrounds. Prerequisites: FON125 and FON242. Corequisite: FON246AA.

**FON247 / 3 CREDITS / 3 PERIODS****WEIGHT MANAGEMENT THEORY**

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

## GBS - General Business

**GBS131 / 3 CREDITS / 3 PERIODS**

### BUSINESS CALCULATIONS

Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups. Prerequisites: None.

**GBS132 / 3 CREDITS / 3 PERIODS**

### PERSONAL AND FAMILY FINANCIAL SECURITY

Principles and practices of personal and family financial planning, includes savings, budgeting, credit, buying versus renting and general principles of consumerism. Prerequisites: None.

**GBS151 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO BUSINESS

Characteristics and activities of current local, national, and international business. An overview of economics, marketing, management and finance. Prerequisites: None.

**GBS205 / 3 CREDITS / 3 PERIODS**

### LEGAL, ETHICAL, AND REGULATORY ISSUES IN BUSINESS

Legal theories, ethical issues and regulatory climate affecting business policies and decisions. Prerequisites: None.

**GBS220 / 3 CREDITS / 3 PERIODS**

### QUANTITATIVE METHODS IN BUSINESS

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

**GBS221 / 3 CREDITS / 3 PERIODS**

 BUS2201

### BUSINESS STATISTICS

Business applications of descriptive and inferential statistics, measurement of relationships, and statistical process management. Includes the use of spreadsheet software for business statistical analysis. Prerequisites: Grade of C or better in GBS220.

**GBS233 / 3 CREDITS / 3 PERIODS**

### BUSINESS COMMUNICATION

Internal and external business communications, including verbal and nonverbal techniques. Prerequisites: ENG101 or ENG107 with grade of "C" or better, or permission of department/division.

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## GLG - Geology

**GLG101 / 3 CREDITS / 3 PERIODS**

 GLG 1101

### INTRODUCTION TO GEOLOGY I - PHYSICAL LECTURE

A study of the kind and arrangement of

materials composing the earth's crust and the geological processes at work on and within the earth's surface. Prerequisites: None.

**GLG102 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO GEOLOGY II - HISTORICAL LECTURE**

Outlines the origin and history of the earth with emphasis on North America--its dynamic, geographic, and climatic changes; animals and plants of the past; the evolution of life. Prerequisites: None.

**GLG103 / 1 CREDIT / 3 PERIODS**

 GLG 1101

**INTRODUCTION TO GEOLOGY I - PHYSICAL LAB**

May accompany GLG101. Study of common rock-forming minerals, rocks, and maps. Prerequisites: None.

**GLG104 / 1 CREDIT / 3 PERIODS**

**INTRODUCTION TO GEOLOGY II - HISTORICAL LAB**

May accompany GLG102. Study of geological structures and rocks, fossils, and geologic maps. May require field trips. Prerequisites: None.

**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.

**GLG111 / 1 CREDIT / 3 PERIODS**

**GEOLOGICAL DISASTERS AND THE ENVIRONMENT LAB**

May accompany GLG110. Basic geological processes and concepts. Emphasis on geology-related environmental problems concerning Arizona. Case histories and field studies. May require field trips. Prerequisites: None.

**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. Prerequisites: None. GLG103 suggested but not required. Course Notes: GLG230AA may be repeated for a total of four (4) credit hours.

**GLG298AA / 1 CREDIT / 1 PERIOD**

**SPECIAL PROJECTS**

Service-learning field experience within human service organizations, government offices, public schools, or hospitals.

Requisites: Prerequisites: Permission of Program Director or Instructor. Course Notes: May be repeated for a total of six (6) GLG282 credit hours; may not repeat specific agency assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog

**GPH - Physical Geography**

**GPH111 / 4 CREDITS / 6 PERIODS**

**INTRODUCTION TO PHYSICAL GEOGRAPHY**

Spatial and functional relationships among climates, landforms, soils, water, and plants. Prerequisites: None.

**GPH212 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO METEOROLOGY I**

Atmospheric processes and elements. General and local circulation, heat exchange and atmospheric moisture. Prerequisites: None.

**GPH214 / 1 CREDIT / 3 PERIODS**

**INTRODUCTION TO METEOROLOGY LABORATORY I**

Basic meteorological and climatological

measurements. Prerequisites: None. Corequisites: GPH212.

**German**

**GER101 / 4 CREDITS / 4 PERIODS**

**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 CREDITS / 4 PERIODS**

**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

**HCC - Health Core Curriculum**

**HCC130 / 3 CREDITS / 3 PERIODS**

**FUNDAMENTALS IN HEALTH CARE DELIVERY**

Overview of current and recent development of health care professions, including career and labor market information, health care delivery systems, third party payers, and

facility ownership. Health organization structure, patient rights and quality care. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Basic communication skills which facilitate inter-professional teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies. Prerequisites: None.

**HCC145AA / 1 CREDIT / 1 PERIOD**

### **MEDICAL TERMINOLOGY FOR HEALTH CARE PROFESSIONALS I**

Introduction to medical terms used in health care. Body systems approach to selected terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using basic word parts. Selected medical abbreviations and symbols and term spelling.

**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**

**HES100 / 3 CREDITS / 3 PERIODS**

**HEALTHFUL LIVING**

Health and wellness and their application to an optimal life style. Explores current topics of interest such as stress management, nutrition, fitness, and environmental health. Evaluates common risk factors associated with modern lifestyles. Prerequisites: None.

**HES210 / 3 CREDITS / 3 PERIODS**

**CULTURAL ASPECTS OF HEALTH AND ILLNESS**

Examines how culture influences health and illness, health care practices, barriers to health care, interactions with health care professionals, and health disparities in the U.S. Prerequisites: None.

**HES271 / 3 CREDITS / 3 PERIODS**

**PREVENTION AND TREATMENT OF ATHLETIC INJURIES**

Prevention and care of athletic injuries, emphasizing use of modern training techniques and support materials. Utilization of preventive taping, strapping, bandaging, cardiopulmonary resuscitation, massage, cryotherapy, hydrotherapy, and practical application of muscle reconditioning.

Prerequisites: None.

**HIS - History**

**HIS103 / 3 CREDITS / 3 PERIODS**

 HIS 1131

**UNITED STATES HISTORY TO 1865**

The political, economic, and social development of the United States from the Pre-Columbian period through the end of the Civil War (1865). Prerequisites: None.

**HIS104 / 3 CREDITS / 3 PERIODS**

 HIS 1132

**UNITED STATES HISTORY 1865 TO PRESENT**

The political, economic, and social development of United States from 1865 to the present time. Prerequisites: None.

**HIS106 / 3 CREDITS / 3 PERIODS**

**SOUTHWEST HISTORY**

Survey of Hispanic, Anglo, African-American and Native cultures of the peoples who have

settled the American Southwest. Emphasis on cattle, mining, fur trade and transportation industries and role development of the region. Prerequisites: None.

**HIS108 / 3 CREDITS / 3 PERIODS**

**UNITED STATES HISTORY 1945 TO THE PRESENT**

Survey of American history from 1945 to the present. Focuses on the political, social, economic and cultural history of the United States from the end of World War II to the present time. Includes domestic developments and foreign policy. Prerequisites: None.

**HIS109 / 3 CREDITS / 3 PERIODS**

**MEXICAN-AMERICAN HISTORY AND CULTURE**

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

**HIS110 / 3 CREDITS / 3 PERIODS**

**WORLD HISTORY TO 1500**

Survey of the economic, social, cultural, and political elements of world history from the beginning of human civilization to 1500. Prerequisites: None.

**HIS111 / 3 CREDITS / 3 PERIODS**

**WORLD HISTORY 1500 TO THE PRESENT**

Survey of the economic, social, cultural, and political elements of world history from 1500 to the present. Prerequisites: None.

**HIS113 / 3 CREDITS / 3 PERIODS**

**HISTORY OF EASTERN CIVILIZATIONS TO 1850**

An examination of the characteristics and development of civilizations, religions and philosophies of the Middle East, India, Far East, and Southeast Asia. From ancient times to the mid-nineteenth century. Prerequisites: None.

**HIS140 / 3 CREDITS / 3 PERIODS**

**AMERICAN INDIAN HISTORY**

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

**HIS201 / 3 CREDITS / 3 PERIODS****HISTORY OF WOMEN IN AMERICA**

Introduction to women's history from the colonial period to the present. Deals chronologically with changes and developments which have influenced the lives of women. Prerequisites: None.

**HIS242 / 3 CREDITS / 3 PERIODS****LATIN AMERICAN CIVILIZATION IN THE POST-COLONIAL PERIOD**

A survey of the political, economic, and social forces which molded Latin American civilization in the period of the development of Republics. Prerequisites: None.

**HIS273 / 3 CREDITS / 3 PERIODS****US EXPERIENCE IN VIETNAM 1945 - 1975**

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

**HIS277 / 3 CREDITS / 3 PERIODS****THE MODERN MIDDLE EAST**

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

**HUM - Humanities****HUM101 / 3 CREDITS / 3 PERIODS****GENERAL HUMANITIES**

A general humanities course concentrating on three great ages of outstanding human achievement: The Golden Age of Greece, the Renaissance and the 20th Century. Prerequisites: None.

**HUM107 / 3 CREDITS / 3 PERIODS****HUMANITIES THROUGH THE ARTS**

Introduction to humanities including film, drama, music, literature, painting, sculpture, and architecture. Prerequisites: None.

**HUM108 / 3 CREDITS / 3 PERIODS****CONTEMPORARY HUMANITIES**

An exploration of human expression in contemporary arts and sciences. Prerequisites: None.

**HUM120 / 3 CREDITS / 3 PERIODS****CULTURAL VIEWPOINTS IN THE ARTS**

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

**HUM201 / 3 CREDITS / 3 PERIODS**

**HUMANITIES: UNIVERSAL THEMES**

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 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.

**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.

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**IBS - International Business**

**IBS101 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO INTERNATIONAL BUSINESS**

A basic overview of international business to introduce students to international trade concepts. Focus of the course is on international business environment issues that influence global business practices, decisions and applications. Prerequisites: None.

**IBS109 / 3 CREDITS / 3 PERIODS**

**CULTURAL DIMENSION FOR INTERNATIONAL TRADE**

The importance of cultural sensitivity in international business relations investigated by studying the impact of geography, history, religion, politics, customs and cross-cultural communications on society. Prerequisites: None.

## IFS - Information Studies

**IFS110 / 1 CREDIT / 1 PERIOD**

### CRITICAL RESEARCH FOR COLLEGE SUCCESS

Access, evaluate, and incorporate sources appropriately into academic projects.

Prerequisites: None. Course Notes: IFS110 may be repeated for a total of four (4) credit hours.

**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**

### 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 Microsoft (MS) Windows and Linux Administration. Prerequisites: CIS126DA, or CIS126DL, or permission of Program Director. Prerequisites or Corequisites: Any MST150++ course.

**ITS120 / 3 CREDITS / 3 PERIODS**

**LEGAL, ETHICAL AND REGULATORY ISSUES**

Exploration of legal and ethical issues unique to information security. Analysis of professional ethical codes and their application to information security practitioners. Federal and state laws as they relate to information security. Prerequisites: ITS110 or permission of instructor.

**ITS130 / 3 CREDITS / 4 PERIODS**

**OPERATING SYSTEM SECURITY**

In-depth examination of operating system security including Transmission Control Protocol/ Data Encryption Standard (DES), Triple Data Encryption Standard (3DES), Advanced Encryption Standard (AES), Pretty Good Privacy (PGP), and other encryption technologies (TCP/IP), Internet Protocol Security (IPSec) and Cisco Internetwork Operating System (IOS), Microsoft Windows, Linux and Mac OSX Security. Procedures to defend networks against attacks and recovery from network disasters. Web server security. Emphasis on hands-on labs in both the Windows and Linux environments. Builds

on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: ITS110 or permission of instructor.

**ITS140 / 3 CREDITS / 4 PERIODS**

**NETWORK SECURITY**

Examination of techniques used to defend network security. Design and implementation of devices including firewalls and Intrusion Detection Systems (IDSs) and Virtual Private Networks (VPNs). Risk analysis and security policies methodologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration. Prerequisites: (ITS110 and ITS130) or permission of instructor.

**ITS150 / 3 CREDITS / 4 PERIODS**

**BUILDING TRUSTED NETWORKS IN THE ENTERPRISE**

Design of a trusted network to secure electronic transactions. Techniques to secure electronic transactions to include cryptography, digital signatures, digital certificates and strong authentication. Computer forensics techniques and legislative issues. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP)

and security concepts and MS Windows and Linux Administration. Prerequisites: ITS110, ITS130 and ITS140, or permission of instructor.

**ITS170 / 1 CREDIT / 1 PERIOD**

**INFORMATION SECURITY POLICY DEVELOPMENT**

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

**ITS172 / 1 CREDIT / 2 PERIODS**

**VIRUSES AND OTHER MALICIOUS SOFTWARE**

Spyware, adware, viruses, worms and trojans. Available tools for identifying and removing malicious software. Techniques for analyzing the behavior of malicious software. Methods of infection and prevention of infection. Prerequisites: None.

**ITS231 / 1 CREDIT / 2 PERIODS**

**ROUTER HARDENING**

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

**JRN - Journalism**

**JRN201 / 3 CREDITS / 5 PERIODS**

 JRN 2201

**NEWS WRITING**

Writing and producing news for the media. Associated Press editing style, writing skills, and organizational structure for news. Prerequisites: 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. Focus on mathematical language, connections, patterns and reasoning. Prerequisites: Satisfactory score on the district math placement test.

**MAT052 / 1 CREDIT / 1 PERIOD**

**NUMBER SENSE II**

Primary emphasis on conceptual understanding of decimals, decimal operations and fractions. Focus on mathematical language, connections, patterns and reasoning. Prerequisites: A grade of "C" or better, or satisfactory Math Diagnostic Assessment score for MAT051.



**MAT053 / 1 CREDIT / 1 PERIOD****MULTIPLICATIVE AND PROPORTIONAL REASONING**

Primary emphasis on conceptual understanding of and solving problems involving fractions and percentages. Focus on additive and multiplicative reasoning. Prerequisites: A grade of "C" or better, or satisfactory Math Diagnostic Assessment Score for MAT051 and MAT052.

**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, or satisfactory Math Diagnostic Assessment score for MAT051, MAT052, and MAT053.

**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, or satisfactory Math Diagnostic Assessment score for MAT051, MAT052, MAT053, and MAT055.

**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, or satisfactory Math Diagnostic Assessment score for MAT051, MAT052, MAT053, MAT055, and MAT056.

**MAT108AA / 1 CREDIT / 1 PERIOD****TUTORED MATHEMATICS**

Structured tutorial assistance and math study skills to help students achieve success in a mathematics course in which they are

concurrently enrolled. Mathematics study skills emphasized. Prerequisites: None. Corequisites: MAT072, or MAT081, or MAT082, or MAT083, or MAT090, or MAT091, or MAT092, or MAT093, or MAT120, or MAT121, or MAT122, or MAT140, or MAT141, or MAT142, or MAT150, or MAT151, or MAT152, or permission of Department Chair. Course Notes: MAT108AA may be repeated for a total of ten (10) credit hours.

**MAT112 / 3 CREDITS / 3 PERIODS**

**MATHEMATICAL CONCEPTS AND APPLICATIONS**

A problem solving approach to mathematics as it applies to real-life situations. Development, use and communication of mathematical concepts and applications that relate to measurement, percentage, practical geometry, statistics, finance, and unit conversions. Prerequisites: An appropriate mathematics placement score, OR a grade of "C" or better for MAT090, or MAT091, or MAT092, OR (an appropriate diagnostic score, or a grade of "C" or better in each of the following courses: MAT055, MAT056, and MAT057).

**MAT121 / 4 CREDITS / 4 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. An appropriate mathematics placement

score, OR a grade of "C" or better for MAT090, or MAT091, or MAT092, OR (an appropriate diagnostic score, or a grade of "C" 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.

**MAT122 / 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 MAT092, 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 set theory, probability, statistics, finance, and geometry. Prerequisites: (A grade of "C" or better in MAT090, or MAT091, or MAT092, or MAT093),

or successful completion of Maricopa Modules, or satisfactory score on District placement exam, or a grade of "C" or better in MAT120, or MAT121, or MAT122. Course Notes: Students may receive credit for only one of the following: MAT140, MAT141, or MAT142.

**MAT142 / 3 CREDITS / 3 PERIODS**

 MAT 1142

**COLLEGE MATHEMATICS**

College-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include set theory, probability, statistics, finance, and geometry. Requisites: Prerequisites: An appropriate mathematics placement score, OR a grade of "B" or better for MAT090, or MAT091, or MAT092, OR (an appropriate diagnostic score, or a grade of "B" or better in each of the following courses: MAT055, MAT056, and MAT057), or a grade of "C" or better in MAT120, or MAT121, or MAT122. Course Notes: Students may receive credit for only one of the following: MAT140, MAT141, or MAT142.

**MAT151 / 4 CREDITS / 4 PERIODS**

 MAT 1151

**COLLEGE ALGEBRA/FUNCTIONS**

Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined

functions; systems of equations, using multiple methods including matrices, modeling and solving real world problems, and defining and illustrating sequences and series. Prerequisites: A grade of "C" or better in MAT120, or MAT121, or MAT122, or satisfactory score on District placement exam. Course Note: May receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187.

**MAT152 / 3 CREDITS / 3 PERIODS**

**COLLEGE ALGEBRA/FUNCTIONS**

Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, modeling and solving real world problems, and defining and illustrating sequences and series. Prerequisites: A grade of "B" or better in MAT120, or MAT121, or MAT122, or satisfactory score on District placement exam. Course Note: May receive credit for only one of the following: MAT150, MAT151, MAT152, 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**

 MAT 1187

**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**

 MAT 1160

**ELEMENTS OF STATISTICS**

Basic concepts and applications of statistics, including data description, estimation and hypothesis tests. Prerequisites: (A grade of "C" or better in MAT140 or MAT141 or MAT142) or (A grade of "C" or better in MAT150 or MAT151 or MAT152) or equivalent, or satisfactory score on District placement exam.

**MAT212 / 3 CREDITS / 3 PERIODS**

 MAT 2212

**BRIEF CALCULUS**

Introduction to the theory, techniques and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences. Prerequisites: Grade of "C" or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.

**MAT213 / 4 CREDITS / 4 PERIODS**

**BRIEF CALCULUS**

Introduction to the theory, techniques, and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences. Prerequisites: Grade of "C" or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.

**MAT217 / 3 CREDITS / 3 PERIODS**

**MATHEMATICAL ANALYSIS FOR BUSINESS**

An introduction to the mathematics required for the study of business. Includes multivariable optimization, Lagrange multipliers, linear programming, linear algebra, probability, random variables, discrete and continuous distributions.

Prerequisites: Grade of C or better in MAT212 or MAT213.

**MAT220 / 5 CREDITS / 5 PERIODS**

 MAT 2220

**CALCULUS WITH ANALYTIC GEOMETRY I**

Limits, continuity, differential and integral calculus of functions of one variable.

Prerequisites: Grade of "C" or better in [MAT182 and (MAT150, MAT151 or MAT152)], or MAT187, or appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT220 or MAT221.

**MAT221 / 4 CREDITS / 4 PERIODS**

**CALCULUS WITH ANALYTIC GEOMETRY I**

Limits, continuity, differential and integral calculus of functions of one variable.

Prerequisites: Grade of "C" or better in [MAT182 and (MAT150, MAT151 or MAT152)], or MAT187, or appropriate Math placement test score. Course Notes: Student may receive credit for only one of the following: MAT220 or MAT221.

**MAT225 / 3 CREDITS / 3 PERIODS**

**ELEMENTARY LINEAR ALGEBRA**

Introduction to matrices, systems of linear equations, determinants, vector spaces, linear transformations and eigenvalues. Emphasizes the development of computational skills.

Prerequisites: Grade of "C" or better in MAT212 or MAT220, or MAT221, or equivalent.

**MAT227 / 3 CREDITS / 3 PERIODS**

 MAT 2227

**DISCRETE MATHEMATICAL STRUCTURES**

Introduction to lattices, graphs, Boolean algebras, and groups. Emphasis on topics relevant to computer science. Prerequisites: A grade of "C" or better in (CSC100 or CSC110) and (MAT220 or MAT221) or permission of Instructor.

**MAT230 / 5 CREDITS / 5 PERIODS**

 MAT 2230

**CALCULUS WITH ANALYTIC GEOMETRY II**

Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series. Prerequisites: Grade of "C" or better in MAT220 or MAT221 or equivalent. Course Note: Student may receive credit for only one of the following: MAT230 or MAT231.

**MAT231 / 4 CREDITS / 4 PERIODS**

**CALCULUS WITH ANALYTIC GEOMETRY II**

Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series. Prerequisites: Grade of "C" or better in MAT220, or MAT221, or equivalent. Course Notes: MAT231 students

may receive credit for only one of the following: MAT230 or MAT231.

**MAT240 / 5 CREDITS / 5 PERIODS**

**CALCULUS WITH ANALYTIC GEOMETRY III**

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

**MAT241 / 4 CREDITS / 4 PERIODS**

 MAT 2241

**CALCULUS WITH ANALYTIC GEOMETRY III**

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

**MAT256 / 3 CREDITS / 3 PERIODS**

**INVESTIGATING QUANTITY: NUMBER, OPERATIONS AND NUMERATION SYSTEMS**

Explore number, numeration systems and operations on numbers. Techniques of problem solving with an emphasis on exploring a variety of strategies. Use a variety of visualization techniques to develop a conceptual understanding of these topics.

Prerequisites: A grade of "C" or better in (MAT150 or MAT151 or MAT152 or higher), or a grade of "C" or better in [(MAT120 or MAT121 or MAT122) and (MAT140 or MAT141 or MAT142 or higher)], or [a grade of "C" or better in (MAT140 or MAT141 or MAT142) and satisfactory score on District placement exam to permit enrollment in (MAT150 or MAT151 or MAT152 or higher)]. Course Notes: MAT256 is designed to meet requirements for prospective elementary education teachers.

**MAT257 / 3 CREDITS / 3 PERIODS**

**INVESTIGATING GEOMETRY, PROBABILITY AND STATISTICS**

Explores geometry, measurement, probability and statistics. Uses visualization, technologies, problem solving, reasoning and proof to develop a conceptual understanding of these topics. Prerequisites: MAT256 or permission of Instructor. Course Notes: MAT257 is designed to meet the requirements for prospective elementary education teachers.

**MAT276 / 4 CREDITS / 4 PERIODS**

**MODERN DIFFERENTIAL EQUATIONS**

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



**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.

**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.

**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****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.

**MKT271 / 3 CREDITS / 3 PERIODS**

### PRINCIPLES OF MARKETING

An analysis of the marketing process and environment with regard to the product, pricing, distribution, and communication in order to satisfy buyer needs. Prerequisites: None.

## MSP - Mortuary Science

**MSP101 / 1 CREDIT / 1 PERIOD**

### ORIENTATION TO FUNERAL SERVICE

Designed to orient prospective students to funeral service and its history, philosophy, educational requirements, apprenticeship, licensure examination, job descriptions for funeral directors and embalmers, employment outlook. Prerequisites: None.

**MSP201 / 3 CREDITS / 3 PERIODS**

### HISTORY AND SOCIOLOGY OF FUNERAL SERVICE

Survey of history of funeral service from ancient to modern times. Sociological aspects of how various cultures deal with death.

Prerequisites: Admission to the Mortuary Science Program.

**MSP202 / 4 CREDITS / 5 PERIODS**

### EMBALMING

Study of the disinfection, preservation and restoration of the deceased human body by chemical means for the specific purpose of funeralization. Prerequisites: Admission to the Mortuary Science Program.

**MSP203 / 3 CREDITS / 3 PERIODS**

### MICROBIOLOGY FOR FUNERAL SERVICE

Survey of the microbiological world as it pertains to the funeral service profession. Knowledge of those organisms that can cause death and safety precautions. Prerequisites: Admission to the Mortuary Science Program.

**MSP204 / 3 CREDITS / 3 PERIODS**

### CHEMISTRY FOR FUNERAL SERVICE

Basic principles of chemistry related to funeral service. Chemical principles of embalming, disinfection and public health. Sanitation practices regarding potentially harmful chemicals. Prerequisites: Admission to the Mortuary Science Program.

**MSP205 / 3 CREDITS / 3 PERIODS**

**MORTUARY ADMINISTRATION I**

Funeral directing and professional relationships with members of the clergy. Introductory information about the establishment of a funeral home. Prerequisites: Admission to the Mortuary Science Program.

**MSP206 / 3 CREDITS / 3 PERIODS**

**MORTUARY ADMINISTRATION II**

Operation of the established funeral home and product knowledge in the area of funeral service merchandising. Prerequisites: MSP205.

**MSP207 / 4 CREDITS / 5 PERIODS**

**RESTORATIVE ART**

Care and restoration of the deceased human body to create natural form and appearance. Includes anatomical aspects and color theory. Prerequisites: Admission to the Mortuary Science Program.

**MSP208 / 3 CREDITS / 3 PERIODS**

**LEGAL, REGULATORY, AND ETHICAL ISSUES IN FUNERAL SERVICE**

Mortuary law regulation by the Federal Trade Commission, and ethical issues in funeral service. Individual State Laws as they pertain to the regulation of funeral establishments and funeral service personnel. Prerequisites: Admission to the Mortuary Science Program.

**MSP209 / 3 CREDITS / 3 PERIODS**

**PATHOLOGY FOR FUNERAL SERVICE**

Pathologic conditions which require special treatment and terminology associated with the causes of death. Prerequisites: Admission to the Mortuary Science Program.

**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 vv Program.

**MSP211 / 3 CREDITS / 3 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.

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**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.

**MST150 / 3 CREDITS / 4 PERIODS**

### MICROSOFT WINDOWS PROFESSIONAL

Knowledge and skills necessary to perform day-to-day administration tasks in a Microsoft Windows-based network. Preparation for Microsoft certification examination. Prerequisites: None. CIS190, or CNT140, or MST140 suggested but not required.

**MST150VI / 3 CREDITS / 4 PERIODS**

### MICROSOFT WINDOWS VISTA ADMINISTRATION

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

**MST150XP / 3 CREDITS / 4 PERIODS**

### MICROSOFT WINDOWS XP PROFESSIONAL

Knowledge and skills necessary to perform

day-to-day administration tasks of Microsoft Windows XP Professional. Preparation for Microsoft certification examination. Prerequisites: None. CIS190, or CNT140, or MST140 suggested but not required.

**MST152 / 4 CREDITS / 5 PERIODS**

### MICROSOFT WINDOWS SERVER

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

**MST152DA / 4 CREDITS / 6 PERIODS**

### MICROSOFT WINDOWS 2000 SERVER

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

**MST152DB / 4 CREDITS / 5 PERIODS**

### MICROSOFT WINDOWS 2003 SERVER

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

**MST155 / 3 CREDITS / 4 PERIODS****IMPLEMENTING WINDOWS NETWORK INFRASTRUCTURE**

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

**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 directory services. 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.

**MST170 / 4 CREDITS / 5 PERIODS****VISUAL BASIC DESKTOP APPLICATION DEVELOPMENT**

Use of Visual Basic programming language to create database applications using Visual Data Access tools, ActiveX Controls, Component Objects, and Structured Query Language (SQL) Server database. Prerequisites: CIS159 or permission of instructor.



**MST172 / 4 CREDITS / 5 PERIODS****VISUAL BASIC .NET WEB APPLICATION DEVELOPMENT**

Knowledge and skills to develop and implement Web-based applications using ASP.NET, Web forms, and the Microsoft.NET framework with Visual Basic. Preparation for Microsoft Certified Applications Developer (MCAD) certification examination. Prerequisites: (CIS133DA, or CIS133AA and CIS133BA and CIS133CA) and CIS259, or permission of Instructor.

**MST176 / 3 CREDITS / 4 PERIODS****VISUAL BASIC .NET XML WEB SERVICES DEVELOPMENT**

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

**MST242 / 4 CREDITS / 5 PERIODS****MICROSOFT EXCHANGE SERVER**

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

**MST244 / 3 CREDITS / 4 PERIODS****MICROSOFT SQL SERVER ADMINISTRATION**

Knowledge and skills required to install,

configure, and administer Microsoft SQL server. Prerequisites: Any MST15+ course, or MST 15+++ course, or permission of Instructor. Course Notes: Preparation for Microsoft certification examination.

**MST246 / 2 CREDITS / 3 PERIODS****IMPLEMENTING MICROSOFT INTERNET EXPLORER**

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

**MST254 / 3 CREDITS / 4 PERIODS****MICROSOFT SQL SERVER DESIGN AND IMPLEMENTATION**

Knowledge and skills required to design and implement databases using Microsoft SQL server. Preparation for Microsoft certification examination. Prerequisites: CIS259, or any MST152 course, or permission of instructor.

**MST259 / 3 CREDITS / 4 PERIODS****DESIGNING WINDOWS NETWORK SECURITY**

Knowledge and skills to analyze business requirements and processes to design a security solution for a Microsoft Windows network. Prerequisites: or Corequisites: MST157, or any MST157++ course, or



permission of Instructor. Course Notes:  
Preparation for Microsoft certification  
examination

**MST270 / 3 CREDITS / 4 PERIODS**

**MICROSOFT SOLUTION ARCHITECTURES**

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

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**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**

 MUS 2222

**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**

 MUS 2222

**AURAL PERCEPTION III**

A development of listening and performing skills, including an introduction of chromatic harmonic techniques and concepts of style. Prerequisites: None. Corequisites: MTC205.

**MTC240 / 3 CREDITS / .6 PERIODS**

**COMPOSITION**

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

**MTC255 / 3 CREDITS / 3 PERIODS**

 MUS 2223

**MUSIC THEORY IV**

A continuation of Music Theory III, including

20th century theories and techniques. Prerequisites: MTC205. Corequisites: MTC256.

**MTC256 / 1 CREDIT / 2 PERIODS**

 MUS 2223

**AURAL PERCEPTION IV**

A continuation of Aural Perception III, including extended chords. Prerequisites: None. Corequisites: MTC255.

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**MUC - Music:  
Commercial/Business**

**MUC109 / 3 CREDITS / 3 PERIODS**

**MUSIC BUSINESS:  
MERCHANDISING AND THE LAW**

Operation, scope, and career opportunities in the music business. Focuses on music in the marketplace, songwriting, publishing, copyright procedures, and business affairs, agents, artist management, and concert production. Prerequisites: None.

**MUC110 / 3 CREDITS / 3 PERIODS**

**MUSIC BUSINESS:  
RECORDING AND MASS MEDIA**

The operation, scope, and career opportunities in the music business. Focuses on the record industry; environmental music; uses of music in radio, telecommunications, and film; and career options. Prerequisites: None.

**MUC111 / 3 CREDITS / 5 PERIODS****DIGITAL AUDIO WORKSTATION I (DAW I)**

Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: MUC195, or MUC195AA, or TCM/VPT105, or permission of Instructor.

**MUC112 / 3 CREDITS / 5 PERIODS****DIGITAL AUDIO WORKSTATION II (DAW II)**

Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: MUC111, and (MUC195 or MUC195AA).

**MUC195 / 3 CREDITS / 5 PERIODS****STUDIO MUSIC RECORDING I**

Basic principles of studio sound recording. Emphasis on musical acoustics, operation of recording equipment, studio setups, and multitrack recording. Includes studio session process and musical production decisions. Prerequisites: None.

**MUC196 / 3 CREDITS / 5 PERIODS****STUDIO MUSIC RECORDING II**

Emphasis on signal-processing equipment, mixing consoles, and advanced musical recording session procedures, production, and engineering. Includes mix-down and resultant master tape of a musical recording session. Prerequisites: MUC195 or MUC195AA.

For the most current information regarding course descriptions, log on to [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

**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.

**MUC293 / 1 CREDIT / 1 PERIOD****SELF PROMOTION FOR MUSIC**

Career goal development. Includes self-presentation and communication skills, keeping files and records, and developing self-promotional materials. Prerequisites: None.

**MUC297AB/ 2 CREDITS / 2 PERIODS****MUSIC INTERNSHIP**

Music Internship work experience in a business or industry eighty (80) hours of designated work per credit. A maximum of 12 credits allowed. Prerequisites: MUC110.

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## **MUE - Music: Education**

**MUE235 / 2 CREDITS / 3 PERIODS****PERCUSSION METHODS I**

Practical class with emphasis on techniques

of playing and teaching percussion instruments including hand position, rudiments, stick control, and elements of reading rhythms Prerequisites: None.

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## MUP - Music: Performance

**MUP101 / 1 CREDIT / .6 PERIOD**

**MUP151 / 1 CREDIT / .6 PERIOD**

**MUP201 / 1 CREDIT / .6 PERIOD**

**MUP251 / 1 CREDIT / .6 PERIOD**

### PRIVATE INSTRUCTION: EUPHONIUM

Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. May be repeated for credit. Prerequisites: None.

**MUP102 / 2 CREDITS / 1.2 PERIODS**

**MUP152 / 2 CREDITS / 1.2 PERIODS**

**MUP202 / 2 CREDITS / 1.2 PERIODS**

**MUP252 / 2 CREDITS / 1.2 PERIODS**

### PRIVATE INSTRUCTION

Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet,

French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp. May be repeated for credit. Prerequisites: None.

**MUP131 / 2 CREDITS / 3 PERIODS**

### CLASS PIANO I

Development of beginning piano techniques and the fundamentals of music including basic hand position, music reading skills of melodic and harmonic material, major scales, transposition, and harmonizations including the I, IV, V7 chords. Prerequisites: None.

**MUP132 / 2 CREDITS / 3 PERIODS**

### CLASS PIANO II

Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading. Prerequisites: MUP131 or permission of instructor.

**MUP133 / 2 CREDITS / 3 PERIODS**

### CLASS VOICE I

Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and performances in class of solo vocal literature. Prerequisites: None.

**MUP134 / 2 CREDITS / 3 PERIODS**

### CLASS VOICE II

Continuation of Class Voice I including the

elements of stage presence and diction.  
Prerequisites: MUP133 or permission of instructor.

**MUP150 / 1 CREDIT / 3 PERIODS**

**COMMUNITY CHORUS**

A mixed chorus with emphasis on college/community participation and preparation of a variety of choral literature for public performance. Auditions may be required. May be repeated for credit. Prerequisites: None.

**MUP153 / 2 CREDITS / 5 PERIODS**

**CONCERT CHOIR**

A mixed choir designed to emphasize choral techniques and performance of all styles of choral literature. Public performances are scheduled each semester. Prerequisites: None. Course Notes: Auditions may be required. MUP153 may be repeated for credit.

**MUP154AA / 1 CREDIT / 3 PERIODS**

**JAZZ VOCAL ENSEMBLE**

Practical and performing experience in vocal jazz. Includes music from the 1920's through the present. Prerequisites: Auditions required or permission of instructor. Course Note: May be repeated for up to three (3) credits.

**MUP159 / 1 CREDIT / 3 PERIODS**

**COMMUNITY ORCHESTRA**

Emphasis on college/community participation and the preparation of orchestral literature

for public performance. Auditions may be required. May be repeated for credit.  
Prerequisites: None.

**MUP161 / 1 CREDIT / 3 PERIODS**

**COMMUNITY BAND**

Emphasis on college/community participation and the preparation of band literature for public performance. Auditions may be required. May be repeated for credit. Prerequisites: None.

**MUP162 / 2 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.

**MUP182 / 1 CREDIT / 3 PERIODS****CHAMBER SINGERS**

Practical and performance experience in various styles of vocal music. Open to all students on the basis of auditions. May be repeated for credit. Prerequisites: None.

**MUP209 / 2 CREDITS / 2 PERIODS****ELEMENTS OF CONDUCTING**

Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles. Prerequisites: None.

**MUP217 / 2 CREDITS / 3 PERIODS****MUSIC THEATRE: BROADWAY SOLOS**

Study and in-class performance of scenes and solos from Broadway musical literature. Prerequisites: None. Course Notes: MUP217 may be repeated for credit.

**MUP225 / 2 CREDITS / 3 PERIODS****CLASS GUITAR I**

Emphasis on note-reading and folk-style harmonic accompaniment. Includes finger-style playing. Stresses development of efficient practice techniques and proper

sitting and hand positions. Prerequisites: None.

**MUP226 / 2 CREDITS / 3 PERIODS****CLASS GUITAR II**

Note-reading range including second position and parts of higher positions. Classical, popular, Latin, and other styles of music. Theory including scales, keys, and chord construction. Technical exercises of both hands. Prerequisites: MUP225 or permission of instructor.

**MUP227 / 2 CREDITS / 3 PERIODS****CLASS GUITAR III**

Additional fingerboard positions. Ensemble techniques and performance. Prerequisites: MUP226 or permission of instructor.

**MUP228 / 2 CREDITS / 3 PERIODS****CLASS GUITAR IV**

Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques. Prerequisites: MUP227 or permission of instructor.

**MUP231 / 2 CREDITS / 3 PERIODS****CLASS PIANO III**

Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants. Prerequisites: MUP132 or permission of instructor.

**MUP232 / 2 CREDITS / 3 PERIODS****CLASS PIANO IV**

Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature. Prerequisites: MUP231 or permission of instructor.

**MUP233 / 2 CREDITS / 3 PERIODS****CLASS VOICE III**

Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications. Prerequisites: MUP134.

**MUP234 / 2 CREDITS / 3 PERIODS****CLASS VOICE IV**

Emphasis on the preparation of solo vocal literature for the purpose of evaluation and the integration of the music with the drama of the music. Prerequisites: MUP233 or permission of instructor.

**MUP270 / 2 CREDITS / 5 PERIODS****MUSICAL THEATRE WORKSHOP**

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

**NCE - Nursing Continuing Education****NCE214MI / .5 CREDITS / .5 PERIODS****MATH AND MEDICATIONS FOR INTERMEDIATE NURSING STUDENTS**

Focus on basic mathematical concepts to calculate metric- apothecary conversion, dosage problems, intravenous flow rates using the ratio/proportion and dimensional analysis methods. These calculations will focus application to acute care, long-term care, and pediatric specialty areas. Prerequisites: Current student in Nursing program or permission of Department or Division.

**NUR - Nursing Science: Basic****NUR104AB / 1 CREDIT / 1 PERIOD****STRUCTURED NURSING REVIEW**

Structured nursing tutorial assistance and nursing study skills to help students achieve success in their respective block of nursing courses. Nursing process and critical thinking application skills emphasized. Prerequisites: None. Corequisites: Concurrent enrollment in the Nursing program or permission of Department Chair. Course 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.

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**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.

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**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 CREDITS / 1 PERIOD**

### PHYSICAL ACTIVITIES: BASIC

Individual, dual, or team sports activities at the basic level. Prerequisites: None. Course Notes: PED103 may be repeated for credit.

**PED115 / 2 CREDITS / 4 PERIODS**

### LIFETIME FITNESS

Increase personal fitness, strength, and vitality. Current principles of cardiovascular

exercise, weight training, flexibility, and balance exercises applicable to lifetime fitness goals. Personalized fitness plans developed and implemented with support of highly trained fitness professionals. Techniques to make sessions more effective and enjoyable. Prerequisites: None. Course Note: PED115 may be repeated for a total of eight (8) credit hours.

**PED117 / 2 CREDITS / 4 PERIODS**

### WEIGHT TRAINING FOR WELLNESS

Strength training and muscular fitness activity to help develop a lifetime of regular exercise and muscular strength maintenance. Development of full body strength and stability of the body's core musculature, translating to increased power, balance, and functional movement ability including assessment of current strength and goal-specific program design to increase strength and muscular fitness. Prerequisites: None. Course Notes: PED117 may be repeated for a maximum of eight (8) credits.

**PED120AF / 2 CREDITS / 4 PERIODS**

### SPECIAL EMPHASIS ACTIVITIES: WEIGHT TRAINING

Intensive experience in weight training. May be repeated for a total of 8 credits. Prerequisites: None.

**PED121 / 1 CREDIT / 2 PERIODS****PHYSICAL CONDITIONING FOR MASSAGE THERAPISTS**

Physical fitness necessary for current and prospective massage therapists. Includes physical fitness and workout techniques as related to performing massage therapy; individual conditioning strategies, and basic nutritional guidelines. Prerequisites: None.

**PED124 / 2 CREDITS / 4 PERIODS****STRENGTH AND CONDITIONING FOR SPORT PERFORMANCE: BASIC**

Introduction to the principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on beginning instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity. Prerequisites: None. Course Notes: PED124 may be repeated for a total of eight (8) credit hours.

**PED125 / 2 CREDITS / 4 PERIODS****STRENGTH AND CONDITIONING FOR SPORT PERFORMANCE: INTERMEDIATE**

Principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity. Prerequisites: PED124. Course Notes: PED125 may be repeated for a total of eight (8) credit hours.

**PED133 / 2 CREDITS / 4 PERIODS****OLYMPIC STYLE WEIGHT LIFTING**

Advanced study of the science, strategy, and techniques of Olympic Style Weightlifting. For the fitness professional who is interested in competing, or is seeking to incorporate advanced strength and conditioning modalities. Addresses current topics, theories and techniques. Prerequisites: None.

**PED201 / 1 CREDIT / 2 PERIODS****PHYSICAL ACTIVITIES: ADVANCED**

Individual, dual, or team sports activities at the advanced level. Prerequisites: None. Prior experience at competitive level recommended. Course Notes: PED201 may be repeated for credit.

**PED224 / 2 CREDITS / 4 PERIODS****STRENGTH AND CONDITIONING FOR SPORT PERFORMANCE: ADVANCED**

Principles and training techniques of strength and conditioning for sport performance. Emphasis placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity; and injury prevention. Prerequisites: PED124 and PED125. Course Notes: PED224 may be repeated for a total of eight (8) credit hours.

**PED225 / 2 CREDITS / 4 PERIODS****STRENGTH AND CONDITIONING FOR SPORT PERFORMANCE: ELITE**

Principles and training techniques of strength and conditioning for sport performance. Emphasis placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity; injury prevention; and assessment techniques. Prerequisites: PED124, PED125, and PED224. Course Notes: PED225 may be repeated for a total of eight (8) credit hours.

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## PHI - Philosophy

**PHI101 / 3 CREDITS / 3 PERIODS**
 PHI 1101
**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**
 PHI 1103
**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**
 PHI 1105
**INTRODUCTION TO ETHICS**

A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories. Prerequisites: None.

**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**

 PHY 1111

### GENERAL PHYSICS I

Includes motion, energy, and properties of matter. Prerequisites: MAT182 or MAT187 or one year high school Trigonometry with a grade of C or better or permission of Department or Division Course Notes: PHY111

is recommended for preprofessional and suggested for certain other majors. Students may receive credit for only one of the following: PHY111 or PHY111AA.

**PHY112 / 4 CREDITS / 6 PERIODS**

 PHY 1112

### GENERAL PHYSICS II

Includes electricity, electromagnetism, and modern physics. Prerequisites: PHY105 or PHY111.

**PHY121 / 4 CREDITS / 6 PERIODS**

 PHY 1121

### 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**

 PHY 1131

### 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.

**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**

 POS 1110

**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**

 POS 1120

**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**

Survey of twentieth century nondemocratic ideologies and movements with emphasis on Marx, Lenin, Mussolini, Hitler, Stalin and Mao. 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 POS220. May not enroll in POS220 and POS222 concurrently. Prerequisites: None.

**POS223 / 3 CREDITS / 3 PERIODS**

**CIVIL RIGHTS**

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

For the most current information regarding course descriptions, log on to [www.maricopa.edu/academic/ccta](http://www.maricopa.edu/academic/ccta).

**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 useable 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**

 PSY 1101

**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 computers in the field of psychology. Prerequisites: None. Corequisites: PSY230.

**PSY235 / 3 CREDITS / 3 PERIODS**

**PSYCHOLOGY OF GENDER**

To assess historical and psychological

perspectives on women and men and to evaluate contemporary viewpoints regarding the psychology of women and men.

Prerequisites: PSY101 with a grade of "C" or better or permission of instructor.

**PSY240 / 3 CREDITS / 3 PERIODS**

**DEVELOPMENTAL PSYCHOLOGY**

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

**PSY241 / 3 CREDITS / 3 PERIODS**

**UNDERSTANDING AND CHANGING BEHAVIOR**

Theory and methods for observing, analyzing, and modifying behavior. Prerequisite or Corequisites: PSY101 or permission of Instructor. Course Note: Taking PSY101 as a prerequisite is recommended.

**PSY242 / 3 CREDITS / 4 PERIODS**

**UNDERSTANDING AND CHANGING BEHAVIOR LAB**

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.

**PSY266 / 3 CREDITS / 3 PERIODS**

**ABNORMAL PSYCHOLOGY**

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

**PSY267 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO FORENSIC PSYCHOLOGY**

Overview of the practice of psychology in the law, by the law, and of the law. Focuses on the complementary functions and distinctions between psychology and the legal justice system. Topics include, but are not limited to, criminal investigations, risk and level of danger, competency, interrogations, confessions, assessment, eyewitness testimony, child custody, and domestic violence. Prerequisites: PSY101.

**PSY270 / 3 CREDITS / 3 PERIODS****PERSONAL & SOCIAL ADJUSTMENT**

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

**PSY290AB / 4 CREDITS / 6 PERIODS****RESEARCH METHODS**

Planning, execution, analysis, and written reporting of psychological research. Surveys the literature, procedures, and instruments in representative areas of psychological research. Prerequisites: ENG101, ENG107 or equivalent. Prerequisites or Corequisites: PSY230 (or equivalent) with a grade of "C" or better, or permission of instructor.

**PSY290AC / 4 CREDITS / 5 PERIODS****RESEARCH METHODS**

Planning, execution, analysis, and written reporting of psychological research. Surveys the literature, procedures, and instruments in representative areas of psychological research. Prerequisites: ENG101, ENG107 or equivalent. Prerequisites or Corequisites: PSY230 (or equivalent) with a grade of "C" or better, or permission of instructor.

**RDG - Reading****RDG081 / 3 CREDITS / 3 PERIODS****READING IMPROVEMENT**

Designed to improve basic reading skills. Includes word recognition, interdisciplinary vocabulary development, recognizing patterns of organization, interpreting inference. Reviews interpreting graphic materials. Emphasis on identifying main ideas and related details. Prerequisites: Appropriate reading placement test score, or grade of "C" or better in RDG071, or permission of Instructor.

**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).

## 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.

**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.

**REC150AB / 3 CREDITS / 3 PERIODS**

### OUTDOOR ADVENTURE SKILLS

Camping and outdoor skills including types of camping, equipment selection and use, cooking and fire building, camp programs, backpacking, and safety. Prerequisites: None.

**REC250 / 3 CREDITS / 3 PERIODS**

### RECREATION LEADERSHIP

An examination of roles and methods of leadership in leisure services settings.

Overview of theories and models of leadership, group dynamics, participant motivation, communication, and face-to-face leadership. Exploration of leadership contexts, including coaching and officiating sports, leading community groups and volunteers, working with persons in various life stages and with varying abilities, and leading different recreation activity areas.

Prerequisites: None.

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## 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.

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**SBS - Small Business Management**

**SBS213 / 1 CREDIT / 1 PERIODS**

**HIRING AND MANAGING EMPLOYEES**

Methods and techniques for managing employees in a small business. Includes supervisor's role, leadership styles, interpersonal communications, staff planning, employee work styles, techniques for handling problem employees, and employee motivation. Focuses on real life situations to enable the business owner to gain high performance from their employee team. Includes segment on hiring, new employee orientation, training, benefits, and developing future staffing needs assessment. Prerequisites: None.

**SBS214 / 1 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.

**SBS220 / 2 CREDITS / 2 PERIODS**

**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.

**SBS230 / 2 CREDITS / 2 PERIODS**

**FINANCIAL AND TAX MANAGEMENT FOR SMALL BUSINESS**

An overview of accounting and record-keeping for the successful management of a small business. Develops an understanding of the accounting cycle and preparation of financial statements. Includes section on tax

consequences and the choice of legal entity choice based on taxation. Prerequisites: None.

**SBU - Society and Business**

**SBU200 / 3 CREDITS / 3 PERIODS**

**SOCIETY AND BUSINESS**

The study and scientific inquiry of issues and demands placed on business enterprise by owners, customers, government, employees and society. Included are social, ethical and public issues and analysis of the social impact of business responses. Prerequisites: None

**SLG - Sign Language**

**SLG101 / 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. SLG103 suggested as a corequisite but not required.

**SLG102 / 4 CREDITS / 4 PERIODS**

**AMERICAN SIGN LANGUAGE II**

Continued development of knowledge and language skills for communicating with



deaf people who sign. Includes numbers, fingerspelling, and culture. Emphasis on enhancement of receptive sign skills and continued development of expressive sign skills. Application of rudimentary, syntactical, and grammatical structure stressed with continued development of sign vocabulary. Prerequisites: SLG101 with a grade of "C" or better, or permission of Department or Division. Completion of prerequisites within the last three years is required.

**SLG103 / 1 CREDIT / 1 PERIOD**

### INTRODUCTION TO DEAFNESS

History and development of American Sign Language (A.S.L.) and English codes. Overview of education for Deaf and Hard of Hearing children. Legal rights and common adaptive devices used by Deaf and Hard of Hearing individuals. Prerequisites: None.

**SLG110 / 2 CREDITS / 2 PERIODS**

### FINGERSPELLING I

Introduction to basic fingerspelling techniques. Concentration on receptive and expressive skills including manual alphabet production and numbers. Focus on methods, theory, and applications. Prerequisites: SLG101, or permission of Department or Division. Completion of prerequisites within the last three years is required.

**SLG120 / 2 CREDITS / 2 PERIODS**

### FINGERSPELLING II

Continued skill development including speed,

dexterity, clarity, and loan signs. Advanced use of numbers, prefixes, suffixes, and polysyllabic words. Prerequisites: SLG102 and SLG110 with a grade of "C" or better, or permission of Department or Division. Completion of prerequisites within the last three years is required.

**SLG201 / 4 CREDITS / 4 PERIODS**

### AMERICAN SIGN LANGUAGE III

Linguistics of American Sign Language (A.S.L.) including non-manual behaviors and signing English idioms with conceptual accuracy. Emphasis on practical application of A.S.L. skills, expanded vocabulary, and cross-cultural communication. Prerequisites: SLG102 with a grade of C or better, or permission of Department or Division. Suggested but not required: (ENG101 or ENG107) and (CRE101, or CRE111, or exemption by score on the reading placement test (ASSET)). Completion of prerequisites within the last three years is required.

**SLG202 / 4 CREDITS / 4 PERIODS**

### AMERICAN SIGN LANGUAGE IV

Advanced American Sign Language skills including continued vocabulary. Emphasis on conversational techniques in a cross-cultural framework. Continued work on conceptual accurate signing of English idioms and words with multiple meanings. Prerequisites: SLG201 with a grade of C or better, or permission of Department or Division. Suggested but not required: (ENG101 or ENG107), SLG200, and



(CRE101, or CRE111, or exemption by score on the reading placement test). Completion of prerequisites within the last three years is required.

## SOC - Sociology

### SOC101 / 3 CREDITS / 3 PERIODS

 SOC 1101

#### INTRODUCTION TO SOCIOLOGY

The systematic study of social behavior and human groups, particularly the influence of culture, socialization, social structure, stratification, social institutions, differentiation by region, race, ethnicity, sex/gender, age, class, and socio/cultural change upon people's attitudes and behaviors. Prerequisites: None. .

### SOC130 / 3 CREDITS / 3 PERIODS

#### HUMAN SEXUALITY

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

### SOC 241 / 3 CREDITS / 3 PERIODS

 SOC 2215

#### RACE AND ETHNIC RELATIONS

Examines how the social construction of race shapes social interaction and social

institutions. Explores the consequences of power, privilege and oppression among major ethnic and racial groups in the United States. Prerequisites: None.

### SOC157 / 3 CREDITS / 3 PERIODS

#### 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.

### SOC180 / 3 CREDITS / 3 PERIODS

#### SOCIAL IMPLICATIONS OF TECHNOLOGY

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

### SOC266 / 3 CREDITS / 3 PERIODS

#### SOCIOLOGY THROUGH FILM

Examines movie-going and the experience of spectatorship. Studies how motion pictures reflect, influence, and are influenced by American culture and societal institutions. Explores the role of the movie industry as a vehicle for social commentary, analysis, and criticism. Prerequisites: None.

## SPA - Spanish

**SPA101 / 4 CREDITS / 4 PERIODS**

 SPA 1101

### ELEMENTARY SPANISH I

Basic grammar, pronunciation and vocabulary of the Spanish language. Includes the study of the Spanish-speaking cultures. Practice of listening, speaking, reading, and writing skills. Prerequisites: None.

**SPA102 / 4 CREDITS / 4 PERIODS**

 SPA 1102

### 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 CREDITS / 3 PERIODS**

### 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 CREDITS / 3 PERIODS**

### BEGINNING SPANISH CONVERSATION I

Conversational Spanish. Basic sentence

structure, pronunciation and vocabulary necessary to develop speaking ability in Spanish. Designed for students seeking speaking and listening abilities with little emphasis on grammar. Prerequisites: None.

**SPA116 / 3 CREDITS / 3 PERIODS**

### BEGINNING SPANISH CONVERSATION II

Continued 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 CREDITS / 3 PERIODS**

### HEALTH CARE SPANISH I

Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings. Prerequisites: None.

**SPA201 / 4 CREDITS / 4 PERIODS**

 SPA 2201

### INTERMEDIATE SPANISH I

Continued study of essential Spanish grammar and Spanish-speaking cultures. Continued practice and development of reading, writing, and speaking skills in Spanish. Emphasis on fluency and accuracy in spoken Spanish. Prerequisites: A grade of "C"

or better in SPA102, or SPA102AA, or SPA111, or permission of Department or Division. Completion of prerequisites within the last three years is required.

**SPA202 / 4 CREDITS / 4 PERIODS**

 SPA 2202

### 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.

## 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.

## SUS - Sustainability/ Natural Sciences

**SUS110 / 3 CREDITS / 3 PERIODS**

### SUSTAINABLE WORLD

Introduction to the field of sustainability and exploration of the interaction between human and natural global systems. Framework for analyzing and investigating the global challenges such as land use change, competition for water and other natural resources, and renewable energy concerns and crises. Prerequisites: None

## THE - Theatre

**THE111 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO THEATRE

A survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism. Prerequisites: None.

**THE118 / 3 CREDITS / 3 PERIODS**

### PLAYWRITING

Practice and study of theories and techniques of writing for the stage; creating characters, dialogue, and plot for monodramas, scenes, and plays. Prerequisites: None.

**THE220 / 3 CREDITS / 3 PERIODS**

 **SUN** THE 2220

### MODERN DRAMA

Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright's structure and style. Prerequisites: ENG101 or ENG107 or equivalent.

**THE260 / 3 CREDITS / 3 PERIODS**

### FILM ANALYSIS

Understanding and enjoyment of film and its correlation to literature, art, music, and other disciplines. Prerequisites: None.

## THF - Theatre and Film

**THF115 / 3 CREDITS / 4 PERIODS**

### MAKEUP FOR STAGE AND SCREEN

Purposes, materials, and techniques of makeup for stage and screen. Prerequisites: None.

**THF205 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO CINEMA

Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.

**THF209 / 3 CREDITS / 4 PERIODS**

### ACTING FOR THE CAMERA

Special technical aspects of acting before a camera. Prerequisites: THP112 or permission of Instructor.

**THF210 / 3 CREDITS / 3 PERIODS**

### CONTEMPORARY CINEMA

A study of contemporary films, directors and critics with emphasis on evaluating film as an art form. Prerequisites: None.

**THF219 / 3 CREDITS / 4 PERIODS**

### ADVANCED ACTING FOR THE CAMERA

Focuses on special technical aspects of advanced acting before a camera.

Prerequisites: THF209 or permission of Instructor.

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## THP - Theatre Performance/ Production

**THP112 / 3 CREDITS / 4 PERIODS**

### ACTING I

Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization.

Prerequisites: None.

**THP201AA / 1 CREDIT / 2 PERIODS**

### THEATRE PRODUCTION I

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

**THP201AB / 2 CREDITS / 4 PERIODS**

### THEATRE PRODUCTION II

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

**THP212 / 3 CREDITS / 4 PERIODS**

### ACTING II

Fundamental techniques of acting through

script analysis, rehearsal, and performance. Prerequisites: THP112 or departmental approval.

**THP213 / 3 CREDITS / 5 PERIODS**

### INTRODUCTION TO TECHNICAL THEATRE

Procedures of technical theatre production and demonstration. Topics include design and construction of scenery; lighting and properties. Prerequisites: None.

**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 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. Including audition techniques, talent evaluation criticism, rehearsal techniques, vocal acting styles, stage movement, and performance. Prerequisites: None

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## WAC - Writing Across Curriculum

**WAC101 / 3 CREDITS / 3 PERIODS**

### WRITING ACROSS THE CURRICULUM

Emphasis on the elements of sentence and paragraph structure, the four stages of the writing process for personal-based and expository. Extensive journal entries, editing and revision of written assignments. Prepare and write multi-paragraph essays. Assigned readings, participation in extensive workshops and groupwork. Prerequisites: Permission of Instructor.

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## WED - Wellness Education

**WED100 / 2 CREDIT / 2 PERIODS**

### PERSONAL WELLNESS

Overview of wellness and its relationship to

personal health. Understanding of personal wellness through lifestyle assessments. Introduction to wellness and health-related topics including fitness, relationships, nutrition, self care, abusive behaviors, mind/body connection, and other current issues in health. Prerequisites: None.

**WED121 / 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.

**WED144 / 3 CREDITS / 5 PERIODS**

### STRATEGIES IN DIABETES MANAGEMENT

Introduction to strategies in diabetes mellitus management and prevention for individuals diagnosed with diabetes and their caretakers. Includes a physical activity component. Prerequisites: None.

**WED151 / 3 CREDITS / 3 PERIODS**

### INTRODUCTION TO ALTERNATIVE MEDICINE

Definition of health; exploration of mind-body-spirit connection in health; various therapeutic modalities; identification of

strengths and limitations of alternative therapies. Also includes development of ability to critically review written material in the alternative therapy area. Prerequisites: None.

**WED156 / 1 CREDIT / 1 PERIOD**

### HUMOR AND PLAY

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

**WED162 / 1 CREDIT / 1 PERIOD**

### MEDITATION AND WELLNESS

Physiology of meditation and its effects on physical and mental health; scholastic abilities and interpersonal relationships; differentiation between meditation and other relaxation techniques. Prerequisites: None.

**WED165 / 2 CREDITS / 2 PERIODS**

### OVERVIEW OF MASSAGE THERAPY

History of massage; overview of bodywork systems; benefits and indications of massage; legal requirements for practice in Arizona. Prerequisites: None.

**WED170 / 1 CREDIT / 1 PERIOD**

### PRINCIPLES OF HOMEOPATHY

Origins of homeopathy; key concepts; perceptions of disease; schools of homeopathy; scientific studies; preparation of remedies; case taking. Prerequisites: None.

**WED172 / 1 CREDIT / 1 PERIOD**

### OVERVIEW OF HERBAL REMEDIES

History and evolution of herbs for healing applications. Preparation, usage, and effects of certain herbs used for healing purposes. Basic literature review skills in the area of herbal medicine. Prerequisites: None.

**WED176 / 1 CREDIT / 1 PERIOD**

### FLOWER ESSENCES

Healing properties of Bach flower remedies; Bach's development of remedies and his philosophy of healing; use and preparation of a variety of flower essences. Prerequisites: None.

**WED182 / 2 CREDITS / 2 PERIODS**

### HEALTH CONDITIONS AND POPULAR HERBS

In-depth look at some of today's most popular herbs and their relationship to specific health conditions. Emphasis on research skills in relation to popular herbs. Includes the effects, uses, and application strategies of herbs. Prerequisites: None. WED172 suggested but not required.

**WED210 / 2 CREDITS / 3 PERIODS**

### SPORTS MASSAGE

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



**WED215 / 2 CREDITS / 5 PERIODS****SELF-CARE FOR HEALTH CARE PROVIDERS**

Emphasis on mind-body methods for personal wellness through integration of physical, emotional, social, and spiritual dimensions of being. Development of a personal practice to achieve and sustain a balanced program to support personal health and well being. Prerequisites: None.

**WED218 / 1 CREDIT / 1 PERIOD****AROMATHERAPY**

Physiology of aromatherapy; methods of use; preparation of oils; uses in sports, beauty care, massage, child care, health care, at work, and in the home. Prerequisites: None.

**WED230 / 6 CREDITS / 9 PERIODS****THERAPEUTIC MASSAGE PRACTICES I**

Principles of professionalism, ethics, and legalities. Includes use of terminology related to massage therapy. Applications, indications, and contraindications of the nine strokes of Swedish massage. Study of the human osseous and muscular structure. Emphasis on normal movement patterns, origins, insertions, and functions of the muscular system. Prerequisites: (BIO160 and WED165) or permission of Program Director.

**WED231 / 6 CREDITS / 9 PERIODS****THERAPEUTIC MASSAGE PRACTICES II**

Refined application of the nine strokes of Swedish massage and contraindications to

avoid. Application of advanced principles and techniques of trigger point therapy, muscle energy technique, stretching, hydrotherapy protocols, hot and cold applications, reflexology, and corporate massage. Study of the human osseous and muscular structure. Emphasis on normal movement patterns and the origin, insertion, and function of the muscular system. Prerequisites: WED230.

**WED232 / 6 CREDITS / 10 PERIODS****THERAPEUTIC MASSAGE PRACTICES III**

Refinement and integration of technical skills, psychosocial competencies, and role identity. Exploration of techniques to assess and facilitate range of motion and function; purpose, benefits, indications, and contraindications of therapeutic massage for specific neuro-musculoskeletal disorders/injury and special populations. Application of massage techniques with therapists pre- and post-client evaluations of the client. Adaptation of massage techniques for special populations. Prerequisites: WED231. Corequisite: WED250, or permission of Program Director.

**WED250 / 3 CREDITS / 6 PERIODS****CLINICAL PRACTICUM**

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

**WED262 / 2 CREDITS / 3 PERIODS**

**ACUPRESSURE/SHIATSU I**

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

**WED264 / 2 CREDITS / 3 PERIODS**

**ACUPRESSURE/SHIATSU II**

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

**WED281 / 3 CREDITS / 3 PERIODS**

**INTRINSIC COACH TM DEVELOPMENT**

Development of intrinsic thinking skills, enabling intrinsic strategizing, and building on intrinsic resources to create a link between information about wellness and information enacted through healthy behavior change. Emphasis is on application of Intrinsic Coaching™ methodology. Prerequisites: None. Course Note: Course is designed for health and wellness professionals. Under the terms and conditions specified in the licensing agreement with Totally Coached,

Inc., and the Maricopa Community College District, only those persons licensed and approved by Totally Coached, Inc., are qualified to teach Intrinsic Coach(tm) courses or other Totally Coached, Inc., courses. These facilitators must be identified within the terms of the agreement between Totally Coached, Inc., and the Maricopa Community College District.

**WED297AA/ 1 CREDIT / 1 PERIOD**

**WED297AB/ 2 CREDITS / 2 PERIODS**

**WED297AC/ 3 CREDITS / 3 PERIODS**

**SPECIAL TOPICS: THERAPEUTIC MASSAGE**

Explores a special topic related to therapeutic massage. Topics vary and include concepts relevant to those pursuing careers in therapeutic massage. Prerequisites: None.

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**WST - Women's Studies**

**WST100 / 3 CREDITS / 3 PERIODS**

**INTRODUCTION TO WOMEN'S AND GENDER STUDIES**

Introduction to critical issues in women's studies. Prerequisites: None.

**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: ENG101 or permission of Instructor.

**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.

**WST290 / 3 CREDITS / 3 PERIODS****WOMEN AND WORLD RELIGION**

Focus on the role of women in several organized religions and/or religious sects. Study of myth and symbols as they are used to establish, maintain, and enforce sex-roles within specific cultural contexts around the world. Prerequisites: None.

.....

## Information Regarding Special Courses Not Listed in the College Catalog

**COOPERATIVE EDUCATION (COURSES NUMBERED 296)**

Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Permission of Program Director or instructor. Corequisites: Must be concurrently enrolled in at least one class related to job/co-op subject area; must maintain an enrollment ratio of two (2) hours of credit in other courses for every

one (1) hour of Cooperative Education credit (excluding radio and television); a maximum of sixteen (16) hours of Cooperative Education credit is allowable in a college program.

**SPECIAL PROJECTS (COURSES NUMBERED 298)**

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

.....

## Shared Unique Number (SUN) System



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

Additional information about SUN System can be found at [www.azsunsystem.com](http://www.azsunsystem.com)





## ADMINISTRATION & FACULTY INDEX

## Administration

### Maricopa County Community College District Governing Board

MARICOPA COUNTY COMMUNITY  
COLLEGE DISTRICT, DISTRICT  
SUPPORT SERVICES CENTER  
2411 WEST 14TH STREET  
TEMPE, ARIZONA 85281-6942  
(480) 731-8889

#### MR. LAURIN HENDRIX

PRESIDENT

Current Term Expires:12/31/2020

District 1

Representing Chandler-Gilbert Community  
College, Mesa Community College, Rio Salado  
College, and the MCCCCD District Office

#### DR. LINDA THOR

SECRETARY

Current Term Expires:12/31/2020

District At Large

Representing Maricopa County

#### MR. ALFREDO GUTIERREZ

MEMBER

Current Term Expires:12/31/2020

District 5

Representing Estrella Mountain Community  
College, GateWay Community College,  
Maricopa Skill Center, and South Mountain  
Community College

#### MS. JOHANNA HAVER

MEMBER

Current Term Expires:12/31/2018

District 3

Representing Paradise Valley  
Community College and Phoenix College

#### MS. TRACY LIVINGSTON

MEMBER

Current Term Expires:12/31/2018

District At Large

Representing Maricopa County

#### MS. JEAN MCGRATH

MEMBER

Current Term Expires:12/31/2018

District 4

Representing Estrella Mountain Community  
College, Southwest Skill Center and Glendale  
Community College

#### MR. DANA G. SAAR

MEMBER

Current Term Expires:12/31/2020

District 2

Representing Mesa Community College  
- Red Mountain Campus and Scottsdale  
Community College

## **Maricopa County Community College District Administration**

2411 WEST 14TH STREET  
TEMPE, ARIZONA 85281-6942  
(480) 731-8000

**DR. MARIA HARPER-MARINICK**  
CHANCELLOR

**DR. PAUL DALE**  
INTERIM EXECUTIVE VICE  
CHANCELLOR AND PROVOST

**MS. GAYE MURPHY**  
VICE CHANCELLOR,  
BUSINESS SERVICES

**MS. LACOYA SHELTON JOHNSON**  
VICE CHANCELLOR,  
HUMAN RESOURCES

**MS. CHRISTINA SCHULTZ**  
VICE CHANCELLOR, RESOURCE  
DEVELOPMENT AND COMMUNITY  
RELATIONS, PRESIDENT AND CEO  
MARICOPA COMMUNITY COLLEGES  
FOUNDATION

**MR. ED KELTY**  
VICE CHANCELLOR, INFORMATION  
TECHNOLOGY SERVICES / CIO

## **Chandler-Gilbert Community College Administration**

2626 E. PECOS ROAD  
CHANDLER, ARIZONA 85225  
(480) 732-7000

**DR. WILLIAM GUERRIERO**  
INTERIM PRESIDENT

B.A., Aquinas College;  
M.S., Central Michigan University;  
Ed.D., Northern Arizona University.

**DR. WILLIAM CRAWFORD III**  
VICE PRESIDENT, STUDENT AFFAIRS  
B.S., Arizona State University;  
M.Ed., Ed.D., Northern Arizona University.

**MR. BRADLEY KENDREX**  
VICE PRESIDENT,  
ADMINISTRATIVE SERVICES  
B.S., M.P.A., Arizona State University.

**DR. CHARLES NWANKWO**  
VICE PRESIDENT, INFORMATION  
TECHNOLOGY AND MEDIA SERVICES  
A.S., Houston Community College;  
B.S., M.S., University of Houston-Clear Lake;  
Ph.D., University of Texas at Austin.

**DR. CYNTHIA BARNES**  
DEAN, COMMUNITY AFFAIRS  
B.S., M.S., Ph.D., Arizona State University.

**DR. DANIEL HERBST**

DEAN, STUDENT AFFAIRS  
B.S., M.S., Illinois State University;  
Ed.D., Ferris State University.

**MS. GABRIELA ROSU**

DEAN, INSTRUCTION  
B.S., Robert Morris University;  
M.S., Duquesne University.

**MR. CHRISTOPHER J. SCHNICK**

DEAN, ARTS AND SCIENCES  
B.S., M.A., University of Maryland,  
College Park.

**MS. BERNADETTE LA MAZZA**

ASSOCIATE DEAN,  
BUSINESS OPERATIONS  
M.A., University of Phoenix  
MAOM, PHR, SHRM-CP.

.....  
**Faculty**

**ADAMS, RYAN**

COUNSELING  
B.S., University of Illinois;  
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.

**BADER, SHERRICK**

EMERGENCY MEDICAL TECHNOLOGY  
G.S., Mesa Community College;  
Certified Emergency Paramedic, Mesa  
Community College.

**BAHAM, MELINDA E.**

PSYCHOLOGY  
B.A., University of the Pacific;  
M.A., Ph.D., Arizona State University.

**BAKER, PATRICIA**

COMPUTER SCIENCE &  
COMPUTER INFORMATION SYSTEMS  
B.S., University of Michigan;  
M.C.S., Arizona State University.

**BARRIOS, RENÉ**

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.

**BINGHAM, CYNTHIA F.**

SPANISH  
B.A., Brigham Young University;  
Certificate, Latin American Studies;  
M.A., 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.

**BRAATEN, ANTHONY**

COMMUNICATION

B.S., M.Ed., Northern Arizona University.

**BRAME, JOEL**

BIOLOGY

B.A., Louisiana Technical University;

M.Ed., Northeast Louisiana University;

N.D., Canadian College of Naturopathic  
Medicine.

**BURGOYNE, MARY BETH**

LIBRARY

B.A., Arizona State University;

M.L.S., University of Arizona.

**BURRIS, JONI**

EDUCATION

B.S., M.Ed., Ph.D., University of North Dakota.

**CANHAM, JEANNE**

MATHEMATICS

B.S., Taylor University;

M.Ed., Arizona State University.

**CASH, SCOTT**

AVIATION

A.A.S., Aircraft Maintenance Technology,  
Spartan College of Aeronautics and  
Technology.

**CESCHIAT, MICHAEL**

ART (CERAMICS)

B.F.A., Columbus College of Art and Design;

M.F.A., University of New Mexico.

**CHARDON, DIANE**

ENGLISH AND HUMANITIES

B.A., Louisiana State University;

M.A., Ph.D., Arizona State University.

**CHUPPA-CORNELL, KIMBERLY**

LIBRARY

B.A., M.A., Arizona State University;

M.L.S., University of Arizona;

Ed.D., Northern Arizona University.

**CHURCH, MICAELA**

DANCE

M.F.A., Arizona State University;

B.A., B.M., Alma College.

**CORREA, FABIO**

SPANISH

M.A., Ph.D., Arizona State University.

**COX, FRANK (TREY)**

MATHEMATICS

B.A., M.S., Concordia University Wisconsin;

Ph.D., Arizona State University.

**DEAN, JOHN**

ENGLISH

B.A., Arizona State University;

M.F.A., Texas State University.

**DENTON, MARCUS L.**

VOCAL MUSIC

B.A., Arizona State University;

M.M., Brigham Young University.

**DICHTENBERG, CAROL L.**

DIVISION CHAIR, LIBRARY, LEARNING  
CENTER & COUNSELING

B.A., State University College at Buffalo;

M.L.S., University at Buffalo.

**DI SCALA, CAMILLE**

BIOLOGY

B.A., Herbert H. Lehman College of the City  
University of New York;

M.D., Albert Einstein College of Medicine.

**DOHERTY, ROBERT**

COMMUNICATION

A.A.S., Clinton Community College;

A.A.S., Community College of the Air Force;

B.A., State University of New York  
at Plattsburgh;

B.A., Columbia College;

M.A., University of Northern Colorado.

**DWORK, JESSICA D.**

CLINICAL NURSING

A.A.S., Chandler-Gilbert Community College;

B.S.N., Grand Canyon University;

M.S.N., University of Phoenix.

**EDWARDS, VIRGINIA**

DIVISION CHAIR, MODERN LANGUAGES  
& HUMANITIES; ENGLISH AS A SECOND  
LANGUAGE

A.A., Chandler-Gilbert Community College;

B.A., M.C., Arizona State University.

**FALLETTA, EVA**

DIRECTOR, LEARNING CENTER

B.Acc., New Mexico State University;

M.C., Arizona State University;

M.Ed., Northern Arizona University.

**FERNANDEZ, MIGUEL**

ENGLISH

B.A., M.A., New York University.

**FINLEY, DAVID**

ENGLISH

B.A., Appalachian State University;

M.A., Arizona State University.

**FINN, PATRICK**

ENGLISH

A.A., Riverside Community College;

B.A., University of California, Riverside;

M.F.A., University of Arizona.

**FISH, GREG**

ELECTRIC UTILITY TECHNOLOGY

JEL, Prof of EUT.

**FISHER, MATTHEW A.**

ACCOUNTING/BUSINESS

B.S., Brigham Young University;

M.Acc., University of Arizona; CPA.

**FLANIGAN, KAREN**

DIVISION CHAIR, NURSING

B.S.N., M.S.N., Arizona State University; RN.

**FLAHERTY, SEAN**

PHYSICS

B.S., California Lutheran University;

M.N.S., Arizona State University.

**FORD, SIDNEY E.**

ACCOUNTING

B.B.A., Wichita State University;

M.B.A., Arizona State University;

CPA.

**FOSTER, TOM**

BUSINESS & COMPUTER  
INFORMATION SYSTEMS

A.A., Mesa Community College;

Certificate, Institutional Research;

B.A.Ed., M.Ed., Ed.D., Arizona State University.

**FOUREMAN, POLLY**

BIOLOGY

A.B., Brown University;

M.S, Ph.D., University of Wisconsin-Madison;

D.V.M., Cornell University.

**FUENTES, ANGEL G.**DIVISION CHAIR, PHYSICAL SCIENCES  
& ENGINEERINGB.S., University of Puerto Rico-Mayaguez  
Campus;  
M.S., Arizona State University.**GARZA, LIBRADO (LEE)**ACCOUNTING, GENERAL BUSINESS,  
MARKETING & MANAGEMENTB.B.A., M.B.A., University of Texas  
at San Antonio;  
Ed.D., Arizona State 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.

**GRAFEL, DEIDRE**COMPUTER INFORMATION SYSTEMS &  
INFORMATION TECHNOLOGYB.A., University of Florida;  
M.A., Jacksonville University;  
MCSE, MCT, MCSD.**GUO, YI Q.**

CHEMISTRY

B.S., University of Science and  
Technology of China;  
M.S., University of California, Los Angeles;  
Ph.D., University of Iowa.**HAMAN, RITA**

CLINICAL NURSING

A.A.S., Bergen Community College;  
B.S.N., Ramapo College;  
M.S.N.Ed., Walden University;  
D.N.P, Walden University.**HARDY, ALISON**

CLINICAL NURSING

A.S., Phoenix College;  
B.S., M.S.N, Grand Canyon University;  
R.N.**HEATH, DARBY**DIVISION CHAIR, SOCIAL &  
BEHAVIORAL SCIENCES;  
ANTHROPOLOGY

B.A.E., M.A., Arizona State University.

**HORN, HEATHER**

ENGLISH

B.A., Rice University;  
M.A., Ph.D., University of Wisconsin-  
Madison.**HUNTER, KATHLEEN**

BUSINESS, PERSONAL COMPUTERS

B.A., Arizona State University;  
M.A., Northern Arizona University;  
MCSE, MCP+I, A+.**HUTTO, CLARENCE (MIKE)**

AVIATION

A.A., Mesa Community College;  
B.A., St. Leo College.**JOHNSON, MONICA**

LIBRARY

B.A., California Lutheran University;  
M.A., University of Arizona.**JOYNER, KACIE**

MATHEMATICS

B.B.A., Texas Christian University;  
M.N.S., Arizona State University.

**JULIAN, WILLIAM**

## AVIATION

Aircraft Maintenance Technology,  
Kansas College of Technology;

A.A.S., Eastern New Mexico University.

**KHALIL, BASHIR M.**

## AVIATION

A.A., A.S., Cochise College;

B.S., M.S., Indiana State University.

**KILBRIDGE, CHRISTINE**

## LIBRARY

B.A., Alma College;

M.A., Kansas State University;

M.L.I.S., Wayne State University.

**KRISHNASWAMY, SUJATHA**

## CHEMISTRY

B.S., University of Madras;

M.S., Indian Institute of Technology;

M.S., Ph.D., Vanderbilt University.

**KUTZKE, LEON**

## ADMINISTRATION OF JUSTICE STUDIES

B.A., Sasinaw Valley State University;

M.A., University of Northern Colorado;

J.D., DePaul University College of Law,  
Chicago.

**LAFURIE, ENJOLIE**

## PSYCHOLOGY

B.S., Cal State U-Fullerton;

M.S.Ed, University of Southern California;

Ph.D., Arizona State University.

**LLAMAS-FLORES, SILVIA**

## MATHEMATICS

B.S., M.A., University of California,  
Los Angeles;

Ph.D., Arizona State University.

**MAINES, NICKI**

## BUSINESS

B.S., Townson University;

M.B.A, University of Baltimore.

**MARKS, PAMELA**

## CHEMISTRY

B.S., St. Olaf College;

M.S., University of Arizona.

**MATAR, BASSAM**

## ENGINEERING

B.S.E.E., Northern Arizona University;

M.S.E.E., Oklahoma State University.

**MATAR, WENDY C.**

## ENGLISH

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

**MCCLOSKEY, MICHAEL (IAN)**

## AVIATION

A.A.S., Cochise Community College;

B.S., Eastern Mennonite University.

**MCDONALD, KRISTY**

## PSYCHOLOGY

B.S., M.A., Ph.D., Arizona State University.

**MCFAVILEN, MICHAEL**

## CHEMISTRY

B.S., M.S., University of California  
at San Diego;

M.S., Arizona State University.

**MCGEE, KIMBERLY**

## HEALTH EDUCATION

B.S., M.S., Ph.D., Arizona State University.

**MCGLOSSON, MARY J.**

## ECONOMICS

B.A., B.S., State University of New York  
at Binghamton;

Ph.D., Arizona State University.

**MCMANAWAY, CARLA J.**

MATHEMATICS

A.A.S., Lake Land Community College;  
B.A., Arizona State University;  
M.Ed., Northern Arizona University.

**MENG, LINDA D.**

MATHEMATICS

B.A., Ottawa University;  
M.Ed., Northern Arizona University.

**MILLER, TRACY LIZ**

THEATRE ARTS

B.F.A., Western Michigan University;  
M.F.A., University of Alabama.

**MORELOS, NOEL**

POLITICAL SCIENCE

B.A., San Diego State University;  
M.A., California State University, Long Beach.

**MORGAN, CHARLES P.**

AVIATION

A.A.S., Chandler-Gilbert Community College;  
B.A.S., Arizona State University.

**MOSER, TERI**

ENGLISH

B.A., M.A., Utah State University;  
Ph.D., Arizona State University.

**MOWAD, NICHOLAS**

PHILOSOPHY

B.A., University of Texas at Austin;  
M.A., Ph.D., Loyola University Chicago.

**MUÑOZ, DAVID**

PHILOSOPHY AND RELIGIOUS STUDIES

A.A., Southwestern College;  
B.A., Grand Canyon University;  
M.A., Fuller Theological Seminary;  
M.A., Arizona State University;  
Ph.D., Trinity Theological Seminary.

**MUNRO, REGINA (REGI)**

DIVISION CHAIR, BIOLOGICAL SCIENCES

B.A., University of Wisconsin-Eau Claire;  
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ACSM-HFI, CSCS.

**NIESET, NICOLE**

COUNSELING

B.A., Ohio State University, Columbus;  
M.Ed., Ph.D., Arizona State University.

**NUNEVILLER, BETH**

BUSINESS

B.S., Arkansas State University;  
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**OHRNBERGER, MARYELLEN**

READING

B.A., CUNY Queens College;  
M.Ed., Arizona State University.

**O'MARA, KATHLEEN (KATE)**

ART HISTORY

B.A., Oakland University;  
M.A., Wayne State University.

**OROZCO, MYRNA (ESTELA)**

BIOLOGY

B.S., M.S., University of Texas at El Paso;  
B.S., D.V.M., Texas A&M University.

**PATTERSON, KIMBERLEY**

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B.S., Arizona State University;  
DVM, Oklahoma State University.

**PARDO, ROBERTA**

MATHEMATICS

B.S., M.Ed., Northern Arizona University.

**PAULS, JENNIFER**

PHYSICS AND MATHEMATICS

B.A., B.S., Bethel College;  
Ph.D., University of Kansas.

**PEARSON, THOMAS**DIVISION CHAIR, BUSINESS &  
COMPUTING STUDIESA.A.S., Community College of the Air Force;  
B.S., Hawaii Pacific University;  
M.S., University of Phoenix.**PETERSON, JENNIFER**

EDUCATION

B.S., Minnesota State University Moorhead;  
M.Ed., Northern Arizona University.**PETREQUIN, PAUL**

HISTORY

B.A., University of Oregon;  
M.A., Ph.D., University of California, Santa  
Cruz.**PODMANIK, MILOS**

MATH

B.A., Arizona State University;  
M.S., Northern Arizona University.**RAMAKRISHNA, PUSHPA**

BIOLOGY

B.S., M.S., Bangalore University;  
M.N.S., Ed.D., Arizona State University.**RAMOS, BELINDA T.**

PSYCHOLOGY

B.A., M.A., Ph.D., Northwestern University.

**RAYAPPA, PREMA**COMPUTER SCIENCE & COMPUTER  
INFORMATION SYSTEMSOCA Oracle Developer Certified Associate;  
B.S., Bangalore University (India);  
M.S., Arizona State University.**REEDER, KAREN**

PSYCHOLOGY

B.A., M.Ed., Ph.D., Arizona State University.

**REIDER, CHRISTOPHER**

EDUCATION

B.A., Arizona State University;  
M.A.Ed., Ottawa University.**REINEKE, YVONNE**

ENGLISH

B.A., University of Michigan, Ann Arbor;  
M.A., Wayne State University;  
Ph.D., University of California-Irvine.**REYNOLDS-GARZA, ANNE**

MATHEMATICS

B.A., Eastern Illinois University;  
M.A., M.Ed., Framingham State University.**RICHARDSON, ARLISA**

PHYSICS

B.S., M.A., Grambling State University;  
M.S., University of Texas at Dallas;  
M.S., Ph.D., Arizona State University.**RUDE, RENÉE**

ENGLISH

B.S., M.E., Northern Arizona University.

**SANDOVAL, VANESSA**

COMMUNICATION

B.A., University of Arizona;  
M.Ed., M.A., Northern Arizona University.**SANTORO, MICHAEL**

GEOLOGY

B.S., M.A., Ph.D., Arizona State University.

**SCHIESSER, ROY**

GEOLOGY

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

**SHORT, LANA**BUSINESS AND PERSONAL  
COMPUTERS & COMPUTER  
INFORMATION SYSTEMS (BPC/CIS)AAS Phoenix College;  
M.E.d, St. Petersburg State;  
Pedagogical University.

**SILBERMAN, SCOTT W.**  
PSYCHOLOGY

B.A., University of Arizona;  
M.A., University of Georgia;  
Ph.D., Arizona State University.

**SINDEL-ARRINGTON, TRICIA**  
READING

B.S., University of Arizona;  
M.Ed., Northern Arizona University;  
Ph.D., Arizona State University.

**SMALLWOOD, LAURA**  
MATHEMATICS

B.S., University of Arizona;  
M.B.A., M.S., Arizona State University.

**SNYDER, ERIC**  
DIVISION CHAIR, AVIATION & APPLIED  
TECHNOLOGY; AVIATION

B.S., Southern Illinois University.

**SPEIER, HOWARD S.**  
MATHEMATICS

B.A., M.S., State University of New York  
at New Paltz.

**STEELE, AREZOO (SUE)**  
MATHEMATICS

B.S., University of Melbourne, Australia;  
M.S., Arizona State University.

**SWAN, GREGORY C.**  
BUSINESS

A.A.S., Mesa Community College;  
B.S., M.Acc., Arizona State University;  
Ed.D., Northern Arizona University;  
CPA, MCP, CDP.

**TAGGART, THOMAS R.**  
MORTUARY SCIENCES

BS., Auroa University;  
MS., Northern Illinois;  
Ed.D., Mississippi State;  
Ed.S., Mississippi State.

**TERRELL, CARYL**  
ENGLISH AND HUMANITIES

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

**THOMPSON, DONNA**  
ENGLISH

B.A., Yale University;  
M.A., Duke University.

**TINKLE-WILLIAMS, KEZIAH**  
ENGLISH

A.A., Spokane Community College;  
B.A., M.A., Eastern Washington University.

**TOMS, MALIK**  
ENGLISH

B.A., M.A., Iowa State University.

**TOVAR-BLANK, ZOILA**  
PSYCHOLOGY

B.A., Stanford University;  
M.Ed., Ph.D., Arizona State University.

**TRONE, GREGORY**  
DIVISION CHAIR, HEALTH SCIENCES;  
HEALTH EDUCATION

B.A., University of North Carolina  
at Wilmington;  
M.S., Appalachian State University;  
Ph.D., Arizona State University.

**VALENZUELA-EMANUEL, KRISTA**  
ENGLISH AS A SECOND LANGUAGE

B.A.E., Arizona State University;  
M.A., Northern Arizona University.

**VILLARREAL, ANDREA**  
NUTRITION

B.S., M.S., Oregon State University.

**WEAVER, MARK**  
ELECTRIC UTILITY TECHNOLOGY

JEL, ELE, Prof EUT.



**WELLNER, KAREN**

BIOLOGY

B.S., State University of New York at Oneonta;  
M.S., Ph. D., Arizona State University;  
M.A., Ph.D., University of Iowa.

**WILLIAMS, PATRICK**

ENGLISH

B.A., M.A., Eastern Washington University;  
Ed.D., Northern Arizona University.

**WILSON, FRANK**

DIVISION CHAIR,  
MATHEMATICS

B.S., M.S., Brigham Young University;  
Ph.D., Northcentral University.

**WOLTER, WILLIAM T. (TED)**

ART

B.A., Western Illinois University;  
M.F.A., University of Illinois at  
Urbana-Champaign.

**WOOD, LORELEI**

CHEMISTRY

B.S., M.A., Northern Arizona University;  
Ph.D., from Arizona State University.

**WOODBURY, PAMELA**

MATHEMATICS

B.S., University of Miami;  
M.S., Lehigh University.

**WOODRUM, BRIAN**

CHEMISTRY

B.S., Elmhurst College;  
Ph.D., Arizona State University.

**WRIGHT, RANDALL**

DIVISION CHAIR,  
COMMUNICATION AND FINE ARTS;  
INSTRUMENTAL MUSIC

B.M.E., M.M., Northern Arizona University.

**YEE, SHARON**

SOCIOLOGY

B.A., M.A., Ph.D., Arizona State University.

**ZAMILA, MARIAM**

COMMUNICATION

B.A., M.A., Texas State University.

**ZEHR, LINDA**

ECONOMICS

B.A., M.A., St. Mary's University.

**ZIMMERER, MARY**

DIVISION CHAIR,  
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## **GLOSSARY OF COLLEGE TERMINOLOGY**

### **ACADEMIC LOAD**

The total number of credit hours taken in a term. Twelve credit hours is considered a full-time load.

### **ACADEMIC ADVISOR**

A designated staff member who has received training to provide students with academic information that will direct them to the appropriate classes to achieve their educational goals and enhance their academic success.

### **ADMISSION**

Acceptance into a college after the student has filed a completed Student Information Form with the Admissions, Records and Registration Office and has been admitted according to admissions criteria. Students who have been admitted are eligible to register for courses.

### **AGEC**

A 35-semester-credit general education program of study that fulfills lower-division general education requirements for students planning to transfer to any Arizona public community college or university and transfers as a block without loss of credit.

### **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.

### **COCURRICULAR 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:  $A=4 \text{ points} \times 3 \text{ (credit hours)} = 12 \text{ points}$ .

**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,  $45 \text{ grade points} \div 15 \text{ credit hours} = 3.0 \text{ GPA}$ .

**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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(623) 935-8000

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