COCHISE COLLEGE

Catalog
2016-2017

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Welcome to Cochise College

Dear students,

I am pleased you have chosen to enroll in one of the United States' top community colleges. If making possibility become reality is important to you, you've come to the right place.

The college is regularly eligible for the Aspen Prize, the nation's signature recognition of high achievement and performance among America's community colleges. SmartAsset.com also ranked the college third in the nation in both 2014 and 2015.

What makes Cochise so special? Cost of attendance, return on investment, graduation success rate, student-teacher ratio, exceptional student outcomes in learning, certificate and degree completion, employment and earnings, and access and success for minority and low-income students make us stand out.

Cochise College is big enough to explore, and small enough to care. Our high-quality instruction, small class size, superior support services and outstanding student life opportunities put possibility within reach.

We wish you the very best as you pursue your future and hope you enjoy your time at Cochise, a college where individuals matter and dreams are realized.

Sincerely,

J.D. Rottweiler, Ph.D.
College President

Toll Free: (800) 966-7943
www.cochise.edu
Regular Hours: 8 a.m. - 4:30 p.m. Monday - Friday
Summer Hours: May 16 – Aug. 11, 2016, 7 a.m. – 5 p.m. Monday - Thursday
All information, including statements on tuition, fees, course offerings, admission, and graduation requirements, is subject to change without notice, obligation or liability.
Published: May 2016
Cochise College is an equal-opportunity, affirmative-action employer and educational institution committed to excellence through diversity.

College Locations

Benson Center

1025 State Route 90
Benson, Arizona 85602-6501
(520) 586-1981
Benson Center Map - www.cochise.edu/contact/benson-center/

The Benson Center is a 13,000-square-foot facility that includes classrooms, computer labs, a learning center and interactive television capabilities. For-credit, developmental, and personal interest classes are offered in the day and evening. Full-time staff assists students with admissions, registration, placement testing and financial aid.

Douglas Campus

4190 West Highway 80
Douglas, AZ 85607-6190
(520) 364-7943
Douglas Campus Map - www.cochise.edu/contact/douglas-campus/

The Douglas Campus is located in a scenic area between Douglas and Bisbee and serves approximately 1,000 students each semester with a diverse curriculum of general education, transfer and direct employment programs, and adult education classes. The campus includes residence halls, an on-campus airport and athletic facilities.

Douglas Prison

ASPC-Douglas
6911 North BDI Boulevard
Douglas, AZ 85607
(520) 364-7521, Extension 34130

Cochise College provides an opportunity for incarcerated students to further their educational goals by offering career and technical education programs at the Douglas prison. Full-time correctional education faculty teach classes that provide incarcerated students with valuable knowledge and marketable skills necessary for them to contribute positively to their families and communities.

Downtown Center

2600 East Wilcox Drive
Sierra Vista, AZ 85635

In 2016, Cochise College began offering classes in a new facility on Wilcox Drive in downtown Sierra Vista. The Downtown Center offers degrees and certificates in nursing and health sciences, culinary arts and electronics technology.

The center also provides continuing education classes and entrepreneurial advising through the Center for Lifelong Learning and Small Business Development Center.

Fort Huachuca

Army Education Center
Building 52104
Fort Huachuca, AZ 85613-6000
(520) 533-2391
Fort Huachuca Center Map - www.cochise.edu/contact/fort-huachuca-center/

The Cochise College office on Fort Huachuca (Building 52104) provides advising and student services to military students and their families as well as civilians who can access Fort Huachuca. Classes are usually offered in eight-week sessions and meet in the classrooms at the Fort Huachuca Center (Building 67601).

Santa Cruz Center

2021 North Grand Avenue
Nogales, Arizona 85621
(520) 287-5583
Santa Cruz Center Map - www.cochise.edu/contact/santa-cruz-center/

Cochise College began offering classes in Santa Cruz County in October 2003. The Santa Cruz Center moved to its current location on Grand Avenue, a 28,000-square-foot facility, in 2013. Full-time staff assists students with admissions, registration, placement testing and financial aid. Classes also meet at other locations in the county.

Sierra Vista Campus

901 North Colombo Avenue
Sierra Vista, AZ 85635-2317
(520) 515-0500
Sierra Vista Campus Map - www.cochise.edu/contact/sierra-vista-campus/

The Sierra Vista Campus is located at the eastern edge of Sierra Vista, approximately one mile northeast of the junction of state highways 90 and 92. The Sierra Vista Campus serves about 2,000 students each semester with a diverse curriculum of general education, transfer and direct employment programs, and adult education classes.

Virtual Campus

Fort Huachuca Center
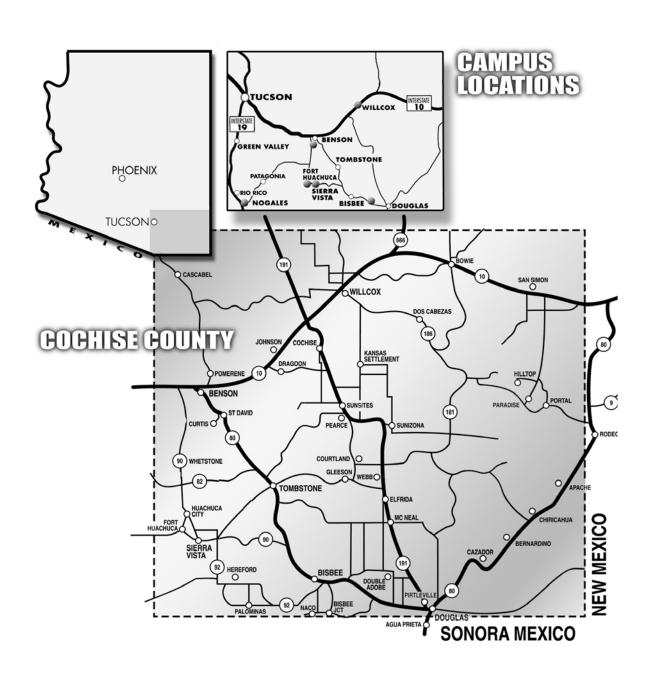Building 67601
Fort Huachuca, AZ 85613

(520) 335-1596

Cochise College offers an array of web-based courses that students can take separately or as part of a degree or certificate program. Online courses meet the same standard as traditional classes and use Internet resources to enrich the educational experience and provide scheduling flexibility.

Willcox Center

470 N. Bisbee Ave.
Willcox, Arizona 85643-1500
(520) 384-4502
Willcox Center Map - www.cochise.edu/contact/willcox-center/

The Willcox Center is located on Willcox Unified School District property near the community high school. The center, serving approximately 200 students with day and evening classes, opened in 2010 with several classrooms, computer and science labs, open study space, and interactive television capabilities. Full-time staff assists with admissions, registration, placement testing and financial aid.

AREA MAP

Academic Calendar

SUMMER SEMESTER 2016

Summer business hours	May 16 - Aug. 11
Last day to apply for August graduation	July 7
Eight-Week Session:	*May 31 - July 21*
Last day to add classes (the day before the class begins)	May 30
Last day to change to withdraw or audit status	July 14
Grades due by noon	July 25
First Five-Week Session:	*May 31 - June 30*
Last day to add classes (the day before the class begins)	May 30
Last day to change to withdraw or audit status	June 23
Grades due by noon	July 6
Second Five-Week Session:	*July 5 - Aug. 8*
Last day to add classes (the day before the class begins)	July 4
Last day to withdraw or change to audit status	August 3
Grades due by noon	August 11
Financial Aid:	
Summer freeze date*	June 7
Summer disbursement date	June 8
Last day to accept summer financial aid applications	June 15
Second Five-Week freeze date*	July 12
Second Five-Week disbursement date	July 13
PFT 1, UAS 1 freeze date*	August 2
PFT 1, UAS 1 disbursement date	August 3
* Financial aid will not pay for classes added after this date.	
Holidays (no classes):	
Memorial Day	May 30
Independence Day	July 4

FALL SEMESTER 2016

Convocation (offices closed)	August 15
Saturday registration	August 20
Residence halls open	Aug. 20 - Dec. 16
Spring registration begins	November 1
Last day to apply for December graduation	November 1
16-Week Semester:	*Aug. 22 - Dec. 12*
Last day to add classes (the day before the class begins)	August 21
Last day to withdraw or change to audit status	December 1
Finals (including Saturday)	Dec. 6 - 12
Grades due by noon	December 15
First Eight-Week Session:	*Aug. 22 - Oct. 17*
Last day to add classes (the day before the class begins)	August 21
Last day to withdraw or change to audit status	October 12
Grades due by noon	October 20
Second Eight-Week Session:	*Oct. 18 - Dec. 12*
Last day to add classes (the day before the class begins)	October 17
Last day to withdraw or change to audit status	December 7
Grades due by noon	December 15
Financial Aid:	
16-week and First Eight-Week freeze date*	August 30
16-week and First Eight-Week disbursement date	August 31
PFT 2 freeze date*	October 12
PFT 2 disbursement date	October 13
Second Eight-Week freeze date*	October 25
Second Eight-Week disbursement date	October 26
* Financial aid will not pay for classes added after this date.	
Holidays (no classes):	
Labor Day	September 5
Columbus Day	October 10
Veterans Day	November 11
Thanksgiving recess	Nov. 24 - 27
Winter break (all staff)	Dec. 19 - Jan. 1

SPRING SEMESTER 2017

Saturday registration	January 7
Residence halls open	Jan. 7 - May 12
Summer and Fall registration begins	May 1
Last day to apply for May graduation	April 7
Commencement	May 12
16-Week Semester:	*Jan. 9 - May 8*
Last day to add classes (the day before the class begins)	January 8
Last day to withdraw or change to audit status	April 27
Finals (including Saturday)	May 2 - 8
Grades due by noon	May 11
First Eight-Week Session:	*Jan. 9 - March 3*
Last day to add classes (the day before the class begins)	January 8
Last day to withdraw or change to audit status	February 24
Grades due by noon	March 8
Second Eight-Week Session:	*March 14 - May 8*
Last day to add classes (the day before the class begins)	March 13
Last day to withdraw or change to audit status	May 3
Grades due by noon	May 11
Financial Aid:	
16-Week and First Eight-Week and PFT 3, UAS 3 freeze date*	January 18
16-Week and First Eight-Week and PFT 3, UAS 3 disbursement date	January 19
Second Eight-Week Session freeze date*	March 22
Second Eight-Week Session disbursement date	March 23
PFT 4, UAS 4 freeze date*	April 5
PFT 4, UAS 4 disbursement date	April 6
* Financial aid will not pay for classes added after this date.	
Holidays (no classes):	
Martin Luther King Day	January 16
Lincoln/ Washington Presidents' Day	February 20
Spring Break	March 6 - 10

General Information

HISTORY

Cochise College opened its doors in 1964 as one of the first community colleges in Arizona. It is located in an area rich in history and cultural diversity and has come a long way from its humble beginnings, when the administration offices were housed in the Gadsden Hotel in Douglas.

From the beginning, the college has been committed to serving citizens throughout Cochise County. It has since extended its service area to neighboring Santa Cruz County through an agreement with the Santa Cruz County Provisional Community College District. Cochise College is Arizona's largest rural community college, serving approximately 15,000 students annually.

The establishment of the college can be attributed to the efforts of the dedicated citizens of Cochise County, who voted in 1961 to create a community college district. A 1962 bond election resulted in the construction of the Douglas Campus, a 540-acre facility featuring unique architecture and panoramic views of the Mule and Chiricahua mountains, as well as neighboring Sonora, Mexico.

The population growth of Fort Huachuca and Sierra Vista and the increased interest in higher education created a need for a second campus in the western part of the county. The campus in Sierra Vista evolved from a handful of temporary buildings at Buena High School in the early 1970s to the full-fledged separate campus that opened its doors to classes in 1978 at its present location on North Colombo Avenue. In partnership with Fort Huachuca, Cochise College also occupies a facility on post, providing classes and support services to active military and community-based residents.

The Benson Center opened in fall 2000 in the northwestern part of Cochise County. The Willcox Center opened in 2010 on Willcox Unified School District property in northeastern Cochise County. These centers provide a variety of programs and services throughout the region.

The development of community-directed services has included the Center for Lifelong Learning, the Small Business Development Center, the Virtual Campus, the Correctional Education Division, Adult Education, and the Center for Economic Research. The college has increased its offering of educational programs while expanding partnerships with K-12 schools, universities and local industries.

In recent years, the college has put significant resources toward facility renewal projects across the district. On both its Douglas and Sierra Vista campuses, new construction and major renovations provide space to meet the needs of 21st-century learners and educators. In addition, the college has

made major technology investments in its classrooms and support areas.

Cochise College continues its journey as a learning community. This direction focuses on teaching and learning, access and diversity, and the use of technology and innovative instruction.

ACCREDITATIONS AND CERTIFICATIONS

Cochise College is accredited by the Higher Learning Commission of the North Central Association. In 2015, the college received the maximum accreditation of 10 years; the next re-accreditation visit will be in 2025-2026. The college holds memberships in the Council of North Central Two-Year Colleges, the American Association of Community Colleges, the Hispanic Association of Colleges and Universities (HACU) and the Association of Community College Trustees.

> The Higher Learning Commission of the North Central Association
> 30 N. LaSalle Street, Suite 2400
> Chicago, IL 60602-2504
> (800) 621-7440 or (312) 263-0456
> Fax: (312) 263-7462
> www.ncahlc.org

The nursing program is accredited by the Accreditation Commission for Education in Nursing and the Arizona State Board of Nursing.

> Accreditation Commission for Education in Nursing
> 3343 Peachtree Road NE, Suite 850
> Atlanta, GA 30326
> (404) 975-5000
> Fax: (404) 975-5020
> www.acenursing.org

> Arizona State Board of Nursing
> 4747 N. 7th Street, Suite 200
> Phoenix, AZ 85014
> (602) 889-5150
> Fax: (602) 889-5155
> www.azbn.gov

The paramedicine program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

> Commission on Accreditation of Allied Health Education Programs
> 1361 Park Street

Clearwater, FL 33756
(727) 210-2350
www.caahep.org

The paramedicine and emergency medical technician programs are certified through Arizona Department of Health Services, Bureau of Emergency Medical Services and Trauma System.

Arizona Department of Health Services
Bureau of Emergency Medical Services and Trauma System
150 N. 18th Avenue, Suite 540
Phoenix, AZ 85007
(800) 200-8523 or (602) 364-3150
Fax: (602) 364-3568
www.azdhs.gov/bems/

The respiratory therapy program is accredited by the Commission on Accreditation for Respiratory Care (CoARC).

Commission on Accreditation for Respiratory Care
1248 Harwood Road
Bedford, TX 76021-4244
(814) 283-2835
www.CoARC.com

The professional pilot program is certified by the Federal Aviation Administration under 14 CFR Part 141.

GOVERNANCE

The college district is governed by a five-member governing board elected from precincts in Cochise County:
Mr. Dennis L. Nelson, Chair
Mr. David Di Peso, Secretary
Mrs. Jane Carol Strain, Member
Mr. Danny Ortega Jr., Member
Mr. Tim Quinn, Member

The college is financed by legislative appropriation, a countywide tax levy and student tuition.

FOUNDATION

The Cochise College Foundation is a private, community-based nonprofit organization that is fiscally and organizationally separate from the college. Its mission is to promote student success, facilities development and program support. The foundation was established on March 20, 1967 and is recognized as a 501(c)(3) nonprofit organization (income tax-deductible) by the Internal Revenue Service and the Arizona Corporation Commission.
The foundation board of directors has a countywide membership. The foundation provides thousands of dollars in scholarships to Cochise College students each year and has assisted the college with several capital projects and academic program support. The foundation accepts monetary gifts,

property, gifts-in-kind or other items of value bequeathed or donated for the benefit of the college. The Cochise College Foundation can be reached at (520) 417-4100 or foundation@cochise.edu.

MISSION, PHILOSOPHY, VISION AND VALUES

Mission

Cochise College provides accessible educational opportunities that are responsive to a diverse population and lead to constructive citizenship, meaningful careers and lifelong learning.

Philosophy

Cochise College provides post-secondary education and educational support services to students interested in and capable of benefiting from programs of higher education. The college prepares students for a successful life beyond the college by promoting the principles of general education as set forth in the college's general education mission statement. Students should leave Cochise College with varied learning experiences and an understanding of the diversity of life. The college makes students aware of their ethical responsibilities to the community, the environment and their fellow human beings. The college provides educational opportunities, resources and programs tailored to changing social, economic and technological needs.

Vision

Cochise College strives to be a learning community held in high esteem by members of its communities, providing high-quality learning opportunities for its citizens.
A learning community
- Places its highest priority, resources and energy on learning.
- Creates an environment and experiences, real or virtual, that encourage students to be active members of the learning community.
- Makes learning possible not only in the classroom but outside, through a myriad of activities and experiences, using any number of tools to enhance learning.
- Extends learning not only to students but to all members of the college community so that a feeling of collegiality abounds.
- Empowers students, faculty and staff to create a personally meaningful learning environment, where each accepts responsibility for contributing to the same.

Core Values

In all that we do—in teaching, learning and serving—we value quality, integrity, and diversity.

Quality: We commit to a quest for excellence and strive to achieve our highest potential.

Integrity: We base our decisions and interactions on honesty, trust, respect, responsibility, accountability, and ethical behavior.

Diversity: We respect differences between and among members of the community by embracing and encouraging the expression of ideas, opinions, and thoughts exchanged freely, respectfully, and civilly.

Getting Started

CAMPUS TOURS

Cochise College encourages new and prospective students to visit its campuses and centers. Tours for all campuses can be scheduled through the Recruiting Office by calling (520) 515-3609 or requested online at www.cochise.edu/contact/tours. The Recruiting Office arranges tours on an individual or group basis. Tours may include student leaders sharing their experiences at Cochise College and opportunities to meet faculty from various departments.

ADMISSION

Admission Criteria

Anyone who meets one of the following criteria will be admitted:

1. A graduate of a high school that is accredited by a regional accrediting association as defined by the United States Office of Education or approved by the Arizona Board of Education or the appropriate state educational agency;
2. An individual with a high school certificate of equivalency such as a GED;
3. A person 18 years or older on or before the first day of classes for which application is made;
4. A transfer student in good standing from another college or university; or
5. A high school student with a concurrent registration form signed by the designated school official and a parent.

Non-high school graduates or GED recipients under 18 must contact the Admissions Office. Additional admission criteria are required for international, aviation, nursing, transfer and concurrent high school students. Students should consult with the appropriate department.

Admission Procedures

Students will be admitted to Cochise College after the Admissions Office has received and approved their application for admission.
Border commuters and international students must submit an international student application and fee.
All applicants under the age of 18 must submit either an official high school transcript or GED certificate with test scores before registration is permitted. High school transcripts should be sent directly by the sending institution to the Admissions Office. Official transcripts carried by the applicant cannot be accepted if previously opened.
All applicants applying for admission to the aviation or nursing programs, those participating in athletics, or those who wish to live in the residence halls at the Douglas Campus must complete the Student Health Record: Part II. The college reserves the right to require a physical examination or immunizations when deemed necessary by a particular college instructional program.

Re-Admission

Students who have been absent from Cochise College two semesters or longer will need to re-apply for admission prior to the beginning of the semester for which they desire to enroll.

TRANSFER TO COCHISE COLLEGE

Prospective students who have attended other regionally accredited colleges and universities must have official copies of their academic records sent to the Registration Office. Accredited higher-education institutions are those that are accredited by the New England Association of Schools and Colleges, Middle States Association of Colleges and Schools, North Central Association of Colleges and Schools, Northwest Association of Schools and Colleges, Southern Association of Colleges and Schools and Western Association of Schools and Colleges.
Transfer of college- or university-level courses will be accepted from non-regionally accredited institutions that are listed in the latest edition of the Higher Education Directory, a directory of postsecondary, degree-granting institutions in the U.S. and its possessions and territories accredited by regional, national, professional and specialized agencies recognized as accrediting bodies by the U.S. Secretary of Education and by the Council for Higher Education Accreditation (CHEA). Students who are requesting an evaluation of transcripts for the purpose of seeking a Cochise College degree must have submitted an admissions application to create a student record. The following regulations govern the acceptance of academic credit from other institutions:

1. Courses accepted for transfer-in credit must have been completed with a grade of C or better.
2. Cochise College may grant academic probation to students who transfer in with an earned grade point average (GPA) below 2.0.
3. Students who have been academically dismissed from another higher-education institution may not attend Cochise College for one full semester after dismissal.
4. Grade point averages earned at other institutions are not calculated with GPAs earned at Cochise College.
5. College transcripts must be mailed directly or sent electronically by the sending institution to the Registration

Office. Official sealed transcripts carried by the applicant are acceptable.

6. Evaluation and posting of credits occurs once a student has been admitted to Cochise College. Students may not request an official Cochise College transcript until they have registered for and completed at least three credits of Cochise College coursework with a grade designation of A, B, C, D, F, P or AU (audit).

STUDENT IDENTIFICATION AND EMAIL

Identification Number

Disclosure of social security numbers to Cochise College is voluntary and not required by either statute or regulation; however, social security numbers will aid in matching current and future academic records with any past records, ensuring that full credit is received for all academic work completed at Cochise College. If students decline to provide their social security number, opportunities for claiming tuition on taxes will not be available through the American Opportunity and Lifetime Learning Credits (Form 8863).

Students are assigned individual identification numbers during the admission process. The student identification number, which is sent by mail and email to new students, is used to obtain most services provided by the college; however, a student's social security number may still be required for some services, such as financial aid and reporting education tax credit information to the federal government.

Email

Cochise College's email system is recognized as an official mode of communication between the college and students. Student email accounts are free and provide students with a way to receive college news and other notifications. Login is at my.cochise.edu.

ADMISSION OF INTERNATIONAL STUDENTS

Steps to Apply

All international students enrolled in an academic or language program at Cochise College are issued an F-1 student visa. Students applying to Cochise College must be 18 years of age or older and have successfully completed high school or an equivalency exam (GED). Below is a list of required documents/items International Students must submit to the Cochise College International Student Office (ISO) in order to be considered for admissions at Cochise College. If you have questions, please contact the ISO by e-mail at intl@cochise.edu or by phone at (800) 966-7943.

1. Application
2. Nonrefundable Application Fee
3. Copy of a Valid Passport
4. Bank Statement/Letter
5. Financial Guarantee Form

6. Education Record
7. Student Health Record
8. Proof of Health Insurance
9. Transfer Students
- International Students transferring from a college or university within the United States are required to inform their current institution the intent to transfer to Cochise College and submit a Transfer Authorization form.
- A copy of the student VISA and copies of all I-20s issued is required.
- Completed application packets must be sent to: Cochise College, International Student Office, 4190 W. Highway 80, Douglas, AZ 85607-6190.

Border Commuter Students

Border commuter students from Mexico are permitted to attend Cochise College part time or full time. These students must apply for an F-1 student visa prior to attending. The I-20 will be issued to students once the following documents have been submitted to the International Student Office:

1. Application for admission;
2. A one-time application fee of $20 for part-time or $50 for full-time students in bank draft or U.S. check payable to Cochise College;
3. Official high school transcripts, or certificate or diploma, with cost of translation paid by the student;
4. Student health form; and
5. Bank guarantee form.

Information on obtaining an F-1 international packet is available at www.cochise.edu/sonora or www.cochise.edu/international or from the International Student Office at (520) 417-4758 or (800) 966-7943.

Health Insurance

All F-1 students who have an I-20 issued by Cochise College and who are living in the United States are required to have the approved health insurance plan.

OFFICE OF DISABILITY SERVICES

In the spirit of the Americans with Disabilities Act of 1990, Cochise College assists students in discovering and developing their full potential by providing support services to students who may need reasonable accommodation or adjustment in order to achieve academic success.

To be eligible to receive an accommodation from Disability Services, a student must be enrolled in Cochise College and have a mental or physical impairment that substantially limits a major life activity. The disability must be verified by appropriate documentation, which means a professional in the area of the disability must document the nature and severity of the disability. Professionals may include medical doctors, psychiatrists, psychologists, and learning specialists. An appointment must then be made with the Director of

Disability Services for the student to complete the intake process necessary to request services and accommodations. Students who need accommodations for placement testing should contact one of the offices of Disability Services prior to testing. Information is available at (800) 966-7943 or www.cochise.edu/disability.

RESIDENCY REQUIREMENTS

Proposition 300 Tuition Assessment

Cochise College's registration procedure for credit classes complies with the requirements of Proposition 300. Approved by Arizona voters in November 2006, Proposition 300 requires verification of eligibility for in-state tuition rates for U.S. citizens and qualifying legal immigrants.
The law does not prevent anyone from enrolling at Cochise College. It does require that students who are not citizens or legal residents pay out-of-state tuition rates. The law further states that persons who are not citizens or legal residents are not entitled to tuition waivers, fee waivers, grants, scholarship assistance, financial aid, tuition assistance, or any type of financial assistance that is subsidized with state monies.
A list of qualifying documents to verify eligibility for in-state tuition is available online at www.cochise.edu/tuition. Documentation can be returned to any of the college's Registration offices or scanned and emailed to the attention of the registrar at admissions@cochise.edu or registration@cochise.edu. The information number is (800) 593-9567.
Each applicant shall have legal residency determined prior to the time of registration and payment of fees. It is the student's responsibility to register under the correct residence determination. Enforcement of residency requirements and regulations are the responsibility of the Cochise College president.
Appeal of residency interpretation or judgments rendered by the college administration shall be handled through appeal channels as established by the district governing board in accordance with the Arizona Revised Statutes, which determine classification for tuition purposes.

Definitions

Arizona Revised Statutes (ARS 15-1801 et seq.) and Cochise College policies determine classification for tuition purposes.

Adult means a person who is 18 years of age or older.
Armed Forces of the United States means the Army, the Navy, the Air Force, the Marine Corps, the Coast Guard, the Commissioned Corps of the United States Public Health Services and the National Oceanographic and Atmospheric Association. (ARS 15-1801)
Continuous attendance means enrollment at an educational institution in this state as a full-time student, as such term is defined by the governing body of the educational institution, for a normal academic year since

the beginning of the period for which continuous attendance is claimed. Such person need not attend summer sessions or other such intersession beyond the normal academic year in order to maintain continuous attendance. (ARS 15-1801)
Domicile means a person's true, fixed and permanent home and place of habitation. It is the place where he/she intends to remain and to which he/she expects to return when he/she leaves without intending to establish a new domicile elsewhere. (ARS-15-1801)
State resident means a person who is domiciled in the State of Arizona for not less than one year or 365 days. (ARS 15-1802)
County resident means a person who is domiciled in the State of Arizona for not less than one year and who has been physically present in the county for at least 50 days prior to the first day of classes of the semester. (R7-1-23)
Dependent means any person (son, daughter, or legal ward) who receives more than half of his/her support for the calendar year from a parent or guardian, as documented on the federal income tax form, and who is domiciled in Arizona.
Alien means a person who has been granted refugee status in accordance with all applicable laws of the United States, has met all other requirements for domicile, and who is entitled to classification as an in-state refugee student.
Emancipated person means a person who is neither under a legal duty of service to his/her parent nor entitled to the support of such parent under the laws of this state. (ARS-15-1801)
Parent means a person's father or mother, or if one parent has custody, that parent. Or, if there is no surviving parent or the whereabouts of the parents are unknown, then a guardian of an unemancipated person (if there are no circumstances indicating that such guardianship was created primarily for the purpose of conferring the status of an in-state student on such unemancipated person). (ARS 15-1801)

Residency Status

In-State Status

Except as otherwise provided in this catalog, no person having a domicile elsewhere than in this state is eligible for classification as an in-state student for tuition purposes. (ARS 15-1802)
A person is not entitled to classification as an in-state student until he/she is domiciled in this state for one year, unless he/she meets one of the following requirements:

1. His/her parent's domicile is in this state for no less than one year and his/her parent is entitled to claim him/her as an exemption for state and federal tax purposes.

2. He/she is an employee of an employer that transferred him/her to this state for employment purposes or he/she is the spouse of such employee.
3. The domicile of an unemancipated person is that of such person's parent. Any unemancipated person who remains in this state when such person's parent, who had been domiciled in this state, moves from this state is entitled to classification as an in-state student until attainment of the degree for which currently enrolled, so long as such person maintains continuous enrollment.
4. A person who is a member of the armed forces of the United States stationed in this state pursuant to military orders, or who is the spouse or dependent child as defined in section 43-1001 of a person who is a member of the armed forces of the United States stationed in this state pursuant to military orders. The student, while in continuous attendance toward the degree for which currently enrolled, does not lose in-state student classification.
5. A person who is honorably discharged from the United States armed forces and provides a DD Form 214 with honorable discharge notation.
6. A person who is a member of an Indian tribe recognized by the United States Department of the Interior, whose reservation land lies in this state and extends into another state and who is a resident of the reservation.

Proof of Residency

Students must file a domicile affidavit with the Admissions Office verifying continuous residency in the state for a 12-month period. At least three of the following items will be used to establish proof of residency:
1. Filing of state income tax report for the previous year
2. Current registration of motor vehicle in Arizona
3. Current registration as a voter in the state
4. Arizona driver's license issuance date
5. Graduation from an Arizona high school
6. Bank statement (checking or savings) from an Arizona banking institution
7. Source of support (employer)
8. Dependency as indicated on federal income tax declaration for dependents.

Concurrent Enrollment: Non-Resident Tuition

It is unlawful for any non-resident student to register concurrently in two or more public institutions of higher education in this state, including any university or community college, for a combined student credit-hour enrollment of more than six semester hours without payment of non-resident tuition at one of such institutions.

Any non-resident student desiring to enroll concurrently in two or more public institutions of higher education in this state, including any university or community college, for a combined total of more than six semester hours and who is not subject to non-resident tuition at any of such institutions shall pay the non-resident tuition at the institution of his/her choice. The amount will be equivalent to non-resident tuition at such institution for the combined total of semester hours for which the non-resident student is concurrently enrolled. (ARS 15-1807)

ENROLLMENT VERIFICATION

Students requesting verification of their enrollment for any purpose, such as life insurance or loan deferment, must do so in person at the Registration Office at any time after the start of a semester. Enrollment verification is free of charge and processed within 48 hours of receiving the request. The National Student Clearinghouse is Cochise College's authorized agent for providing degree and enrollment verifications at www.degreeverify.org.

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

Cochise College shall not permit, without the written consent of the student, the disclosure of information from educational records—or personally identifiable information contained therein—other than directory information, to any individual, agency, or organization other than in specific situations as outlined by the Family Educational Rights and Privacy Act of 1974, its amendments and the final rule of the U.S. Department of Education. Students may withhold disclosure of any directory information by submitting written notification to the Admissions Office prior to the first day of classes each semester. Failure on the part of any student to specifically request the withholding of directory information indicates individual approval for disclosure. One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by Cochise College in an administrative, supervisory, academic, research, or support staff position (including law enforcement personnel and health staff); or a person or company with whom Cochise College has contracted (such as an attorney, auditor, collection agent, or official of the National Student Clearinghouse).
Cochise College designates the following items as directory information: student name, major field of study, participation in officially recognized activities and sports, dates of attendance, degrees and awards received and most recent previous school attended. The college may disclose any of those items without prior written consent, unless notified in writing to the contrary by the student in advance of any request.

Money Matters

PAYMENT OF TUITION AND FEES

All fees approved by the governing board are subject to change. Tuition and fee information is available from the Admissions Office, the Business Office or at www.cochise.edu/tuition.
Class schedules include specific registration and payment dates. All tuition and fees are due as the final step in the registration process. Cochise College accepts checks or credit card payments.
If a check is returned unpaid, students will be assessed a service fee and dropped from all classes. If tuition and fees are not paid in full on or before the due date, students will be dropped from all classes and will be prohibited from any future registration. Past due accounts may be turned over to a collection agency and students are liable for any collection or attorney fees.
If students have been approved to receive financial aid, it will be applied to their accounts. If the financial aid award does not cover the amount owed, students need to pay their remaining balance. If the financial aid is more than the amount owed, students will receive a refund.

TUITION

In-state	$79 per credit
Out-of-state 1-6 credits	$119 per credit
Out-of-state over 6 credits (retroactive to first credit)	$250 per credit
Virtual Campus	$119 per credit
Co-op education courses	$39 per credit
New Mexico Tuition Waiver*	$79 per credit
Western Undergraduate Tuition Waiver**	$119 per credit
Golden Apache (county resident 60+ years):	
Regular course	$39 per credit
Online course	$59 per credit

*A special tuition agreement exists for full-time students between Cochise College and Western New Mexico University. Information is available from the Admissions Office.
**Cochise College is a member of the Western Undergraduate Exchange (WUE) program. Residents of Alaska, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Northern Marianas Islands, Oregon, South Dakota, Utah, Washington or Wyoming should contact the Admissions Office for eligibility.

Special Tuition Rates

Special tuition rates are available to students, including those from Sonora who want to study at Cochise College. Information is available at www.cochise.edu/tuition/waiver.

FEES

Tuition payment plan fee (e-cashier)	$35
Accuplacer testing retest - one subject	$15
Accuplacer testing retest - two subjects	$20
Accuplacer testing retest - three subjects	$25
Proctor Fee - one exam	$20
Proctor Fee - one course	$30
CLEP proctor fee	$25
DSST proctor fee	$25
Myers-Briggs	$20
Strong Interest Inventory	$15
Other testing services	$20
Placement scores (faxed)	$10
MOS credentialing fee	$50
Transcripts (official)	$10
Transcripts (overnight)	$75
Returned check fee (for each returned item)	$50
Check reissuance fee	$50
Airport tie-down fee (per month)	$100
Replacement of ID card or meal card	$20
Border commuter application fee	$20
International student application fee	$50
International student illness/accident insurance	TBD
Avionics technology	$90*
Professional pilot	$90*

Fees are subject to change. The full tuition and fees schedule is at cochise.edu/tuition.
*A non-refundable deposit applied to aviation tuition and/or fees and refunded if the student is not accepted into the program by the Aviation Department.

ON-CAMPUS LIVING

Rooms

Residence halls— Huachuca Hall (single occupancy) and Desert View Townhouses (double occupancy)—are available on the Douglas Campus. Room and board (meals) are combined. Students who live in single or double occupancy residence halls must participate in the meal program. Residents have access to Internet, laundry facilities, free cable and local telephone services. Payment for room and board is due at registration or by the last day to add classes. On-campus residents must comply with rules and regulations as they appear in the residence hall contracts and the student handbook, as well as local, state and federal laws. The Residential Life Office can be reached at (520) 417-4062.

Deposit

Residence hall	$150*

*A refundable deposit required with the housing application that does not apply toward room and board fees and is refunded less any amounts due to the college for damages or other charges.

Regular Student – 17 Weeks

Meal program	$2,127
Room rate	$1,155

Combined Rate

Meal plan and housing with 16 or more credit hours of enrollment	$2,127
Meal plan and housing with 12-15 credit hours of enrollment	$2,740

Professional Pilot – 21 Weeks

Meal plan	$2,611
Room rate	$1,430

Combined Rate

Meal plan and housing with 16 or more credit hours of enrollment	$2,611
Meal plan and housing with 12-15 credit hours of enrollment	$3,275

REFUNDS

Tuition and Fee Refunds

Students must be signed up for a class the day prior to the course start date. To receive a full refund for a dropped course, it must be dropped prior to the start of the term. Students who drop a class within the first week of the term will be refunded 90 percent of their tuition. The refund can be applied to a new course added to their schedule as long as the new class has not met yet. No refund is available after the 90-percent refund window closes.

If a class is canceled by the college, students will receive a full refund for all tuition and fees. Refunds are issued within three weeks after the end of registration. Students may enroll in another class and apply the tuition and fees from the canceled class to the new class.

All refunds for tuition, fees and deposits due to a student will first be applied to any amounts owed to the college. Sufficient time must be allowed for final clearance of fee payment checks before refunds are made.

Residence Hall Refunds

Students are eligible for a 50-percent refund of room fees if leaving residence within 21 days of the first day of classes for each semester or within 21 days of the start date of a specific program in which they are enrolled. Room fees will not be reimbursed after the 21st day as specified above.

Students withdrawing from the college may be eligible for a meal plan refund, prorated on a weekly basis, up to four weeks after the start of the 17-week term. Students who are enrolled in only a first or second eight-week term will be charged a prorated meal plan rate of 50 percent of a full 17-week meal plan. Departing eight-week-only students are eligible for refunds, prorated on a weekly basis, up to two weeks after the eight-week term begins. Any refund exceptions to this policy must be made in writing to the dean of Student Services and must contain the rationale for the request along with any documentation requested by the dean. Requests for exceptions to this policy will not be accepted by the dean after 15 working days from the departure of the student.

Federal Title IV Financial Aid Refunds

Students who receive federal financial aid funds are subject to the federal refund policy. Students who completely withdraw before completing 60 percent of the term are subject to this policy and may owe a repayment of the unearned portion of their grant funds. Students have 45 days to return the funds to Cochise College. If repayment is not made during the 45 days, the repayment owed will be turned over to the Department of Education for collection. Once a repayment is turned over to the Department of Education, eligibility for additional federal aid is suspended until satisfactory payment arrangements are made.

The federal Pell Grant and Supplemental Educational Opportunity Grant (SEOG) programs are subject to this repayment provision. Students who have received student loan funds are responsible for completing an exit interview and for notifying their lender of the withdrawal. The federal work-study program is not subject to the refund policy.

The withdrawal date is the date:

- The student began the withdrawal process prescribed by the institution;
- The student otherwise provided the school with official notification of the intent to withdraw; or
- For the student who does not begin the school's withdrawal process or notify the school of the intent to

withdraw, the midpoint of the payment period or period of enrollment for which Title IV assistance was disbursed (unless the institution can document a later date).

The percentage of the payment period or period of enrollment completed for which assistance was awarded is calculated by dividing the total number of calendar days comprising the payment period or period of enrollment for which the assistance is awarded into the number of calendar days completed in that period as of the day the student withdrew. Additional policy and regulatory information is available from the Financial Aid Office.

FINANCIAL AID, SCHOLARSHIPS AND GRANTS

Students applying for financial aid at Cochise College must be admitted into an eligible degree or certificate program of study and must meet any other eligibility requirements for each program. All new financial aid recipients must complete a financial aid orientation session before receiving any federal funds.
Official academic transcripts are required of all transfer students who appear in the National Student Loan Database System (NSLDS) as having attended previous institution(s) and/or having substantial student loan debt. Transcripts are evaluated and restricted enrollment enforced when applicable. Students who have not met the college's academic standards (2.0 GPA and completion of 75 percent of classes attempted) at the prior institution(s) will be evaluated with the same probation and suspension standards currently in place for Cochise College students. Students who consistently have received W and F grades may be required to complete a progress appeal.
Cochise College provides access to federal, state, and institutional financial aid through the Financial Aid Office. A number of institutional and private scholarship applications are also available. Financial aid may be awarded based on financial need, academic merit, athletic ability, or community service. The application process for most of the programs begins with completion of the Free Application for Federal Student Aid (FAFSA). Students complete the FAFSA online at www.FAFSA.gov. To assist in completing the online application, a FAFSA worksheet is available online or from the Financial Aid Office. Priority consideration for some grants is given to applications received in the Financial Aid Office by May 1.

Federal Pell Grants

A federal Pell Grant, unlike a loan, does not have to be repaid. It is restricted to undergraduate students. Eligibility is established by the federal government, and the grant is targeted to students with high need. The award adjusts to students' actual enrollment status. Students never attending a course or withdrawing from all of their courses could face repayment of all received Pell Grant monies.

Federal Direct Loans (Stafford Loans)

Low-interest student loans are available to help meet educational expenses. The loans must be repaid. Students must be enrolled in a minimum of six credit hours during a term (including eight-week terms) to be eligible. Loans can also be obtained by students who do not demonstrate a need. A student must complete loan entrance counseling, the master promissory note and a direct loan request form before a student loan can be certified.

Work-Study Program

The work-study program offers students an opportunity to work up to 16 hours per week to assist with college expenses. Many of these jobs are career related and offer flexible work schedules. Students must be enrolled at least half time, have a minimum 2.0 GPA and maintain Satisfactory Progress to qualify for these jobs. Work-study jobs are available both on and off campus. Information on student employment is available from the Human Resources Office.

Veterans Affairs

The Veterans Affairs Office is located within the Financial Aid Office on the Sierra Vista Campus. Information concerning attendance, benefits and procedures is available. All veterans are advised to maintain close contact with the college's certifying official.
Veterans receiving VA benefits are required to immediately report to the college's certifying official when they add a course, drop a course or withdraw from college. Dropping or reducing enrollment may result in an overpayment of benefits by the VA and veterans may be required to repay all the money received during that term.
Veterans at Cochise College may register and have their tuition payments waived until they receive their benefit payments or tuition is paid by the VA. If veterans enroll and do not notify the VA Office the day they enroll, they may be dropped for non-payment of tuition. Veterans are responsible for payment of all tuition and fees, regardless of payments received from the VA.

Scholarships

Scholarships are offered by the Cochise College Foundation each year. These scholarships are funded by private donors. Financial need, grade point average, field of study, leadership and community service may be some of the eligibility requirements. Applications are accepted early in the spring semester for scholarships to be awarded for the following academic year. Notices of other scholarships are publicized periodically. The STARS application can be found at www.cochise.edu/fa.

Academic Procedures

CATALOG REQUIREMENTS

A student maintaining continuous enrollment in any public community college or public university in Arizona may graduate from Cochise College by meeting the requirements in the Cochise College catalog in effect at the time of that student's initial enrollment, or by meeting the requirements in any single Cochise College catalog in effect during any subsequent academic year (fall, spring, summer) of that student's continuous enrollment.

Continuous enrollment is defined as being enrolled during consecutive academic years in which course credit is earned. Noncredit and audited courses do not count toward continuous enrollment. For the purpose of determining a student's catalog requirements, continuous enrollment is limited to the five academic years prior to the student's current year of enrollment. The five-year continuous enrollment limit moves forward with the student into year six and beyond. Re-enrollment is required of any student who has not completed a course during a given academic year. In the event of re-enrollment, the student must meet the requirements of the catalog in effect at that time.

Military students and their dependents attending Cochise College under a SOCAD agreement are eligible for the catalog degree requirements of the catalog in effect when they begin taking courses and have a five year period in which to complete the degree.

ACADEMIC CLASSIFICATION AND STATUS

Classification of Students

Freshman: Student with fewer than 32 passing college credits.
Sophomore: Student with 32 or more passing college credits.
Full-time: Student carrying 12 or more credits during a semester.
Three-quarter-time: Student carrying 9 or more but fewer than 12 credits during a semester.
Half-time**:** Student carrying 6 or more but fewer than 9 credits during a semester.
Less than half-time: Student carrying fewer than 6 credits during a semester.

Academic Status

Good Standing: A cumulative grade point average (GPA) of 2.0 or higher on a 4.0 scale.
Probation: After attempting 13 or more credits, a student's academic status is reviewed after each semester. A cumulative GPA below 2.0 places a student on academic probation, with the academic status noted on the student's transcript. While on probation, a student is permitted to enroll in 12 or fewer credits.

Suspension: If a student's cumulative GPA falls below 2.0 for two consecutive terms, the student is suspended from school and the academic status noted on the student's transcript. A student suspended following the spring semester may not attend classes the following summer and fall terms. A student suspended following the fall semester may not attend classes the following spring and summer terms.

TEACHING MODALITIES

Classes taught at Cochise College may employ any one of these teaching modalities:

1. Face-to-Face: Classes that meet physically and students are required to attend regular face-to-face sessions.
2. Live Streaming Room-to-Room: A class where students participate in real time either in person or through a web conferencing system. All participants are required to be physically present in a Cochise College classroom or computer center and actively participate in class activities during the scheduled class times.
3. Live Streaming Anywhere: A class where students participate in real time through a web conferencing system. Students may utilize Cochise College computer resources to participate in the class, but may also be able to join the class from other locations. All participants are required to be present and actively participate in class activities during the scheduled class times.
4. Online: Classes that require no on-site meetings. These classes may include one or two activities where the instructor and students meet in real time through a web conferencing system, but they are designed to be completed by students who do not need to be physically present. These classes may also require a proctored final examination.
5. Hybrid-Online/Face-to-Face: Classes where content is delivered using both online and face-to-face modalities in approximately equal proportions.
6. Hybrid-Online/Live Streaming Room-to-Room: Classes where content is delivered using both Online and Live Streaming Room-to-Room modalities in approximately equal proportions.
7. Hybrid-Online/Live Streaming Anywhere: Classes where content is delivered using both Online and Live Streaming Anywhere modalities in approximately equal proportions.

In addition to the above, the following types of specialized classes may be scheduled that use one or more of the teaching modalities:

1. Modular: A class where students complete a series of online modules and demonstrate mastery at the conclusion of each module. While these classes are somewhat self-paced, students are expected to reach specific milestones during the term of the class. Modular classes use a Face-to-Face, Online or Hybrid-Online/Face-to-Face modality.
2. Collaborative: Two or more independent classes where instructors conduct joint activities; for example, a reading and sociology collaboration may have reading activities assigned from sociology books. Students must register for both classes. The two classes may be taught using any of the modalities.
3. Concurrent: Two or more classes that meet as one. For example, a basic and advanced section of a class may meet as single class and the instructor would conduct activities appropriate for both sections. These classes can be taught using any of the modalities.
4. Cooperative: A class in which a student completes work-related objectives or projects that are negotiated between the student, an employer related to the student's field of study, and an instructor. The student regularly submits assignments and other reports to the instructor. These classes are coordinated by the cooperative education office and do not follow any particular modality.

GRADING SYSTEMS

The following are grade designations earned in each course and recorded on a student's permanent record.

A Indicates the highest academic grade possible. It is reserved for accomplishment that is truly distinctive and demonstrably outstanding.

B Denotes achievement considerably above acceptable standards and mastery of course materials.

C Indicates a satisfactory degree of attainment and is the least acceptable standard for graduation from college or for additional studies within the discipline. This grade implies completion of the minimum outcomes identified in the course curriculum.

D Denotes a limited understanding of the subject matter. This grade will not transfer to another institution of higher education and it is unacceptable for additional studies within the discipline.

F Indicates inadequate or unsatisfactory attainment, serious deficiency in understanding of course material or failure to complete requirements of the course.

W Indicates a withdrawal from the course by the designated drop date.

I Indicates that, for a justifiable reason, a student failed to complete all requirements of the course. The instructor has the option of issuing an incomplete rather than an F to the Registration Office. The student must make up an incomplete during the succeeding semester to avoid an F. An incomplete grade is not computed in the student's GPA.

AU Indicates that a student will not receive a grade or credit.

Registration and fee policies apply. Pass/fail classes may not be audited. Instructors give priority to students registering for credit, and they do not require audit students to take examinations or to hand in assignments. A student auditing a class may not change to a credit basis later than Friday of the second week of the semester. A student may change from a credit to an audit basis up to five calendar days prior to the start of finals. The drop/add procedure is used to effect such changes.

IP Indicates that a student's coursework is in progress at the time grades are due.

P Indicates C or higher work in a class taken for pass/fail.

X Indicates a D or failed grade in a class taken for pass/fail.

Grade Point Average (GPA)

Semester grades are assigned grade points as follows:

Grade	Points per credit earned
A	4
B	3
C	2
D	1
F	0

For example, a three-credit course with a grade of A earns 12 grade points. The total grade points accumulated are divided by the total credits attempted (excluding W, I and AU) to determine the GPA. In determining academic standing at Cochise College, the GPA of a transfer student is computed on the basis of credits attempted at Cochise College only and does not include credits and grade points earned at another college.

Grade Reports

Cochise College has an online student grade report system for viewing and printing grades.

Grade Change

A grade that has been reported to the registrar by an instructor may be changed only by the instructor issuing the grade or by the appropriate instructional manager.

ACADEMIC HONORS AND HONORS DISTINCTION

President's List and Dean's List

Students who complete 12 or more credits in one 16-week semester or term at Cochise College and maintain a semester GPA of 3.9 or higher are recognized as achieving high academic honors and placed on the President's List. Students who complete 12 or more credits in one 16-week semester or term at Cochise College and maintain a semester GPA of 3.5

to 3.899 are recognized as achieving academic honors and placed on the Dean's List.

Honors Program

General Eligibility: Students may join the Honors Program after completing 12 transfer-level credits with at least a 3.5 GPA.

Honors Distinction

Students completing 16 credits of honors coursework and having a 3.5 cumulative GPA or higher earn an Honors Program Distinction seal on their Cochise College diploma, a medallion, as well as a notation on their transcripts and in the commencement program.

Transfer to University Honors Programs

Students earning the Cochise College Honors Program Distinction are often invited to join university-level honors programs upon transfer. Scholarship opportunities are also available to honors students.

ACADEMIC RESTRICTIONS

Attendance

Student attendance is a major factor in academic success. Cochise College conducts a census report on the 10th day of each semester. Students who have not attended in that time are dropped for non-attendance. Instructors are responsible for establishing specific attendance criteria for each class and communicating the criteria to students in writing during the first week of class. Instructors may drop students who exceed their limit of absences. Students who are dropped during the census or by their instructor will not receive a refund on tuition and fees. Students on college-sponsored trips may be excused; however, they are responsible for all missed assignments.

Course Repeats

A course may be repeated six times for a grade. All courses will be listed on the student's transcript with the grade received. The highest grade earned will be computed for graduation and cumulative grade point average. Students are not required to repeat a failed course unless it is a prerequisite for another course or required for graduation or transfer.

Credit Load Limitations

Maximum educational benefits accrue when students enroll for a reasonable course load. The college has established the following credit load limitations:

Beginning freshmen (first-time college students) and returning students with a cumulative GPA of 2.0 or higher	19 credits
Concurrently enrolled high school students and returning students with a cumulative GPA below 2.0	12 credits

Final Exams

Final examinations are required and serve an important purpose in the academic process. Certain courses may call for demonstration of competency with final projects requiring more than two hours of work; these projects may serve as the final examination. Such projects must necessarily begin and end before the examination period; however, these courses must meet during the scheduled examination period for review, critique or other meaningful activity. The final examination schedule is printed in the class schedule at the beginning of each semester. Students must attend all final examinations or their instructor may issue a failing grade.

Course Withdrawal

Students may withdraw from a course by logging into my.cochise.edu or by completing a drop/add form from the Registration Office or the Student Development Center. Failing to withdraw could jeopardize the receipt of any refunds and may result in an F grade.

Academic Dishonesty

Cochise College requires students to adhere to the highest level of ethical academic conduct and has no tolerance for academic dishonesty. The college may impose serious academic sanctions as a result of academic dishonesty up to and including suspension and expulsion from a specific program or from the college. A statement regarding and defining academic dishonesty must be part of every course procedure sheet.

Academic dishonesty consists of many forms of unethical academic conduct, including, but not limited to, cheating, fabrication, plagiarism and facilitating academic dishonesty.

1. Cheating means intentionally using or attempting to use unauthorized materials, information or study aids, as well as unauthorized devices such as cell phones and other technology.
2. Fabrication means intentional falsification of any information or citation.
3. Plagiarism means intentionally or knowingly representing the words or ideas of another as one's own.
4. Facilitating academic dishonesty means intentionally or knowingly helping another to commit an act of academic dishonesty.
5. Other forms of academic dishonesty include:
   a. Submitting work to more than one instructor for credit without disclosure and approval.
   b. Knowingly violating the terms of any academic sanction imposed for an earlier violation of Policy 3010.

ADDING AND DROPPING COURSES

Adding Classes

Students who wish to add classes to their schedule must register the day before the class begins.

Dropping Classes

Classes dropped after the last day of the drop/add period and up to five calendar days prior to the start of finals result in a W on the student's transcript. After this time, instructors must assign a grade of A, B, C, D or F or an incomplete (I).

Wait Listed Classes

When a student is wait listed for a class it puts them on standby for future openings in the class. If an opening becomes available the student will receive notification through their Cochise College email. The student then has 24 hours to register for the class.

NON-TRADITIONAL LEARNING

A maximum of 30 credits are allowed for non-traditional learning experiences. In addition, certain departments allow students to receive credit for earned certificates if they are enrolled in a related Cochise College certificate or degree program. Non-traditional learning credits do not count toward the college residency requirement.

Advanced Placement

The Advanced Placement (AP) program offers college-level courses and examinations to high school students. AP exams are administered in high schools by the College Board each year in May. Students who receive a score of 3, 4 or 5 on an AP subject exam may be awarded college credit. Students should consult with an advisor in the Student Development Center to confirm AP credit. Information about the AP program is available on the College Board website at www.collegeboard.org.

CLEP and DSST

Cochise College accepts both the general and the subject examinations of the College Level Examination Program (CLEP) and of the DANTES (Defense Activity for Non-Traditional Education Support) Standardized Subject Test (DSST) for college credits, provided satisfactory scores are attained.

Students must have completed at least one Cochise College course before CLEP or DSST credit is granted. A list of available tests and their corresponding credits is available on www.aztransfer.com. Students cannot be awarded CLEP or DSST credit for courses taken in the same subject at the same level. Conversely, students cannot receive course credit at the same or lower level if they have already received CLEP or DSST credit. More information is available in Policy 3006.3 or at www.cochise.edu/transfer-to-cochise. Cochise College may award up to 30 credits for CLEP and DSST examinations; however, other colleges and universities are not obligated to accept these credits.

Military Service Schools, MOS and SOC Agreement

The college follows the credit recommendations of the American Council on Education (ACE) for Military Occupational Specialty (MOS) training. Colleges differ on their policies related to credit allowed for military service schools. Credit granted by Cochise College does not obligate any other college or university to accept such credit. Evaluation and posting of credits occurs once a student has been admitted to Cochise College. Students may not request an official Cochise College transcript until they have registered for and completed at least three credits of Cochise College coursework with a grade designation of A, B, C, D, F, P or AU (audit). Credit earned for military service may not be used toward the college's 16-credit residency requirement. Cochise College is a participating Servicemembers Opportunity College (SOC). The SOC association of schools has agreed to work together to make it easier for you and your family members to enroll in college programs by simplifying credit transfers. In addition, SOC schools normally offer distance learning programs, as well as degree programs and individual courses. SOC Agreements with Cochise College are limited to a five-year period.

DEGREE AND CERTIFICATE REQUIREMENTS

Degree Requirements

A cumulative grade point average (GPA) of 2.0 or higher is required for any associate degree: Associate of Arts, Associate of Arts in Elementary Education, Associate of Business, Associate of Science, Associate of General Studies and Associate of Applied Science. All courses must be completed with a grade of C or better. A minimum of 16 credits of any degree granted must be completed in residency at Cochise College.

Additional degree requirements are found in the Degrees and Programs (p. 30) section of this catalog.

Bachelor's Degree Waiver of General Education Requirements

Students who have already earned a bachelor's degree from a regionally accredited institution and are interested in pursuing certain Associate of Applied Science (AAS) degrees may use a bachelor's degree to satisfy the general education requirements for the AAS degree. Students should consult with an academic advisor to determine their eligibility to waive the general education requirements. Approved AAS degrees are:

Administration of Justice (p. 44)	(Major Code - AJS)
Automotive Technology (p. 49)	(Major Code - ATC)
Avionics Technology (p. 49)	(Major Code - AVT)
Building Construction Technology (p. 53)	(Major Code - BCT)

Cisco and Linux Networking (p. 61)	(Major Code - CLN)
Computer Programming (p. 58)	(Major Code - CPG)
Culinary Arts (p. 61)	(Major Code - CUL)
Early Childhood Care and Education (p. 65)	(Major Code - ECE)
Education (p. 65)	(Major Code - ED)
Fire Science Technology (p. 69)	(Major Code - FST)
Intelligence Operations Studies (p. 71)	(Major Code - IOST)
Media Production Arts (p. 72)	(Major Code - MPA)
Professional Administrative Assistant (p. 76)	(Major Code - PAA)
Professional Pilot Technology (p. 51)	(Major Code - PPT)
Remotely Piloted Vehicle Operations (p. 52)	(Major Code - RPV)
Unmanned Aerial Vehicle Flight Operator (p. 80)	(Major Code - UAVO)
Unmanned Aircraft Systems and Operations (p. 52)	(Major Code - UAS)
Unmanned Aircraft Systems Technician (p. 80)	(Major Code - UAVT)
Welding Technology (p. 81)	(Major Code - WLD)

Certificate Requirements

A Certificate of Completion is awarded to students who complete a certificate program outlined in the Cochise College catalog. All courses must be completed with a grade of C or better. A minimum of 25 percent of the required credits must be taken in residency at Cochise College for each Certificate of Completion granted.

Additional Associate Degrees

Students may earn additional associate degrees at Cochise College if they complete the following for each additional degree:
- All requirements for the additional degrees and
- Sixteen additional Cochise College credits not used in other Cochise College degree(s).

GRADUATION APPLICATION PROCESS

Graduating students must complete and submit the online graduation application at www.cochise.edu/advising/graduation. Then they must make an appointment with a Student Development Center advisor for a graduation check. Students must notify the Student Development Center of any change of address that occurs during the application process period.

For associate degrees, students must file their application by the deadline listed in the academic calendar. Diplomas will be delayed if students miss the deadline to file. For certificates, students must file an application at any time during the semester they are completing the requirements for their certificate. Diplomas and Certificates of Completion are mailed after final grades are processed, and records evaluated and posted to official transcripts. Students must ensure there are no encumbrances or holds on their college account to avoid delays in distribution of their transcript, diploma or certificate.

TRANSCRIPTS

A transcript is a copy of a student's permanent academic record. Transcript processing time is normally five business days after receiving the signed request form and payment. Archived transcripts (prior to 1985) may require additional processing time. Transcripts are mailed via first-class mail. Cochise College offers an expedited service for an additional fee. According to federal law, transcript requests must be submitted in writing and include the student's signature; telephone requests are not honored. Transcript requests can be submitted online at www.GetMyTranscript.com or www.cochise.edu/transcripts or in person at the Admissions Office.

Transcript fees must be paid at the time the transcript request is submitted. Payment may be made by check or money order payable to Cochise College, or by credit card payment. The college accepts Visa, MasterCard, Discover and American Express. Transcripts are not sent to students who have an outstanding financial obligation with the college.

Unofficial transcripts are strictly copies of the computerized records on file (after 1985) in the Student Information System. Unofficial transcripts are available at MyCochise or at www.cochise.edu/cc.

STUDENT COMPLAINTS AND GRIEVANCES

Students who have complaints, grievances or personal concerns about a Cochise College course, instructor or grade are encouraged to first discuss the problem with their instructor. Students who are still dissatisfied may contact the appropriate academic dean or director or submit a student complaint form at www.cochise.edu/feedback-complaint-form.

Student Complaint Log

All complaints directed to college personnel by students are considered important and will be addressed by the respective employee, department and/or office personnel pursuant to Policy 4008.

Complaints are documented and investigated, and their resolution and/or disposition noted, with a record of such complaints maintained for no less than two years. Information about these complaints will be shared with the college's accrediting agency, the Higher Learning Commission of the North Central Association; however, individual identities of students will be shielded without the express permission of said complainants. The complaint log is reviewed on an annual basis by the vice president for instruction/provost, who ascertains whether the complaints follow any particular pattern and whether special intervention, direction and/or staff development is needed to mitigate subsequent complaints or address institutional problems.

Services for Students

LIBRARIES

Cochise College has two main libraries: the Charles Di Peso Library on the Douglas Campus and the Andrea Cracchiolo Library on the Sierra Vista Campus. Many library services and resources are available at www.cochise.edu/library. The library staff is dedicated to enhancing learning opportunities, increasing information literacy and meeting the educational needs of students and the general public.

The libraries house an academic collection of more than 68,000 books and periodicals and over 5,800 media items, including audiobooks, music CDs and DVDs. They also offer a variety of databases that provide access to more than 8,700 magazines and academic journals. The libraries' ebook collections contain more than 41,000 titles covering a broad range of subject areas. A digital database provides streaming access to over 20,000 educational videos. Each library also has photocopiers, computers, and laptops for student use.

BOOKSTORE

Barnes and Noble bookstores are located on both the Douglas and Sierra Vista campuses. A bookstore representative also visits the Benson, Willcox and Santa Cruz centers at the beginning of each semester. Students can find textbooks, collegiate clothing, reference and trade books, classroom supplies and other items. Book rental and digital options also are available. Student book buy-backs are held each semester during finals week. Graduation gowns may also be ordered in February for May graduates.

ACADEMIC SERVICES

Student Development Center

The Student Development Centers (SDC), located on the Douglas and Sierra Vista campuses, coordinate several key services supporting student learning: academic advising, counseling, testing, tutoring, and co-op learning. Counselors and advisors assist students in defining, planning and achieving success by helping them develop decision-making skills and personal strengths. Students can plan their program of study, learn about work/career options, explore transfer programs and learn about college resources.

Placement Assessment

Applicants to Cochise College must complete the ACCUPLACER placement assessment or submit ACCUPLACER, Compass, ASSET, ACT, or SAT scores which are no more than two years old before registering for classes with academic skills prerequisites. Transferred scores must come directly from the institution previously attended or from the testing agency.

Students must complete placement assessments in the areas of English, reading and mathematics prior to meeting with an advisor and registering if they are planning to register for a course with an English, reading or mathematics prerequisite. Placement testing may be waived for students who provide a transcript or diploma showing completion of an accredited associate or higher degree, or for transfer students whose official transcripts show completed coursework in a corresponding subject with a grade of C or better.

NOTE: Students taking MAT 081, Beginning Algebra, in 2016-17 must concurrently take CPD 150, Academic Excellence Seminar.

Tutoring

Cochise College provides free tutoring in writing and mathematics at the Douglas and Sierra Vista campuses. Online tutoring services are also available. Professional and peer tutors, faculty and staff work with students individually and in small groups to facilitate learning.

Career Technical Education Programs (CTEPS)

CTEPS offers a variety of support services to students enrolled in career and technical education programs, including academic advising, advocacy, career exploration and financial assistance.

TRiO Student Support Services

The TRiO program helps students overcome class, social and cultural barriers to their college education. To qualify, a student must be enrolled or accepted for full-time enrollment at Cochise College, be a U.S. citizen or legal permanent resident, demonstrate a need for academic support, and meet at least one of the following criteria:

- First-generation college student (parents or guardian did not receive a bachelor's degree);
- Low-income student as established by the Department of Education; or
- Learning or physically disabled student registered with the Office of Disability Services.

More information is available at www.cochise.edu/trio or at the TRiO Student Support Services office on the Douglas Campus.

Career and Cooperative Education

Career counseling services are designed to assist students in exploring career and employment options, in discovering

personality strengths and interests, and in obtaining career information on specific majors and occupations. Cooperative (co-op) education provides opportunities for students to supplement coursework with practical work experiences related to their career objectives. Faculty advisors are assigned to mentor each student. Students earn academic credit and accomplish career-related objectives in a working environment in their field of study. Co-op services are available in the Student Development Center on the Douglas and Sierra Vista campuses. More information is at www.cochise.edu/career.

STUDENT ACTIVITIES

Extracurricular activities include community service, civic engagement and campus events. Student government and various clubs plan activities that promote leadership and social development. More information is at www.cochise.edu/activities.

Student Government

Student Government Association is established on both the Douglas and Sierra Vista campuses. At each campus, SGA comprises five appointed officers: president, vice president, secretary, treasurer and social events coordinator, who are selected based on an application process each spring. Student government plans, coordinates and promotes student activities.

Clubs and Organizations

Many campus events are the result of student clubs and organizations, which are governed by the Student Government Association. More information is at www.cochise.edu/clubs.

Athletics

Student athletic programs reside on the Douglas Campus. Athletes compete in baseball, men's and women's basketball, men's and women's rodeo and women's soccer. Cochise College is a Division I National Junior College Athletic Association school and a member of the National Intercollegiate Rodeo Association. The school colors are red and white, and the mascot is the Apaches.

OTHER EDUCATIONAL SERVICES

Developmental Courses for Underprepared Students

All new students should take the college placement test prior to registration in order to determine their skill levels in reading, writing and mathematics. Students with gaps in their academic backgrounds in one or more of these areas may need developmental courses to bring their skills up to college level. Students receive assistance from an advisor in selecting the proper developmental courses needed to prepare them for

college-level work. The majority of developmental courses are numbered 099 and below. Although these courses count toward meeting full-time status for financial aid purposes, they cannot be used to meet graduation requirements.

Learning Communities

Learning communities use collaborative teaching to bring together different academic disciplines and teach students how these areas are related. Instructors from different academic disciplines restructure their curriculum thematically to foster community, coherence and connections among disciplines. Learning communities increase student engagement, motivation and intellectual development.

Dual Enrollment and Programs of Study

High school students taking certain academic and/or career and technical education classes in high school can earn college credit. These courses count for credit at both the high school and at Cochise College. A list of courses that meet dual enrollment guidelines is available from high school counselors or the Cochise College K-12 Outreach Department. Programs of Study create a pathway between secondary and postsecondary education, providing students with the opportunity to acquire postsecondary credits while in high school. Information is at www.cochise.edu/highschool.

Adult Education

Cochise College Adult Education helps adult learners acquire the skills and knowledge necessary to enter the workforce or post-secondary education. Our focus areas are academics, technology, and communication in job and college contexts. Classes provide instruction for:

- Foundational skill building (reading, writing, math)
- High school equivalency test preparation (GED® Test prep)
- English language acquisition for nonnative speakers

Classes are held at Cochise College locations in Sierra Vista, Douglas, Benson and Willcox. Fees are based on household income on a sliding scale.

Summer Spanish and English Immersion

The college offers summer Spanish and English immersion programs on the Douglas Campus. These intensive, day-long classes are designed to improve basic listening and speaking in the Spanish language, or to improve reading, writing, grammar and oral communication proficiency in English. Students receive four to eight transferable credits of first-year Spanish, or completion of one level of English as a Second Language. Classroom instruction is enhanced by computer-assisted instruction, audio-visual materials, field trips and social activities.

POLICIES

Campus Crime Report

According to federal statute and regulations, colleges and universities are required to prepare and distribute each year an annual security report. The Campus SaVE Act details those reporting requirements. Within the report, colleges must set forth their policies on crime prevention and sex offenses and give statistics on the number of crimes reported on campus. Other reported crimes include the number of arrests for liquor law and drug violations and weapons possessions. The crime report is updated each September; the drug and alcohol free workplace report is updated each April. The reports may be reviewed at www.cochise.edu/securityemergency.

Under the Violence Against Women Act (VAWA, 1994), colleges are required to provide "primary prevention and awareness programs" for all incoming students, as well as ongoing prevention and awareness campaigns. Information is available from the vice president for Human Resources or the dean of Student Services.

Alcohol- and Drug-Free Workplace

Cochise College is committed to the prevention of alcohol and drug abuse, recognizing that the abuse of alcohol or other drugs poses serious risks to a person's health. Cochise College conforms with and supports all federal, state, and local laws and regulations that prohibit the unlawful manufacture, distribution, dispensation, possession, or use of alcohol or any prohibited or controlled substance at any college location. Students registered at Cochise College assume an obligation to conduct themselves in a manner compatible with the college's function as an educational institution and are expected to exercise personal responsibility and make informed choices concerning the use and misuse of alcohol and illicit drugs.

Cochise College will impose disciplinary sanctions that include, but are not limited to, verbal or written reprimands, disciplinary probation, removal from classes, suspension, expulsion, or possible referral to local, state, or federal law enforcement agencies, for any unlawful on-campus manufacture, distribution, use, or possession of alcohol or any prohibited controlled substance.

Smoking

Smoking is not permitted in any building or classroom at Cochise College. Designated smoking areas may be used outside of buildings on each campus and at each center. Information on designated smoking areas can be obtained from campus security or the dean of Student Services.

Sexual Harassment

Cochise College expressly forbids sexual harassment and discrimination of its employees and students by supervisors, other employees and students, and the general public.

Behaviors considered to be sexual harassment include the following: unwanted physical touching (beyond normal greeting); sexual molesting; verbal insults; and sexually explicit suggestions or rumors designed to cause emotional distress, place an individual in bad light, substantially interfere with an individual's work or study performance, or create an intimidating, hostile, and offensive work or study environment.

Any persons who believe that they have been victims of sexual harassment may make a formal complaint to an immediate supervisor, the vice president for Human Resources, or the dean of Student Services. All such complaints are treated in a confidential manner and are investigated thoroughly and promptly. If the complaints are not resolved, persons believing themselves victimized by such alleged sexual harassment are free to pursue other administrative or judicial remedies available, including the pursuit of their rights under Title IX of the Education Amendments of 1972, through the vice president for Human Resources and affirmative action or the dean of Student Services.

Degrees and Programs

COCHISE COLLEGE GENERAL EDUCATION

Mission

General education at Cochise College creates opportunities for students to build the foundation of knowledge and skills necessary for lifelong success. It helps them enrich their quality of life by encouraging habits of mind that enable them to understand and value the world they live in and to contribute to its well-being.

Values

Through its general education curriculum, Cochise College strives to instill into the learning process a sense of interconnectedness and wholeness. We value learning as an ongoing process. We value effective communication; aesthetic investigation, innovative solutions, and creative self-expression; critical thinking in problem solving; awareness of and respect for diversity; appropriate evaluation and application of information; and technological skills in information management and presentation. We believe these values lead to ethical, responsible social behavior. Our values are reflected in our general education outcomes.

Outcomes

Students fulfill general education requirements at Cochise College by demonstrating competency in the following: communication, creativity, critical thinking, diverse and global perspectives, information literacy, and technology literacy. These outcomes clearly state the expected knowledge, skills, attitudes, competencies, and habits of mind that students are expected to have acquired at the college upon completion of a degree.

- **Communication:** Students, using writing and speaking skills, individually and collaboratively, discover, organize, and communicate information, ideas, and arguments in a clear and effective manner appropriate to the audience and purpose.
- **Creativity:** Students perform one or more of the following: analyze, evaluate, and reflect on aesthetic experiences; propose innovative solutions to technical, scientific, social, or individual problems; produce artifacts of self-expression.
- **Critical Thinking:** Students employ logical, analytical, analogical, and reflective reasoning in combination with scientific, mathematical, humanistic, or artistic inquiry to solve problems effectively.
- **Diverse and Global Perspectives:** Students demonstrate an understanding of the diversity of human experience and the interdependent roles of historical, cultural, socio-economic, geographic, and ecological influences on this experience.
- **Information Literacy:** Students recognize that information is needed, and they use both traditional and modern technologies to effectively locate, evaluate, and apply the needed information.
- **Technology Literacy:** Students apply technological skills and processes to effectively acquire, manage, and present information.

Cochise College is committed to continuous improvement of its students' learning. The learning improvement process provides evidence of how well the college is meeting its objectives, helps identify areas of improvement, and allows improvements to be implemented. This is achieved by investigating current levels of learning, experimenting with ways to improve learning, and using the experimentation results to integrate successful strategies and actions for improving student learning into the college's curriculum or procedures.

TRANSFER DEGREES

Arizona Transfer

Cochise College offers the first two years of a four-year program for students who wish to earn a bachelor's degree. Transfer degree programs include the Associate of Arts (AA) for liberal arts, social science, and fine arts majors; Associate of Arts Elementary Education (AAEE); Associate of Business (ABUS) for business administration and computer information systems majors; and Associate of Science (AS) for natural, physical, and life science majors. These degrees are designed to transfer to all Arizona public universities. A student can enter the university as a junior after completing one of these associate degrees. Although these degrees are designed for transfer to all Arizona public universities, not all Arizona public universities offer majors in all areas. Students should consult with an advisor in the Student Development Center to ensure that their chosen university offers a degree in their area of study and that they select the most appropriate courses for this degree.

A statewide agreement between Arizona public community colleges and universities guarantees students two ways to transfer: (1) earning an associate degree or (2) completing a general education block called the Arizona General Education Curriculum (AGEC). The AGEC block fulfills the lower-division general education requirements at all Arizona public community colleges and universities. For most majors, Cochise College recommends students transfer after having

completed an AGEC or associate degree to ensure a seamless process.

Information on transfer to one of the three state universities—Arizona State University (ASU), Northern Arizona University (NAU), or the University of Arizona (U of A)—is available online at www.aztransfer.com. The AZTransfer website provides information regarding policies and procedures for transferring credits from community colleges to the public universities in the state of Arizona. Students can see how their coursework will transfer to Arizona's public universities by visiting the website of the Arizona Course Equivalency Guide (CEG) at http://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG. In addition, 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. Information is available online at www.aztransfer.com/sun. Cochise College also has some specific transfer agreements with each of these universities. Students should consult with an advisor for more detailed information on these options.

Private Transfer Agreements

Cochise College also has private articulation agreements with the following institutions. Students can check the websites or consult with a Cochise College advisor.

American Public University System	www.apus.edu
Ashford University	www.ashford.edu
California University of Pennsylvania	www.calu.edu
Capella University	www.capella.edu
Chamberlain College	www.chamberlain.edu
Charter Oak State College	www.charteroak.edu
Embry-Riddle Aeronautical University	www.erau.edu
Franklin University	www.franklin.edu
Grand Canyon University	www.gcu.edu
Kaplan University	www.cc.kaplan.edu
Northcentral University	www.ncu.edu
University of Phoenix	www.phoenix.edu
University of the Potomac	www.potomac.edu
Wayland Baptist University	www.wbu.edu
Western International University	www.wintu.edu
Western New Mexico University	www.wnmu.edu

OTHER ASSOCIATE DEGREES

Students should consult with an advisor in the Student Development Center concerning specific requirements and transfer options available for these degrees.

Associate of General Studies (AGS) Degrees - While not designed primarily for transfer, AGS degrees offer flexibility for the student who may wish to transfer to an out-of-state institution by including general education requirements. The student may also choose to complete an AGEC block to enhance possible transfer to an in-state institution.

Associate of Applied Science (AAS) Degrees - An extensive selection of AAS degree programs is available to students to prepare for employment in a specific career. In some cases, the programs are linked to agreements enabling a student with an AAS degree to transfer to an Arizona university without loss of credit. For more information, students should speak with an advisor or visit www.aztransfer.com/associates_degrees/aas_bas.

COCHISE COLLEGE GENERAL EDUCATION COURSES - TRANSFER DEGREES

Arizona General Education Curriculum (AGEC)

Arizona public community colleges and universities have agreed upon a common structure for transfer of general education curriculum. The Arizona General Education Curriculum (AGEC) block fulfills the lower-division general education requirements at all Arizona public community colleges and universities. Arizona residents who complete only an AGEC need to have a minimum cumulative grade point average of 2.5 and a grade of C or better in each AGEC course for assured admission into an Arizona public university, while Arizona residents who complete an associate degree need to have a minimum cumulative grade point average of 2.0 for assured admission.

The AGEC block at Cochise College consists of 35-39 credits. Coursework should be chosen from the appropriate AGEC course list to meet specific degree requirements.
General education requirements are:

Composition	6 credits
Mathematics	3-5 credits
Laboratory sciences	8 credits
Arts	3 credits

Humanities	3 credits
Social and behavioral sciences	6 credits
Technology literacy (AGEC-B only)	3 credits
AGEC-A : general education electives	4-6 credits
AGEC-B: general education electives	1-3 credits
AGEC-S: additional mathematics and/or laboratory sciences	6-8 credits
TOTAL GENERAL EDUCATION REQUIREMENTS	35-39 CREDITS

The three types of AGECs are:

AGEC-A	meets the general education requirements for arts and liberal arts majors in the Associate of Arts (AA) degrees and in the Associate of Arts Elementary Education (AAEE) degree.
AGEC-B	meets the general education requirements for business and information systems majors in the Associate of Business (ABUS) degrees.
AGEC-S	meets the general education requirements for math and science majors in the Associate of Science (AS) degrees.

The following applies to all Cochise College AGEC blocks:

- All courses must be completed with a grade of C or better.
- A core curriculum course may be used to satisfy a general education requirement; however, the total credits required for the degree remain the same.
- Six credits of coursework must be completed to fulfill the intensive writing requirement.
- The cultural and historical or global awareness requirements are satisfied by completing the arts, humanities, and social and behavioral science portion of the AGEC.
- A minimum of eight credits in the AGEC component of any transfer degree must be completed in residency at Cochise College.
- Placement testing is required and prerequisites may apply.

AA, AAEE, ABUS, AND AS DEGREES

COMPOSITION 6 CREDITS

ENG 101	Composition*°	3
ENG 102	English Composition*° OR	3
ENG 102H	English Composition	3

MATHEMATICS 3-5 CREDITS
AGEC-A

MAT 142	College Mathematics*°	3
MAT 151	Precalculus Algebra*°	4
MAT 154	Mathematics for Elementary Education Majors I°	3
MAT 156	Mathematics for Elementary Education Majors II°	3
MAT 167	Elements of Statistics*°	3
MAT 182	Precalculus Trigonometry°	3
MAT 187	Precalculus*°	5

MAT 212	Calculus for Business*°	3
MAT 220	Calculus I*°	5
MAT 227	Discrete Mathematics*	3
MAT 231	Calculus II*	4
MAT 241	Calculus III*	4
MAT 252	Introduction to Linear Algebra	3
MAT 262	Differential Equations*	3

AGEC-B

MAT 212	Calculus for Business*°	3
MAT 220	Calculus I*°	5

AGEC-S

MAT 220	Calculus I*°	5
MAT 231	Calculus II*	4
MAT 241	Calculus III*	4
MAT 252	Introduction to Linear Algebra	3
MAT 262	Differential Equations*	3

LABORATORY SCIENCES 8 CREDITS
AGEC-A or AGEC-B

AST 180	Introduction to Astronomy°‡	4
BIO 100	General Biology (for non-majors)°‡	4
BIO 105	Environmental Biology‡	4
BIO 156	Introductory Biology for Allied Health‡	4
BIO 160	Introduction to Human Anatomy and Physiology°‡	4
BIO 181	General Biology I (for majors)*‡	4
BIO 182	General Biology II*‡	4
BIO 201	Human Anatomy and Physiology I*°‡	4
BIO 202	Human Anatomy and Physiology II*‡	4
BIO 205	Microbiology*‡	4
BIO 226	Ecology‡	4
CHM 128	Forensic Chemistry‡	4
CHM 130	Fundamental Chemistry*°‡	4
CHM 138	Chemistry for Allied Health°‡	4
CHM 151	General Chemistry I*‡	4
CHM 152	General Chemistry II*‡	4
CHM 235	General Organic Chemistry I*‡	4
CHM 236	General Organic Chemistry II*‡	4
FOR 105	Forensic Science: Physical Evidence‡	4
GEO 101	Physical Geography°‡	4
GLG 101	Introduction to Geology I (Physical)*°‡	4
GLG 102	Introduction to Geology II (Historical)°‡	4
PHY 111	General Physics I*‡	4
PHY 112	General Physics II*‡	4
PHY 230	Physics with Calculus I*‡	4
PHY 231	Physics with Calculus II*‡	4

AGEC-S

BIO 181	General Biology I (for majors)*‡	4
BIO 182	General Biology II*‡	4
CHM 151	General Chemistry I*‡	4
CHM 152	General Chemistry II*‡	4
PHY 230	Physics with Calculus I*‡	4
PHY 231	Physics with Calculus II*‡	4
	BIO 181: for majors	

ARTS 3 CREDITS

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

ART 103	Design Fundamentals*‡	3
ART 106	Drawing I*‡	3
ART 107	Survey of World Art: Prehistoric - Gothic*°	3
ART 108	Survey of World Art: Renaissance to the Twentieth Century*°	3
ART 120	Appreciation of Visual Arts	3
ART 216	Drawing II‡	3
ART 220	Printmaking I‡	3
ART 225	Printmaking II‡	3
ART 230	Color and Design‡	3
ART 231	Three-Dimensional Design and Sculpture*‡	3
ART 245	Figure Drawing‡	3
ART 270	Ceramics I‡	3
ART 273	Ceramics IIA‡	3
ART 274	Ceramics IIB‡	3
ART 275A	Ceramics III‡	3
ART 280	Painting I‡	3
ART 281	Painting II‡	3
ART 285	Beginning Photography‡	3
ART 286	Intermediate Photography‡	3
ART 290	Sculpture I‡	3
ART 291	Sculpture II‡	3
ART 293	Sculpture III‡	3
ART 294	Sculpture IV‡	3
ART 295	Watercolor Painting I‡	3
ART 296	Watercolor Painting II‡	3
DMA 210	Digital Imaging II°‡	3
DMA 211	Computer Animation II°‡	3
DMA 260	Graphic Design I‡	3
DMA 261	Graphic Design II‡	3
DMA 262	Digital Video Production‡	3
DMA 263	Digital Video Production II‡	3
DMA 266	Digital Photography‡	3
DMA 267	Digital Photography II‡	3
ENG 119	Creative Writing°~	3
ENG 219	Advanced Creative Writing°~	3
HUM 200	Film History°~	3
JRN 201	Essentials of Newspaper Publishing	3
MUS 100	Fundamentals of Music Notation°	3
MUS 109	Orchestra	1
MUS 110	Chorus	1
MUS 111	Band	1
MUS 123	American Popular Music°	3
MUS 132	Music Theory I°	3
MUS 133	Music Theory II°	3
MUS 201	Ensemble	1
MUS 210	Music Theatre Workshop	2
MUS 260	Music Fundamentals through Experience	3
THE 101	Acting I	3
THE 201	Acting II	3
THE 220	Dramatic Structure*	3

HUMANITIES 3 CREDITS

ART 107	Survey of World Art: Prehistoric - Gothic*°	3
ART 108	Survey of World Art: Renaissance to the Twentieth Century*°	3
ASL 101	American Sign Language I°	4
ASL 102	American Sign Language II°	4
ASL 201	American Sign Language III°	4
ASL 202	American Sign Language IV°	4
COM 102	Essentials of Communication*	3
COM 110	Public Speaking°	3
ENG 220	British Literature I°~	3
ENG 221	British Literature II°~	3
ENG 222	Introduction to Shakespeare°~	3
ENG 224	American Literature I°~	3
ENG 225	American Literature II°~	3
ENG 228	Mythology and Folklore°~	3
ENG 230	Literature of the Southwest~	3
ENG 231	Native American Literature°~	3
ENG 255	Introduction to the English Language°~	3
ENG 260	Irish Literature~	3
ENG 265	Major American Writers~	3
ENG 273	Women and Literature°~	3
HON 260	The Human Quest for Utopia~	3
HUM 101	Humanities in Contemporary Life°	3
HUM 110	Introduction to Film°	3
HUM 115	Cultural Heritage of the Southwest°	3
HUM 116	Middle Eastern Humanities°	3
HUM 200	Film History°~	3
HUM 205	Cultural Studies through the Humanities I°~	3
HUM 206	Cultural Studies through the Humanities II°~	3
HUM 210	Foreign Film Classics°	3
JRN 101	Introduction to Mass Communications	3
JRN 102	Essentials of News Writing*	3
MUS 101	Introduction to Music	3
MUS 232	Music Theory III*°	3
MUS 233	Music Theory IV*°	3
PHI 111	Introduction to Western Philosophy*°~	3
PHI 113	Introduction to Logic*°~	3
PHI 130	Introduction to Ethics*°~	3
PHI 201	Introduction to Eastern Philosophy°~	3
PHI 202	Philosophy of Religion°~	3
SPA 101	Elementary Spanish I*°	4
SPA 102	Elementary Spanish II*°	4
SPA 201	Intermediate Spanish I*°	4
SPA 202	Intermediate Spanish II*°	4
THE 103	Introduction to Theatre°	3

SOCIAL AND BEHAVIORAL SCIENCES 6 CREDITS

AJS 101	Introduction to Administration of Justice*°	3
AJS 204/COM 204	Elements of Intercultural Communication~	3
ANT 101	The Origin and Antiquity of Humankind°	3
ANT 102	Society and Culture°	3
ANT 110	Exploring Archaeology°	3
ANT 235	Principles of Archaeology~	3
ANT 285	Prehistoric Cultures of North America°~	3
ANT 286	Historic Indian Tribes of North America~	3
ANT 288	Native Peoples of the Southwest~	3

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

ECN 201	Principles of Macroeconomics*°~	3
ECN 202	Principles of Microeconomics*°~	3
EDU 201	Introduction to Education	3
EDU 230	Classroom Relationships°	3
GEO 121	World Regional Geography°	3
HIS 110	History of the United States 1607-1877*°	3
HIS 111	History of the United States Since 1877*°	3
HIS 201	History of Women in the United States~	3
HIS 229	History of Mexico I°~	3
HIS 230	History of Mexico II°~	3
HIS 240	Survey of Western Civilization I°~	3
HIS 241	Survey of Western Civilization II°~	3
HIS 242	Survey of Western Civilization III°~	3
HIS 274	The Holocaust~	3
POS 110	American National Government*°	3
POS 220	Federal and Arizona Constitution°~	3
POS 230	World Politics*°~	3
POS 240	Comparative Politics*°	3
PSY 101	Introduction to Psychology*°	3
PSY 103	Personality and Adjustment°	3
PSY 210	Social Psychology°~	3
PSY 230	Personality Theories and Research°~	3
PSY 240	Developmental Psychology°~	3
PSY 250	Introduction to Psychological Research, Measurements and Statistics°‡~	3
PSY 270	Abnormal Psychology°~	3
PSY 290	Experimental Psychology°~	4
SOC 101	Introduction to Sociology*°	3
SOC 160	Sociology of Race and Ethnicity*°~	3
SOC 202	Social Problems*°~	3
SOC 210	Marriage and the Family°~	3
SOC 212	Sociology of Gender°~	3
SOC 230	Human Sexuality and Gender Awareness°	3

TECHNOLOGY LITERACY 3 CREDITS
AGEC-B

CIS 120	Introduction to Information Systems*°	3

GENERAL EDUCATION ELECTIVES

AGEC-A		4-6
AGEC-B		1-3

ADDITIONAL MATHEMATICS AND/OR LABORATORY SCIENCES

AGEC-S		6-8

Based on your major and after consulting with an advisor, select MAT 231, MAT 241, MAT 252, MAT 262, and/or appropriate laboratory science courses. See http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec for a complete list.

COCHISE COLLEGE GENERAL EDUCATION COURSES - NON-TRANSFER DEGREES

AGS DEGREES

COMPOSITION 6 CREDITS

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

MATHEMATICS 3-5 CREDITS

MAT 132	Applied Mathematics°	3
MAT 142	College Mathematics*°	3
MAT 151	Precalculus Algebra*°	4
MAT 154	Mathematics for Elementary Education Majors I°	3
MAT 156	Mathematics for Elementary Education Majors II°	3
MAT 167	Elements of Statistics*°	3
MAT 182	Precalculus Trigonometry°	3
MAT 187	Precalculus*°	5
MAT 212	Calculus for Business*°	3
MAT 220	Calculus I*°	5
MAT 227	Discrete Mathematics*	3
MAT 231	Calculus II*	4
MAT 241	Calculus III*	4
MAT 252	Introduction to Linear Algebra	3
MAT 262	Differential Equations*	3

LABORATORY SCIENCES 4 CREDITS

See list of acceptable courses for transfer degrees (p. 32).

ARTS 3 CREDITS

See list of acceptable courses for transfer degrees (p. 32).

HUMANITIES 3 CREDITS

See list of acceptable courses for transfer degrees (p. 33).

SOCIAL AND BEHAVIORAL SCIENCES 6 CREDITS

See list of acceptable courses for transfer degrees (p. 33).

AAS DEGREES

COMPOSITION 6 CREDITS

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

MATHEMATICS/LABORATORY SCIENCES 3-4 CREDITS

MAT 132	Applied Mathematics°	3
MAT 142	College Mathematics*°	3
MAT 151	Precalculus Algebra*°	4
MAT 154	Mathematics for Elementary Education Majors I°	3
MAT 156	Mathematics for Elementary Education Majors II°	3
MAT 167	Elements of Statistics*°	3
MAT 182	Precalculus Trigonometry°	3
MAT 187	Precalculus*°	5
MAT 212	Calculus for Business*°	3
MAT 220	Calculus I*°	5
MAT 227	Discrete Mathematics*	3
MAT 231	Calculus II*	4
MAT 241	Calculus III*	4
MAT 252	Introduction to Linear Algebra	3
MAT 262	Differential Equations*	3

Electronics Technology only

PSY 101	Introduction to Psychology*°	3

Nursing only

NUR 121A	Medication Math I	2
NUR 121B	Medication Math II	2

Paramedicine only

BIO 156	Introductory Biology for Allied	4

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

	Health‡	
BIO 160	Introduction to Human Anatomy and Physiology°‡	4

LIBERAL ARTS 6 CREDITS

AJS 101	Introduction to Administration of Justice*°	3
AJS 204/COM 204	Elements of Intercultural Communication~	3
ANT 101	The Origin and Antiquity of Humankind°	3
ANT 102	Society and Culture°	3
ANT 110	Exploring Archaeology°	3
ANT 235	Principles of Archaeology~	3
ANT 285	Prehistoric Cultures of North America°~	3
ANT 286	Historic Indian Tribes of North America~	3
ANT 288	Native Peoples of the Southwest~	3
ART 103	Design Fundamentals*‡	3
ART 106	Drawing I*‡	3
ART 107	Survey of World Art: Prehistoric - Gothic*°	3
ART 108	Survey of World Art: Renaissance to the Twentieth Century*°	3
ART 120	Appreciation of Visual Arts	3
ART 216	Drawing II‡	3
ART 220	Printmaking I‡	3
ART 225	Printmaking II‡	3
ART 230	Color and Design‡	3
ART 231	Three-Dimensional Design and Sculpture*‡	3
ART 245	Figure Drawing‡	3
ART 270	Ceramics I‡	3
ART 273	Ceramics IIA‡	3
ART 274	Ceramics IIB‡	3
ART 275A	Ceramics III‡	3
ART 280	Painting I‡	3
ART 281	Painting II‡	3
ART 285	Beginning Photography‡	3
ART 286	Intermediate Photography‡	3
ART 290	Sculpture I‡	3
ART 291	Sculpture II‡	3
ART 293	Sculpture III‡	3
ART 294	Sculpture IV‡	3
ART 295	Watercolor Painting I‡	3
ART 296	Watercolor Painting II‡	3
ASL 101	American Sign Language I°	4
ASL 102	American Sign Language II°	4
ASL 201	American Sign Language III°	4
ASL 202	American Sign Language IV°	4
COM 102	Essentials of Communication*	3
COM 110	Public Speaking°	3
DMA 210	Digital Imaging II°‡	3
DMA 211	Computer Animation II°‡	3
DMA 260	Graphic Design I‡	3
DMA 261	Graphic Design II‡	3
DMA 262	Digital Video Production‡	3
DMA 263	Digital Video Production II‡	3
DMA 266	Digital Photography‡	3
DMA 267	Digital Photography II‡	3
ECN 201	Principles of Macroeconomics*°~	3

ECN 202	Principles of Microeconomics*°~	3
EDU 201	Introduction to Education	3
EDU 230	Classroom Relationships°	3
ENG 119	Creative Writing°~	3
ENG 219	Advanced Creative Writing°~	3
ENG 220	British Literature I°~	3
ENG 221	British Literature II°~	3
ENG 222	Introduction to Shakespeare°~	3
ENG 224	American Literature I°~	3
ENG 225	American Literature II°~	3
ENG 228	Mythology and Folklore°~	3
ENG 230	Literature of the Southwest~	3
ENG 231	Native American Literature°~	3
ENG 255	Introduction to the English Language°~	3
ENG 260	Irish Literature~	3
ENG 265	Major American Writers~	3
ENG 273	Women and Literature°~	3
GEO 121	World Regional Geography°	3
HIS 110	History of the United States 1607-1877*°	3
HIS 111	History of the United States Since 1877*°	3
HIS 201	History of Women in the United States~	3
HIS 229	History of Mexico I°~	3
HIS 230	History of Mexico II°~	3
HIS 240	Survey of Western Civilization I°~	3
HIS 241	Survey of Western Civilization II°~	3
HIS 242	Survey of Western Civilization III°~	3
HIS 274	The Holocaust~	3
HON 260	The Human Quest for Utopia~	3
HUM 101	Humanities in Contemporary Life°	3
HUM 110	Introduction to Film°	3
HUM 115	Cultural Heritage of the Southwest°	3
HUM 116	Middle Eastern Humanities°	3
HUM 200	Film History°~	3
HUM 205	Cultural Studies through the Humanities I°~	3
HUM 206	Cultural Studies through the Humanities II°~	3
HUM 210	Foreign Film Classics°	3
JRN 101	Introduction to Mass Communications	3
JRN 102	Essentials of News Writing*	3
JRN 201	Essentials of Newspaper Publishing	3
MUS 100	Fundamentals of Music Notation°	3
MUS 101	Introduction to Music	3
MUS 109	Orchestra	1
MUS 110	Chorus	1
MUS 111	Band	1
MUS 123	American Popular Music°	3
MUS 132	Music Theory I°	3
MUS 133	Music Theory II°	3
MUS 201	Ensemble	1
MUS 210	Music Theatre Workshop	2
MUS 232	Music Theory III*°	3
MUS 233	Music Theory IV*°	3
MUS 260	Music Fundamentals through Experience	3
PHI 111	Introduction to Western Philosophy*°~	3

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

PHI 113	Introduction to Logic*°~	3
PHI 130	Introduction to Ethics*°~	3
PHI 201	Introduction to Eastern Philosophy°~	3
PHI 202	Philosophy of Religion°~	3
POS 110	American National Government*°	3
POS 220	Federal and Arizona Constitution°~	3
POS 230	World Politics*°~	3
POS 240	Comparative Politics*°	3
PSY 101	Introduction to Psychology*°	3
PSY 103	Personality and Adjustment°	3
PSY 210	Social Psychology°~	3
PSY 230	Personality Theories and Research°~	3
PSY 240	Developmental Psychology°~	3
PSY 250	Introduction to Psychological Research, Measurements and Statistics°‡~	3
PSY 270	Abnormal Psychology°~	3
PSY 290	Experimental Psychology°~	4
SOC 101	Introduction to Sociology*°	3
SOC 160	Sociology of Race and Ethnicity*°~	3
SOC 202	Social Problems*°~	3
SOC 210	Marriage and the Family°~	3
SOC 212	Sociology of Gender°~	3
SOC 230	Human Sexuality and Gender Awareness°	3
SPA 101	Elementary Spanish I*°	4
SPA 102	Elementary Spanish II*°	4
SPA 201	Intermediate Spanish I*°	4
SPA 202	Intermediate Spanish II*°	4
THE 101	Acting I	3
THE 103	Introduction to Theatre°	3
THE 201	Acting II	3
THE 220	Dramatic Structure*	3
WLD 114	Welding for Metal Sculpture‡	3

TECHNOLOGY LITERACY 3 CREDITS

CIS 116	Computer Essentials°	3
CIS 120	Introduction to Information Systems*°	3

DEGREE PROGRAMS

In each of the six degrees—the AA, AAEE, ABUS, AS, AGS, and AAS—only approved general education courses may be used to satisfy the general education requirements.
The AA, AAEE, ABUS, and AS degrees are designed for transfer to Arizona State University, Northern Arizona University, and the University of Arizona; however, not all three state universities offer majors in all areas. Students should consult with an advisor in the Student Development Center to ensure that their chosen university offers a degree in their area of study and that they select the most appropriate courses for their area of study. Since university requirements vary considerably, it is strongly recommended that students work closely with an academic advisor to plan their coursework.

ASSOCIATE OF ARTS DEGREE

The AA degree is recommended for liberal arts, social science, or fine arts students who plan to transfer to a university. These degrees are designed for transfer to all Arizona public universities; however, not all three state universities offer majors in all areas. Students should consult with an advisor in the Student Development Center to ensure that their chosen university offers a degree in their area of study. Cochise College has the following Associate of Arts degrees:

Administration of Justice (p. 44)	Major Code - AJS
Communications (p. 56)	Major Code - COM
Computer Science (p. 59)	Major Code - CSC
Early Childhood Care and Education (p. 64)	Major Code - ECE
Economics (p. 63)	Major Code - ECN
English (p. 68)	Major Code - ENG
Exercise Science, Health and Physical Education, Recreation and Wellness (p. 68)	Major Code - HPES
Fine Arts (p. 48)	Major Code - ARTF
General Requirements (p. 69)	Major Code - GENG
Humanities (p. 71)	Major Code - HUM
Journalism and Media Arts (p. 72)	Major Code - JMA
Music (p. 74)	Major Code - MUS

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Philosophy (p. 75)   Major Code - PHI

Psychology (p. 77)   Major Code - PSY

Social Sciences (p. 78)   Major Code - SS

Social Work (p. 78)   Major Code - SCW

Theatre Arts (p. 79)   Major Code - THE

GENERAL EDUCATION REQUIREMENTS, AGEC-A 35 CREDITS

Composition 6 credits

| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-5 credits

| MAT 142 | College Mathematics*° or higher (3-5 credits) | 3 |

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education course list.

LANGUAGE REQUIREMENT 0-16 CREDITS

University non-English language requirements vary. Check the language requirement for your major.

CORE CURRICULUM OR ELECTIVES 13-29 CREDITS

Elective courses must be transferable to the university or universities to which the student plans to transfer.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

DEGREE REQUIREMENTS:

- General education requirements for AA degrees consist of 35 credits. Six credits of coursework must be completed to fulfill the intensive writing requirement. The cultural and historical or global awareness requirements are satisfied by completing the arts, humanities, and social and behavioral science portion of the AGEC.
- Specific courses are required for the completion of each transfer degree program.
- All courses must be completed with a grade of C or better. A core curriculum course may be used to satisfy a general education requirement; however, the total credits required for the degree remain the same.
- A minimum of 16 credits of any degree granted must be completed in residency at Cochise College.
- A minimum of 8 credits in the AGEC component of any transfer degree must be completed in residency at Cochise College.
- A cumulative grade point average (GPA) of 2.0 or higher is required for any transfer degree.

ASSOCIATE OF ARTS ELEMENTARY EDUCATION DEGREE

The AAEE degree is designed for elementary education majors who plan to transfer to a four-year university. This degree is designed for transfer to all Arizona public universities. Students should consult with an advisor in the Student Development Center to ensure they are making the correct choices for their target university.

Associate of Arts Elementary Education (p. 63)   Major Code - EED

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-5 credits

| MAT 142 | College Mathematics*° or higher (3-5 credits) | 3 |

Laboratory Sciences 8 credits

8 credits must be taken from two different prefixes. BIO 100, BIO 105, BIO 201, GEO 101, PHY 111, CHM 130, AST 180, and GLG 101 are recommended.

Arts 3 credits

ART 120 or MUS 260 is recommended.

Humanities 3 credits

COM 102 is highly recommended; ART 107, ART 108, and MUS 101 are also recommended.

Social and Behavioral Sciences 6 credits

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* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

POS 220, HIS 110, and HIS 111 are highly recommended. PSY 101, ECN 201 or ECN 202, and PSY 240 are also recommended.

General Education Electives 4-6 credits

General education electives must be chosen from the general education course list.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses.
See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 18 CREDITS

Courses

EDU 201	Introduction to Education	3
EDU 222	Introduction to Special Education°	3
EDU 226	Cultural Diversity in Education	3
EDU 230	Classroom Relationships°	3
MAT 154	Mathematics for Elementary Education Majors I°	3
MAT 156	Mathematics for Elementary Education Majors II°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

Some students will have more than 64 credits because of varying credits in language, mathematics, and other courses. 64 credits represent the minimum for this degree.

DEGREE REQUIREMENTS:

- General education requirements for the AAEE degree consist of 35 credits. Six credits of coursework must be completed to fulfill the intensive writing requirement. POS 220 is recommended to fulfill three of the six credits. The cultural and historical or global awareness requirements are satisfied by completing the arts, humanities, and social and behavioral science portion of the AGEC.
- Specific courses are required for the completion of each transfer degree program.
- All courses must be completed with a grade of C or better. A core curriculum course may be used to satisfy a general education requirement; however, the total credits required for the degree remain the same.
- A minimum of 16 credits of any degree granted must be completed in residency at Cochise College.
- A minimum of 8 credits in the AGEC component of any transfer degree must be completed in residency at Cochise College.
- A cumulative grade point average (GPA) of 2.0 or higher is required for any transfer degree.

ASSOCIATE OF BUSINESS DEGREE

The ABUS degree is designed to satisfy transfer requirements for business and computer information systems majors. These degrees are designed for transfer to all Arizona public universities. Students should consult with an advisor in the Student Development Center for assistance in degree planning. Cochise College has the following Associate of Business degrees:

GENERAL EDUCATION REQUIREMENTS, AGEC-B 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 212	Calculus for Business*°	3
	OR	
MAT 220	Calculus I*°	5

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Technology Literacy 3 credits

CIS 120	Introduction to Information Systems*°	3

General Education Electives 1-3 credits

General education electives must be chosen from the general education course list.

CORE CURRICULUM AND ELECTIVES 29 CREDITS

Elective courses must be transferable to the university or universities to which the student plans to transfer.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

DEGREE REQUIREMENTS:

- General education requirements for ABUS degrees consist of 35 credits. Six credits of coursework must be completed to fulfill the intensive writing requirement. The cultural and historical or global awareness requirements are satisfied by completing the arts, humanities, and social and behavioral science portion of the AGEC.
- Specific courses are required for the completion of each transfer degree program.
- All courses must be completed with a grade of C or better. A core curriculum course may be used to satisfy a general education requirement; however, the total credits required for the degree remain the same.
- A minimum of 16 credits of any degree granted must be completed in residency at Cochise College.
- A minimum of 8 credits in the AGEC component of any transfer degree must be completed in residency at Cochise College.
- A cumulative grade point average (GPA) of 2.0 or higher is required for any transfer degree.

ASSOCIATE OF SCIENCE DEGREE

The AS degree is designed for students interested in transferring to a four-year institution in the areas of natural, physical, or life sciences. These degrees are designed for transfer to all Arizona public universities; however, not all three state universities offer majors in all areas. Students should consult with an advisor in the Student Development Center to ensure that their chosen university offers a degree in their area of study. Cochise College has the following Associate of Science degrees:

Biology (p. 52)	Major Code - BIO
Chemistry (p. 56)	Major Code - CHM
Computer Science (p. 58)	Major Code - CSC
Engineering (p. 66)	Major Code - EGR
General Requirements (p. 70)	Major Code - GENG
Mathematics (p. 73)	Major Code - MAT
Physics (p. 76)	Major Code - PHY

GENERAL EDUCATION REQUIREMENTS, AGEC-S 35-39 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 220	Calculus I*° or higher (3-5 credits)	5

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Laboratory Sciences 8 credits

BIO 181	General Biology I (for majors)*‡	4
	AND	
BIO 182	General Biology II*‡	4
	OR	
CHM 151	General Chemistry I*‡	4
	AND	
CHM 152	General Chemistry II*‡	4
	OR	
PHY 230	Physics with Calculus I*‡	4
	AND	
PHY 231	Physics with Calculus II*‡	4

Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Additional mathematics and/or laboratory sciences 6-8 credits

Based on your major and after consulting with an advisor, select MAT 231, MAT 241, MAT 252, MAT, and/or appropriate laboratory science courses. See http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec for a complete list.

CORE CURRICULUM AND ELECTIVES 25-29 CREDITS

Elective courses must be transferable to the university or universities to which the student plans to transfer.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

DEGREE REQUIREMENTS:

- General education requirements for AS degrees consist of 35-39 credits. Six credits of coursework must be completed to fulfill the intensive writing requirement. The cultural and historical or global awareness requirements are satisfied by completing the arts, humanities, and social and behavioral science portion of the AGEC.
- Specific courses are required for the completion of each transfer degree program.
- All courses must be completed with a grade of C or better. A core curriculum course may be used to satisfy a general education requirement; however, the total credits required for the degree remain the same.
- A minimum of 16 credits of any degree granted must be completed in residency at Cochise College.
- A minimum of 8 credits in the AGEC component of any transfer degree must be completed in residency at Cochise College.
- A cumulative grade point average (GPA) of 2.0 or higher is required for any transfer degree.

ASSOCIATE OF GENERAL STUDIES DEGREE

The AGS degree is designed for students who do not plan to transfer or who plan to transfer to an out-of-state university and want more flexibility in selecting courses. Choosing the AGS and fulfilling Arizona General Education Curriculum (AGEC) requirements will maintain an open door for transferring to an Arizona public university at a later time.

The AGS degree is designed to be a general studies degree with no area of emphasis. Students planning to transfer to an out-of-state university should work closely with an academic advisor in choosing their coursework. Whenever possible, working with the catalog of the out-of-state university provides the best planning tool for students. Cochise College has the following Associate of General Studies degrees:

Aviation Dispatch (p. 51)	Major Code - AVD
General Studies (p. 70)	Major Code - AGS
Professional Pilot Technology (p. 50)	Major Code - PPT

GENERAL EDUCATION REQUIREMENTS 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 132	Applied Mathematics°	3
	or higher (3-5 credits)	

Laboratory Sciences 4 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Foreign Language (100 or higher) or Communications (101 or higher) 3-4 credits
General Education Electives 6-7 credits

General education electives must be chosen from the general education course list or HPE 179

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses may be selected from any Cochise College course at the 100 level or higher.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

DEGREE REQUIREMENTS:

- The AGS degree requires coursework at the 100 level or higher.
- General education requirements for AGS degrees consist of a minimum of 35 credits. Six credits of coursework must be completed to fulfill the intensive writing requirement. The cultural and historical or global awareness requirements are satisfied by completing the arts, humanities, and social and behavioral science courses in the degree.
- All courses must be completed with a grade of C or better.
- An elective course may be used to satisfy a general education requirement; however, the total credits required for the degree remain the same.
- A minimum of 16 credits of any degree granted must be completed in residency at Cochise College.
- A cumulative grade point average (GPA) of 2.0 or higher is required for any AGS degree.

ASSOCIATE OF APPLIED SCIENCE DEGREE

The AAS degree is most commonly used to prepare students for employment in a specific career upon graduation. Some Arizona universities have responded to the needs in particular technical fields by creating two-plus-two programs enabling a student with an AAS degree to transfer to a university without loss of credit. These degree programs may require lower-division general education courses in the junior and senior years. Students should consult with an academic advisor for information about the Bachelor of Applied Science (BAS) degrees at Arizona public universities. Cochise College has the following Associate of Applied Science degrees:

Administration of Justice (p. 44)	Major Code - AJS
Agriculture (p. 45)	Major Code - AGR
Automotive Technology (p. 49)	Major Code - ATC
Avionics Technology (p. 49)	Major Code - AVT
Building Construction Technology (p. 53)	Major Code - BCT
Business Management (p. 55)	Major Code - BMT
Cisco and Linux Networking (p. 61)	Major Code - CLN
Computer Information Systems (p. 58)	Major Code - CIS
Computer Programming (p. 58)	Major Code - CPG
Culinary Arts (p. 61)	Major Code - CUL
Cybersecurity (p. 59)	Major Code - CYB
Early Childhood Care and Education (p. 65)	Major Code - ECE
Education (p. 65)	Major Code - ED
Electronics Technology (p. 66)	Major Code - ELT
Engineering (p. 67)	Major Code - EGR
Engineering Technology (p. 67)	Major Code - EGRT
Equine Science and Management (p. 45)	Major Code - EQSM
Fire Science Technology (p. 69)	Major Code - FST
Intelligence Operations Studies (p. 71)	Major Code - IOST
Logistics Supply Chain Management (p. 73)	Major Code - LGS
Media Production Arts (p. 72)	Major Code - MPA
Network Technology (p. 60)	Major Code - NWT
Paramedicine (p. 46)	Major Code - PAR
Professional Administrative Assistant (p. 76)	Major Code - PAA
Professional Pilot Technology (p. 51)	Major Code - PPT
Registered Nurse (p. 74)	Major Code - NUR
Remotely Piloted Vehicle Operations (p. 52)	Major Code - RPV
Respiratory Therapy (p. 47)	Major Code - RTH
Unmanned Aerial Vehicle Flight Operator (p. 80)	Major Code - UAVO
Unmanned Aircraft Systems and Operations (p. 52)	Major Code - UAS
Unmanned Aircraft Systems Technician (p. 80)	Major Code - UAVT
Welding Technology (p. 81)	Major Code - WLD

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Mathematics/Laboratory Sciences 3-4 credits

MAT 132	Applied Mathematics° or higher (3-4 credits)	3

BIO 156 or BIO 160 will satisfy the mathematics/laboratory science requirement for the paramedicine program only.
NUR 121A and NUR 121B will satisfy the mathematics/laboratory science requirement for the nursing program only.
PSY 101 will satisfy the mathematics/laboratory science requirement for the electronics program only.

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM (SEE AREAS OF STUDY)
ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

DEGREE REQUIREMENTS:

- The AAS degree requires coursework at the 100 level or higher.
- General education requirements for AAS degrees consist of a minimum of 18 credits selected from the appropriate general education course list.
- All courses must be completed with a grade of C or better.
- A minimum of 16 credits of any degree granted must be completed in residency at Cochise College.
- A cumulative grade point average (GPA) of 2.0 or higher is required for any AAS degree.

CERTIFICATES

Cochise College offers many certificates designed for direct employment. A minimum of 25 percent of the required credits used in the certificate must be completed from Cochise College for each certificate granted. All courses must be completed with a grade of C or better. Cochise College has the following certificates:

Certificate	Credits	Major Code
Administrative Office Aide (p. 77)	16-18 credits	Major Code - AOA
Aerospace Thermal Fusion (p. 81)	30 credits	Major Code - AETF
Aerospace Welding Technology (p. 82)	18 credits	Major Code - AEWT
Automotive Technology (p. 49)	21 credits	Major Code - ATC
Avionics Technology (p. 50)	57 credits	Major Code - AVT
Basic Logistics Supply Chain Management (p. 73)	24 credits	Major Code - LGSB
Carpentry Technology (p. 53)	23 credits	Major Code - CTC
Chef Garde Manger Apprentice (p. 62)	21 credits	Major Code - CGMA
Chef Patissier – Baker's Apprentice (p. 62)	24 credits	Major Code - BKRA
Cisco Networking (p. 61)	16 credits	Major Code - CNT
Computer Maintenance and Repair (p. 60)	19 credits	Major Code - COMR
Computer-Aided Drafting (p. 62)	27 credits	Major Code - CAD
Electrical Technology (p. 54)	22 credits	Major Code - ET
Emergency Medical Technician (Prep for External Licensure) (p. 46)	8 credits	Major Code - EMT

Entrepreneurship/Small Business Management (p. 55)	30 credits	Major Code - ENTC
Fire Science Technology (p. 69)	18 credits	Major Code - FST
General Business (p. 55)	18 credits	Major Code - GBUS
General Computer-Aided Drafting (p. 63)	18 credits	Major Code - GCAD
General Welding Technology (p. 81)	18 credits	Major Code - GWLD
Hazardous Materials Technician (p. 69)	16 credits	Major Code - HMT
HVAC (p. 53)	20 credits	Major Code - HVAC
Linux System Administrator (p. 60)	19 credits	Major Code - LSA
Medical Assistant (p. 46)	27 credits	Major Code - MEDA
Medication Assistant (Prep for External Licensure) (p. 48)	6 credits	Major Code - MAC
Nursing Assistant (Prep for External Licensure) (p. 47)	6 credits	Major Code - CNA
Paramedicine (p. 47)	49-55 credits	Major Code - PAR
Practical Nurse (Prep for External Licensure)	43 credits	Major Code - LPN
Receptionist (p. 77)	18-19 credits	Major Code - RCP
Sous Chef Apprentice (p. 62)	40-43 credits	Major Code - SCCA
Technical Education Facilitator (p. 66)	16 credits	Major Code - TEF
Utility Industry (p. 54)	23 credits	Major Code - UI
Web Developer (p. 61)	26 credits	Major Code - WEBD
Welding Technology (p. 81)	30 credits	Major Code - WLD

Air Conditioning Maintenance Technician (p. 83)	16 credits	Major Code - ACM
Automotive Service Manager (p. 82)	12 credits	Major Code - ASM
Basic Automotive Technology (p. 82)	15 credits	Major Code - BATC
Basic Building Construction Technology (p. 82)	13 credits	Major Code - BBCT
Cabinetmaker (p. 83)	12 credits	Major Code - CAB
Telecommunications Cable Installation (p. 83)	12 credits	Major Code - TCI

Designed for the inmates of the Arizona Department of Corrections in Douglas.

ARIZONA DEPARTMENT OF CORRECTIONS

CERTIFICATES

Advanced Automotive Technology (p. 82)	15 credits	Major Code - AATC
Advanced Building Construction Technology (p. 83)	16 credits	Major Code - ABCT

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Areas of Study

ADMINISTRATION OF JUSTICE

ADMINISTRATION OF JUSTICE - ASSOCIATE OF ARTS (MAJOR CODE - AJS)

The Administration of Justice Associate of Arts degree is designed to prepare the student for a wide variety of criminal justice career fields or for transfer into university degree programs. To ensure seamless university transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory sciences 8 credits

CHM 128	Forensic Chemistry‡ OR	4
FOR 105	Forensic Science: Physical Evidence‡	4
	Laboratory sciences	4

CHM 128 or FOR 105 is highly recommended.

Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits

COM 204, POS 110 or POS 220, and PSY 101, SOC 101, or SOC 160 are recommended.

General Education Electives 4-6 credits

COM 102	Essentials of Communication*	3
	General education electives	1-3

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.

Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency
University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 18 CREDITS

AJS 101	Introduction to Administration of Justice*°	3
AJS 109	Substantive Criminal Law°	3
AJS 225	Criminology°	3
AJS 230	The Police Function°	3
AJS 240	The Correction Function°	3
AJS 260	Procedural Criminal Law	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com. AJS 212, AJS 215, AJS 275, PSY 240, and SOC 207 are recommended. It is highly recommended that students complete a criminal justice-related internship in addition to the 64-unit degree, namely AJS 224 or a related SLE special topics course.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

ADMINISTRATION OF JUSTICE - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - AJS)

The Administration of Justice Associate of Applied Science degree is designed to prepare the student for a career in the criminal justice profession or for transfer to a university Bachelor of Applied Science degree program. Furthermore, core courses provide additional training to certified law enforcement and corrections professionals.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 142	College Mathematics*° or higher (3-4 credits)	3

Liberal Arts 6 credits

POS 220, PSY 101, PSY 270, SOC 101, SOC 160, and SOC 207 are recommended.

Technology Literacy 3 credits

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 30 CREDITS

Select from the following options or see an AJS advisor for evaluation of certified training.

AJS 101	Introduction to Administration of Justice*°	3
AJS 109	Substantive Criminal Law°	3
AJS 212	Juvenile Justice Procedures°	3

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

AJS 225	Criminology°	3
	OR	
AJS 275	Criminal Investigations	3
AJS 230	The Police Function°	3
AJS 240	The Correction Function°	3
AJS 260	Procedural Criminal Law	3
COM 102	Essentials of Communication*	3
	OR	
COM 204/AJS 204	Elements of Intercultural Communication°~	3
CHM 128	Forensic Chemistry‡	4
	OR	
FOR 105	Forensic Science: Physical Evidence‡	4
	Physical Education	2

Based upon AJS Department evaluation, certified law enforcement training such as POST Academy, FLETC Academy, and COTA can be used to fulfill all or part of the core curriculum and elective requirements.

DEPARTMENT APPROVED ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Electives may include, but are not limited to, the following: AJS 204, AJS 215, AJS 225 (or AJS 275), CHM 128 (or FOR 105), PSY 101, PSY 240, non-English language and laboratory science courses.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

Students pursuing a BAS degree must meet with an advisor to determine the appropriate general education and core curriculum requirements. Additional credits required in the general education block for BAS transfer may be used to fulfill core curriculum or elective requirements.

AGRICULTURE

AGRICULTURE - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - AGR)

The Agriculture Associate of Applied Science degree is designed to prepare the student for a career in the agricultural profession or for transfer to a university Bachelor of Applied Science degree program. It focuses on animal science, natural resources, and agribusiness management, and it introduces students to various careers in the field of agriculture.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits
| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-4 credits
| MAT 132 | Applied Mathematics° | 3 |

or higher (3-4 credits)

Liberal Arts 6 credits
| COM 102 | Essentials of Communication* | 3 |
| PSY 101 | Introduction to Psychology*° | 3 |

Technology Literacy 3 credits
CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 42 CREDITS

AGR 102	Introduction to Agriculture*°‡~	3
AGR 105	Range Management	3
AGR 208	Animal Science‡	4
AGR 214	Soil Science‡	4
AGR 220	Agriculture Practicum	4
AGR 225	Principles of Agribusiness	3
AGR 230	Feeds and Feeding	3
AGR 237	Equine Science and Management‡	4
AGR 243	Livestock Production and Management	3
BIO 100	General Biology (for non-majors)°‡	4
BUS 143	Principles of Management	3
CHM 130	Fundamental Chemistry*°‡	4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

EQUINE SCIENCE AND MANAGEMENT - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - EQSM)

The Equine Science and Management Associate of Applied Science degree is designed to prepare students for a career in equine science and management or for transfer to a university Bachelor of Applied Science degree program. It focuses on equine anatomy and physiology, reproduction, conformation and lameness, stable operations and management, and western equitation.
Prior to enrollment, students must meet the following requirements: 1) Score of 75% or higher on horsemanship practical entrance exam, 2) Passing evaluation of their horse during the entrance exam, 3) Documentation of current vaccines and negative Coggins test, and 4) Acceptance into the equine program.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits
| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-4 credits
| MAT 132 | Applied Mathematics° or higher (3-4 credits) | 3 |

Liberal Arts 6 credits
| COM 102 | Essentials of Communication* | 3 |
| PSY 101 | Introduction to Psychology*° | 3 |

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 39 CREDITS

AGR 220	Agriculture Practicum	4
AGR 237	Equine Science and Management‡	4
BIO 100	General Biology (for non-majors)°‡	4
BUS 143	Principles of Management	3
EQS 105	Western Equitation I‡	3
EQS 115	Equine Evaluation‡	3
EQS 120	Equine and Stable Management I‡	3
EQS 145	Equine Anatomy and Physiology‡	3
EQS 205	Western Equitation II‡	3
EQS 215	Equine Lameness‡	3
EQS 220	Equine and Stable Management II‡	3
EQS 245	Equine Reproduction‡	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

ALLIED HEALTH

EMERGENCY MEDICAL TECHNICIAN - CERTIFICATE (MAJOR CODE - EMT)

The Emergency Medical Technician Certificate provides a study of anatomy and physiology, signs and symptoms of illness and injury, patient assessment, procedures associated with the provision of emergency medical care, triage, basic life support systems, and basic legal responsibilities. Equips students with the knowledge and skills required by the National Registry of Emergency Medical Technicians (NREMT) and the Arizona Department of Health Services – Bureau of Emergency Medical Services (ADHS-BEMS) to practice as an Emergency Medical Technician. Students desiring NREMT/ADHS-BEMS certification must complete the state-required number of clinical experience hours with an Emergency Medical Service provider of out-of-hospital emergency care. Meets the ADHS-BEMS guidelines and is approved by the state of Arizona and the National Registry of EMTs.
Medical Direction: Arizona Certified EMTs are authorized to provide treatment, perform procedures, and utilize skills—as defined by the 2009 National EMS Education Standards—only under the medical control of an approved medical director or certified base hospital.

CORE CURRICULUM 8 CREDITS

| EMT 174 | Emergency Medical Technician‡ | 8 |

TOTAL CERTIFICATE REQUIREMENTS 8 CREDITS

MEDICAL ASSISTANT - CERTIFICATE (MAJOR CODE - MEDA)

The Medical Assistant Certificate provides training for entry-level employment in a medical practice setting, with emphasis on the routine administrative and clinical tasks required in the day-to-day operation of offices and clinics of health professionals. It introduces students to telephone techniques and other front office functions such as filing and coding insurance claims, scheduling patients, and keeping electronic medical records. It also introduces them to back office skills that include taking vital signs, assisting with electrocardiograms and other special procedures, using medical terminology, and administering medication. The certificate's externship course offers practical experience in a medical office setting. Prior to certificate completion, students take the Medical Assistant certification examination to become certified as Registered Medical Assistants.

CORE CURRICULUM 27 CREDITS

BIO 160	Introduction to Human Anatomy and Physiology°‡	4
HLT 101	Medical Terminology°	2
HLT 111	CPR and First Aid‡	1
HLT 139	Medical Assistant I‡	8
HLT 140	Medical Assistant II‡	12

See course descriptions for prerequisites and other requirements.
HLT 111 must be taken at Cochise College or at an accredited college or university.

TOTAL CERTIFICATE REQUIREMENTS 27 CREDITS

PARAMEDICINE - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - PAR)

The Paramedicine Associate of Applied Science degree prepares the student to become a Nationally Registered Paramedic. Paramedics render basic and advanced medical treatment before and during patient transport to a medical facility and they assess and treat a wide variety of medical emergencies. Paramedics work for fire departments, law enforcement agencies, private ambulance services, industrial companies, clinics, and hospitals.
Admission into the program requires a separate application. Prior to enrollment in the paramedicine program, all students must pass a computer-based entrance examination.

GENERAL EDUCATION REQUIREMENTS 19 CREDITS

Composition 6 credits

| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics/Laboratory Sciences 4 credits

| BIO 156 | Introductory Biology for Allied Health‡ | 4 |

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

	OR	
BIO 160	Introduction to Human Anatomy and Physiology°‡	4

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 49-55 CREDITS

PMD 101	Paramedicine I‡	6
PMD 201	Paramedicine II‡	7
PMD 202	Paramedicine III‡	7
PMD 203	Paramedicine IV‡	10
PMD 204	Paramedicine V‡	10
PMD 205	Paramedicine VI‡	9
PMD 206	Paramedicine VII‡	6

The program coordinator may waive PMD 101 for students who meet the course requirements.

TOTAL DEGREE REQUIREMENTS 68-74 CREDITS

PARAMEDICINE - CERTIFICATE (MAJOR CODE - PAR)

The Paramedicine Certificate prepares the student to become a Nationally Registered Paramedic. Paramedics render basic and advanced medical treatment before and during patient transport to a medical facility and they assess and treat a wide variety of medical emergencies. Paramedics work for fire departments, law enforcement agencies, private ambulance services, industrial companies, clinics, and hospitals. Admission into the program requires a separate application. Prior to enrollment in the paramedicine program, all students must pass a computer-based entrance examination.

CORE CURRICULUM 49-55 CREDITS

PMD 101	Paramedicine I‡	6
PMD 201	Paramedicine II‡	7
PMD 202	Paramedicine III‡	7
PMD 203	Paramedicine IV‡	10
PMD 204	Paramedicine V‡	10
PMD 205	Paramedicine VI‡	9
PMD 206	Paramedicine VII‡	6

The program coordinator may waive PMD 101 for students who meet the course requirements.

TOTAL CERTIFICATE REQUIREMENTS 49-55 CREDITS

RESPIRATORY THERAPY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - RTH)

The Respiratory Therapy Associate of Applied Science degree prepares the student to become an allied health professional specializing in the diagnosis, treatment, and care of patients suffering from cardiopulmonary disease. Upon completion of

the program, the student is eligible to take national registry examinations to be certified as a respiratory therapist.

YEAR 1 PROGRAM PREREQUISITES:

FALL AND SPRING SEMESTERS 27-28 CREDITS

BIO 156	Introductory Biology for Allied Health‡	4
BIO 160	Introduction to Human Anatomy and Physiology°‡	4
BIO 205	Microbiology*‡	4
ENG 101	Composition*°	3
ENG 102	English Composition*°	3
MAT 132	Applied Mathematics° or higher (3-4 credits)	3
	Liberal arts	3
	Liberal arts	3

Liberal Arts: Select PSY 101, PSY 103, PSY 218, PSY 230, PSY 240, PSY 270, SOC 101, SOC 160, SOC 202, SOC 207, or SOC 230.

YEAR 2 FRESHMAN:

FIRST SEMESTER 16 CREDITS

RTH 110	Introduction to Respiratory Care‡	4
RTH 112	Respiratory Physiology‡	4
RTH 121	Basic Therapeutics‡	4
RTH 123	Basic Assessment and Monitoring‡	4

SECOND SEMESTER 13 CREDITS

RTH 124	Pharmacology for Respiratory Care	3
RTH 162	Principles of Mechanical Ventilation‡	3
RTH 235	Clinical Procedures I	4
RTH 246	Cardiorespiratory Disorders I	3

YEAR 3 SOPHOMORE:

THIRD SEMESTER 13 CREDITS

RTH 241	Critical Care Therapeutics‡	4
RTH 243	Advanced Assessment and Monitoring‡	4
RTH 245	Clinical Procedures II	5

FOURTH SEMESTER 14 CREDITS

RTH 251	Advanced and Specialty Therapeutics‡	5
RTH 255	Clinical Procedures III	5
RTH 256	Cardiorespiratory Disorders II‡	3
RTH 257	Clinical Applications and Professional Development‡	1

TOTAL DEGREE REQUIREMENTS 83-84 CREDITS

NURSING ASSISTANT - CERTIFICATE (MAJOR CODE - CNA)

The Nursing Assistant Certificate, which requires one semester to complete, is approved by the Arizona State Board of Nursing to prepare students for nursing assistant certification. Emphasis is on communication, patient safety, anatomy and physiology, specific patient-care skills, and patient rights. Includes the nursing process and the legal and professional responsibilities of the nursing assistant. Also

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* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

covers the basic physical, psychosocial, and cultural needs of all patients, with special emphasis on the geriatric population. Students taking this program for state certification must be 16 prior to program completion, provide documentation of U.S. citizenship or qualifying alien status, undergo fingerprinting, pass a background check, and have received absolute discharge from the sentence for any felony conviction no less than 5 years prior to submitting their application for state certification.

CORE CURRICULUM 6 CREDITS

HLT 109	Nursing Assistant‡	5
HLT 111	CPR and First Aid‡	1

HLT 111: Possession of a current American Heart Association CPR and First Aid certification for healthcare providers satisfies this course requirement.

TOTAL CERTIFICATE REQUIREMENTS 6 CREDITS

MEDICATION ASSISTANT - CERTIFICATE (MAJOR CODE - MAC)

The Medication Assistant Certificate is approved by the Arizona State Board of Nursing to prepare Certified Nursing Assistants to become Certified Medication Assistants who can safely administer selected medications in some hospitals and in long-term care facilities. Emphasis is on simple calculations, categories of medication, and basic principles of medication administration. Students who complete the Medication Assistant Certificate and who pass the written and manual-skills exam administered by the Arizona State Board of Nursing will become Certified Medication Assistants. Prior to enrollment, students must meet the following requirements: 1) minimum 18 years of age; 2) high school diploma, GED, or foreign equivalent with English language proficiency; and 3) minimum six months working experience as a Certified Nursing Assistant.

CORE CURRICULUM 6 CREDITS

HLT 128	Medication Assistant - Certified‡	3
HLT 129	Medication Assistant Externship‡	3

TOTAL CERTIFICATE REQUIREMENTS 6 CREDITS

ART

The art program at Cochise College has been designed with three goals in mind: (1) as a source of personal growth and self-expression, (2) to fulfill general education requirements for associate or baccalaureate degrees, and (3) to successfully transfer credit to four-year institutions.
Students seeking a specialized career in art should see an art instructor for advisement.

FINE ARTS - ASSOCIATE OF ARTS (MAJOR CODE - ARTF)

The Fine Arts Associate of Arts degree prepares students for transfer to a university program in art. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses.
See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency
University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 15 CREDITS

ART 103	Design Fundamentals*‡	3
ART 106	Drawing I*‡	3
ART 107	Survey of World Art: Prehistoric - Gothic*°	3
ART 108	Survey of World Art: Renaissance to the Twentieth Century*°	3
ART 231	Three-Dimensional Design and Sculpture*‡	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com. The Art Department recommends the following: For a two-dimensional emphasis, select ART 216, ART 230, ART 245, ART 280, ART 281, ART 285, ART 286, ART 295, or ART 296; for a three-dimensional emphasis, select ART 270, ART 273, ART 274, ART 275A, ART 290, ART 291, ART 293, or ART 294.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

AUTOMOTIVE TECHNOLOGY

AUTOMOTIVE TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - ATC)

The Automotive Technology Associate of Applied Science degree provides students with a working knowledge of the skills required for employment as automotive technicians. It benefits both students seeking marketable skills and experienced automotive technicians looking to upgrade their proficiency and obtain industry certification. Students successfully completing the program will have obtained the knowledge and skills necessary to qualify for all eight segments of the Automotive Service Excellence (ASE) Technician Certification.

GENERAL EDUCATION REQUIREMENT 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 132	Applied Mathematics° or higher (3-4 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 33 CREDITS

AUT 101	Introduction to Automotive Technology‡	3
AUT 102	Automotive Electrical Fundamentals‡	3
AUT 103	Internal Combustion Engines‡	3
AUT 104	Automotive Brake Systems‡	3
AUT 105	Automotive Suspension and Steering Systems‡	3
AUT 106	Automotive Manual Drive Systems‡	3
AUT 108	Automotive Parts Specialist	3
AUT 201	Automotive Electrical Systems and Equipment‡	3
AUT 204	Automatic Transmission/Transaxle Diagnostics and Rebuilding‡	3
AUT 205	Automobile Heating, Ventilation, and Air Conditioning‡	3

AUT 206	Engine Performance‡	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

AUTOMOTIVE TECHNOLOGY - CERTIFICATE (MAJOR CODE - ATC)

The Automotive Technology Certificate is designed to provide students with a solid core of skills for employment in the automotive technology industry and prepare them to take the applicable Automotive Service Excellence (ASE) certification tests.

CORE CURRICULUM 21 CREDITS

AUT 101	Introduction to Automotive Technology‡	3
AUT 102	Automotive Electrical Fundamentals‡	3
AUT 103	Internal Combustion Engines‡	3
AUT 104	Automotive Brake Systems‡	3
AUT 105	Automotive Suspension and Steering Systems‡	3
AUT 201	Automotive Electrical Systems and Equipment‡	3
AUT 204	Automatic Transmission/Transaxle Diagnostics and Rebuilding‡	3

TOTAL CERTIFICATE REQUIREMENTS 21 CREDITS

AVIATION

AVIONICS TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - AVT)

The Avionics Technology Associate of Applied Science degree prepares students for Federal Communications Commission licensure as avionics technicians, and it trains them to meet demands in the rapidly changing fields of electronics and of aircraft and unmanned aerial systems.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 132	Applied Mathematics° or higher (3-4 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 57 CREDITS

AVT 104	Introduction to Electronics‡	7

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

AVT 107	Avionics Fundamentals to Include Unmanned Aerial Systems‡	4
AVT 112	Electronic Devices and Circuits I‡	8
AVT 115	Digital and Microprocessor Fundamentals‡	8
AVT 202	Electronic Communications to Include Unmanned Aerial Systems‡	8
AVT 205	Electronic Devices and Circuits II‡	4
AVT 208	FCC/FAA Regulations	3
AVT 218	Unmanned Aerial Systems and Ground Control Stations‡	4
AVT 220	Navigation Systems to Include Unmanned Aerial Systems‡	4
AVT 224	Autopilot and Control Systems to Include Unmanned Aerial Systems	3
AVT 228	Aircraft Radar Systems to Include Unmanned Aerial Systems‡	4

TOTAL DEGREE REQUIREMENTS 75-76 CREDITS

AVIONICS TECHNOLOGY - CERTIFICATE (MAJOR CODE - AVT)

The Avionics Technology Certificate prepares students for Federal Communications Commission licensure as avionics technicians, and it trains them to meet demands in the rapidly changing fields of electronics and of aircraft and unmanned aerial systems.

CORE CURRICULUM 57 CREDITS

AVT 104	Introduction to Electronics‡	7
AVT 107	Avionics Fundamentals to Include Unmanned Aerial Systems‡	4
AVT 112	Electronic Devices and Circuits I‡	8
AVT 115	Digital and Microprocessor Fundamentals‡	8
AVT 202	Electronic Communications to Include Unmanned Aerial Systems‡	8
AVT 205	Electronic Devices and Circuits II‡	4
AVT 208	FCC/FAA Regulations	3
AVT 218	Unmanned Aerial Systems and Ground Control Stations‡	4
AVT 220	Navigation Systems to Include Unmanned Aerial Systems‡	4
AVT 224	Autopilot and Control Systems to Include Unmanned Aerial Systems	3
AVT 228	Aircraft Radar Systems to Include Unmanned Aerial Systems‡	4

TOTAL CERTIFICATE REQUIREMENTS 57 CREDITS

PROFESSIONAL PILOT TECHNOLOGY - ASSOCIATE OF GENERAL STUDIES (MAJOR CODE - PPT)

The Professional Pilot Technology Associate of General Studies degree is certified by the Federal Aviation Administration (FAA certificate HR8S200Q) under Part 141

of its regulations. The degree program provides students with the knowledge, skills, and ratings necessary to become a competent, qualified professional pilot. Areas of study include single-engine, multi-engine, flight instructor, and airline transport. All ratings are offered, and students may enter the program with or without prior flight training or certificates. For those with prior training, placement in the flight portion of the program will depend upon a skills analysis when they enter the program. A normal course of study will progress from the private pilot certificate to an FAA-certified commercial pilot degree with instrument and multi-engine ratings.

GENERAL EDUCATION REQUIREMENTS 35 CREDITS

Composition 6 credits
| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-5 credits
| MAT 132 | Applied Mathematics° or higher (3-5 credits) | 3 |

Laboratory Sciences 4 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Foreign Language (100 or higher) or Communications (101 or higher) 3-4 credits
General Education Electives 6-7 credits

General education electives must be chosen from the general education list or HPE 179.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 35 CREDITS

PFT 101	Private Pilot Ground School°	5
PFT 105	Crew Resource Management - Flight	2
PFT 111	Solo Flight Preparation	3.5
PFT 112	Cross-Country Navigation	1.5
PFT 113	Private Pilot Certification	1
PFT 121	Commercial Flight I	3
PFT 130	Commercial Pilot Ground School°	5
PFT 131	Commercial Flight II	3
PFT 204	Instrument Rating Ground School°	5
PFT 214	Instrument Rating Flight I	3.5
PFT 215	Instrument Rating Flight II	1.5
PFT 218	Commercial Flight III	1

TOTAL DEGREE REQUIREMENTS 70 CREDITS

Acceptance into the professional pilot program requires an interview with the director of aviation plus completion of admission requirements and departmental acceptance. Admission to Cochise College does not guarantee acceptance into the pilot program.

PROFESSIONAL PILOT TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - PPT)

The Professional Pilot Technology Associate of Applied Science degree is certified by the Federal Aviation Administration (FAA certificate HR8S200Q) under Part 141 of its regulations. The degree program provides students with the knowledge, skills, and ratings necessary to become a competent, qualified professional pilot. Areas of study include single-engine, multi-engine, flight instructor, and airline transport. All ratings are offered, and students may enter the program with or without prior flight training or certificates. For those with prior training, placement in the flight portion of the program will depend upon a skills analysis when they enter the program. A normal course of study will progress from the private pilot certificate to an FAA-certified commercial pilot degree with instrument and multi-engine ratings.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 132	Applied Mathematics° or higher (3-4 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 43-52 CREDITS

PFT 101	Private Pilot Ground School°	5
PFT 105	Crew Resource Management - Flight	2
PFT 111	Solo Flight Preparation	3.5
PFT 112	Cross-Country Navigation	1.5
PFT 113	Private Pilot Certification	1
PFT 121	Commercial Flight I	3
PFT 122	Aviation Weather°	3
PFT 130	Commercial Pilot Ground School°	5
PFT 131	Commercial Flight II	3
PFT 204	Instrument Rating Ground School°	5
PFT 206	Aircraft Systems°	3
PFT 214	Instrument Rating Flight I	3.5
PFT 215	Instrument Rating Flight II	1.5
PFT 218	Commercial Flight III	1

MULTI-ENGINE OPTION:

PFT 210	Multi-Engine Rating Ground School°	1
PFT 211	Multi-Engine Rating Flight	1

OR
FLIGHT INSTRUCTOR OPTION:

PFT 230	Flight Instructor - Fundamentals Ground School	3
PFT 231	Flight Instructor - Airplane Ground School	5
PFT 235	Flight Instructor - Airplane Stage I	1.5
PFT 236	Flight Instructor - Airplane Stage II	1.5

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64-71 CREDITS

AVIATION DISPATCH - ASSOCIATE OF GENERAL STUDIES (MAJOR CODE - AVD)

The Aviation Dispatch Associate of General Studies degree provides students with the knowledge and skills required to take the Federal Aviation Administration written and practical examinations, which are necessary for a career as an aircraft dispatcher.

GENERAL EDUCATION REQUIREMENTS 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 132	Applied Mathematics° or higher (3-5 credits)	3

Laboratory Sciences 4 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Foreign Language (100 or higher) or Communications (101 or higher) 3-4 credits
General Education Electives 6-7 credits

General education electives must be chosen from the general education list or HPE 179.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 25 CREDITS

PFT 101	Private Pilot Ground School°	5
PFT 105	Crew Resource Management - Flight	2
PFT 122	Aviation Weather°	3
PFT 204	Instrument Rating Ground School°	5
PFT 206	Aircraft Systems°	3
PFT 222	Aircraft Dispatcher‡	7

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Acceptance into the professional pilot program requires an interview with the director of aviation plus completion of admission requirements and departmental acceptance. Admission to Cochise College does not guarantee acceptance into the pilot program.

REMOTELY PILOTED VEHICLE OPERATIONS - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - RPV)

The Remotely Piloted Vehicle Operations Associate of Applied Science degree is designed to prepare students for a career in unmanned systems. It teaches them to operate these systems in air, ground, and marine environments. Emphasis is on decision-making skills and on safe operating techniques.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 132	Applied Mathematics° or higher (3-4 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 43 CREDITS

CIS 150	Essentials of Networking°	3
CIS 179	Applied Technical Writing°	3
UAS 101	Introduction to Unmanned Aircraft Systems	3
UAS 103	Simulations for Unmanned Systems‡	4
UAS 121	Remote Sensing and Imagery	3
UAS 132	Multi-Rotor Flight‡	4
UAS 200	Unmanned Aircraft Systems Ground School	3
UAS 210	Crew Resource Management - UAS	3
UAS 212	Maintenance and Repair for Operators‡	3
UAS 220	Unmanned Systems Safety	3
UAS 221	Mapping Software‡	4
UAS 230	Fundamentals of UAS Instruction	3
UAS 232	Fixed-Wing Flight‡	4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

UNMANNED AIRCRAFT SYSTEMS AND OPERATIONS - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - UAS)

The Unmanned Aircraft Systems and Operations Associate of Applied Science degree prepares students to safely and effectively operate unmanned aircraft systems for commercial uses in the national airspace system.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 132	Applied Mathematics° or higher (3-4 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials°	3

CORE CURRICULUM 44 CREDITS

CIS 179	Applied Technical Writing°	3
PFT 101	Private Pilot Ground School°	5
PFT 111	Solo Flight Preparation	3.5
PFT 112	Cross-Country Navigation	1.5
PFT 113	Private Pilot Certification	1
PFT 122	Aviation Weather°	3
PFT 204	Instrument Rating Ground School°	5
PFT 206	Aircraft Systems°	3
PFT 214	Instrument Rating Flight I	3.5
PFT 215	Instrument Rating Flight II	1.5
UAS 101	Introduction to Unmanned Aircraft Systems	3
UAS 121	Remote Sensing and Imagery	3
UAS 201	Unmanned Aircraft Systems Pilot and Payload Operator‡	8

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

BIOLOGY

BIOLOGY - ASSOCIATE OF SCIENCE (MAJOR CODE - BIO)

The Biology Associate of Science degree prepares students for transfer to a university program in biological sciences or health professions. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-S) 35-39 CREDITS

Composition 6 credits

ENG 101	Composition*°	3

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* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

| ENG 102 | English Composition*° | 3 |

Mathematics 3-5 credits

| MAT 220 | Calculus I*° | 5 |
| | or higher (3-5 credits) | |

Laboratory Sciences 8 credits

CHM 151	General Chemistry I*‡	4
	AND	
CHM 152	General Chemistry II*‡	4

Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Additional Mathematics and/or Laboratory Sciences 6-8 credits

Based on your major and after consulting with an advisor, select MAT 231, MAT 241, MAT 252, MAT, and/or appropriate laboratory science courses. See http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec for a complete list.

Six credits of arts, humanities, or social and behavioral sciences must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 11 CREDITS

BIO 181	General Biology I (for majors)*‡	4
BIO 182	General Biology II*‡	4
MAT 167	Elements of Statistics*°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

BUILDING CONSTRUCTION TECHNOLOGY

BUILDING CONSTRUCTION TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - BCT)

The Building Construction Technology Associate of Applied Science degree is intended for students seeking employment as construction workers, estimators, or construction supervisors, and for experienced construction workers looking to upgrade their skills. It gives students the skills required for the appropriate National Center for Construction Education and Research (NCCER) certification and for most construction apprenticeships.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-4 credits

| MAT 132 | Applied Mathematics° | 3 |
| | or higher (3-4 credits) | |

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 37 CREDITS

BCT 100	Technical Mathematics I	3
BCT 102	Carpentry Fundamentals‡	4
BCT 103	International Residential Building Codes	3
BCT 104	Electric I‡	4
BCT 108	Basics in Construction	2
BCT 109	Construction Safety	3
BCT 110	Cabinetmaking‡	3
BCT 111	Plumbing I‡	4
BCT 127	Blueprint Reading and Estimating	3
BCT 201	Carpentry Framing and Finishing‡	4
BCT 202	Carpentry Forms‡	4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

HVAC - CERTIFICATE (MAJOR CODE - HVAC)

The Heating, Ventilation, and Air Conditioning (HVAC) Certificate prepares students for direct employment in the refrigeration industry by teaching the skills required to install, service, troubleshoot, and maintain residential and commercial HVAC systems.

CORE CURRICULUM 20 CREDITS

BCT 122	HVAC I‡	3
BCT 222	HVAC II‡	3
BCT 223	HVAC III‡	4
BCT 225	HVAC IV‡	4
MAT 132	Applied Mathematics°	3
WLD 105	Oxyacetylene Welding‡	3

TOTAL CERTIFICATE REQUIREMENTS 20 CREDITS

CARPENTRY TECHNOLOGY - CERTIFICATE (MAJOR CODE - CTC)

The Carpentry Technology Certificate teaches basic carpentry, framing and finishing, form making, technical mathematics, and blueprint reading skills, all of which prepare students for National Center for Construction Education and Research (NCCER) certification and for eventual employment in the construction trades.

CORE CURRICULUM 23 CREDITS

| BCT 100 | Technical Mathematics I | 3 |
| BCT 102 | Carpentry Fundamentals‡ | 4 |

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

BCT 103	International Residential Building Codes	3
BCT 108	Basics in Construction	2
BCT 127	Blueprint Reading and Estimating	3
BCT 201	Carpentry Framing and Finishing‡	4
BCT 202	Carpentry Forms‡	4

TOTAL CERTIFICATE REQUIREMENTS 23 CREDITS

ELECTRICAL TECHNOLOGY - CERTIFICATE (MAJOR CODE - ET)

The Electrical Technology Certificate teaches electrical theory, national codes, blueprint reading, and grounding and bonding skills, all of which prepare students for National Center for Construction Education and Research (NCCER) certification and for eventual employment in the construction trades.

CORE CURRICULUM 22 CREDITS

BCT 104	Electric I‡	4
BCT 105	Electrical Theory	3
BCT 106	National Electrical Code I	3
BCT 108	Basics in Construction	2
BCT 127	Blueprint Reading and Estimating	3
BCT 204	Electric II‡	4
BCT 220	Grounding and Bonding	3

TOTAL CERTIFICATE REQUIREMENTS 22 CREDITS

UTILITY INDUSTRY - CERTIFICATE (MAJOR CODE - UI)

The Utility Industry Certificate prepares students for employment as technicians and supervisors in the industry. Students gain an understanding of safety issues that pertain to the industry, and of mathematics, computer, and business communications skills. They then apply these skills in field experience.

CORE CURRICULUM 23 CREDITS

BCT 100	Technical Mathematics I	3
BCT 108	Basics in Construction	2
BCT 109	Construction Safety	3
BCT 112	Introduction to the Utility Industry	3
BCT 127	Blueprint Reading and Estimating	3
BCT 224	Field Experience in Building Construction Technology	3
BUS 167	Business Communications°	3
CIS 116	Computer Essentials°	3

BCT 224: 3 credits

TOTAL CERTIFICATE REQUIREMENTS 23 CREDITS

BUSINESS

BUSINESS ADMINISTRATION - ASSOCIATE OF BUSINESS (MAJOR CODE - BUSG)

The Business Administration Associate of Business degree prepares students for transfer to a university program in management, marketing, or general business. It also trains them for direct employment in the business world. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-B) 35 CREDITS

Composition 6 credits

| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-5 credits

MAT 212	Calculus for Business*°	3
	OR	
MAT 220	Calculus I*°	5

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits

ECN 201	Principles of Macroeconomics*°~	3
	AND	
ECN 202	Principles of Microeconomics*°~	3

Technology Literacy 3 credits

| CIS 120 | Introduction to Information Systems*° | 3 |

General Education Electives 1-3 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 27 CREDITS

BUS 109	Survey of Business°	3
BUS 167	Business Communications°	3
BUS 172	Quantitative Methods in Business°	3
BUS 201	Financial Accounting*°	3
BUS 202	Managerial Accounting*°	3
BUS 219	Business Statistics*°	3
BUS 233	The Legal Environment of Business°	3
CIS 181	Computer Applications°	3
CIS 281	Advanced Computer Applications°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

Students transferring to Arizona State University, Northern Arizona University, or the University of Arizona should consult the major guides at www.aztransfer.com and see an advisor for specific transfer information.

BUSINESS MANAGEMENT - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - BMT)

The Business Management Associate of Applied Science degree prepares students for employment in business management or for transfer to a university Bachelor of Applied Science degree program.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 142	College Mathematics*° or higher (3-4 credits)	3

Liberal Arts 6 credits

COM 102	Essentials of Communication*	3
ECN 201	Principles of Macroeconomics*°~ OR	3
ECN 202	Principles of Microeconomics*°~	3

Technology Literacy 3 credits

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 36 CREDITS

BUS 104	Business Math°	3
BUS 109	Survey of Business°	3
BUS 123	Human Resource Management°	3
BUS 143	Principles of Management	3
BUS 145	Principles of Marketing°	3
BUS 146	Introduction to Accounting°	3
BUS 160	Essential Workplace Success Skills°	3
BUS 167	Business Communications°	3
BUS 183	Starting a Business°	3
BUS 233	The Legal Environment of Business°	3
BUS 245	Seminar: Trends and Practices in Business	3
CIS 181	Computer Applications°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Recommended electives: Students may consider two co-op credits in BUS 224 to gain workplace experience, and any course with a BUS/CIS/ECN prefix. Transfer AAS students should check with transfer school for transferability.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

GENERAL BUSINESS - CERTIFICATE (MAJOR CODE - GBUS)

The General Business Certificate provides students with a basic knowledge of business practices. It is designed to improve students' skills and help prepare them for a career in business.

CORE CURRICULUM 18 CREDITS

BUS 104	Business Math°	3
BUS 109	Survey of Business°	3
BUS 146	Introduction to Accounting°	3
BUS 167	Business Communications°	3
BUS 183	Starting a Business°	3

Select one of the following (3 credits):

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*° OR	3
	Department approved elective	3

TOTAL CERTIFICATE REQUIREMENTS 18 CREDITS

ENTREPRENEURSHIP/SMALL BUSINESS MANAGEMENT - CERTIFICATE (MAJOR CODE - ENTC)

The Entrepreneurship/Small Business Management Certificate teaches entrepreneurs a wide variety of small business skills. It is designed to develop entrepreneurs and foster economic growth in the community.

CORE CURRICULUM 30 CREDITS

BUS 104	Business Math°	3
BUS 109	Survey of Business°	3
BUS 146	Introduction to Accounting°	3
BUS 167	Business Communications°	3
BUS 183	Starting a Business°	3
BUS 201	Financial Accounting*°	3
BUS 233	The Legal Environment of Business°	3
BUS 283	Small Business Management°	3
ECN 201	Principles of Macroeconomics*°~	3

Select one of the following (3 credits):

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

OR
Department approved elective   3

TOTAL CERTIFICATE REQUIREMENTS 30 CREDITS

CHEMISTRY

CHEMISTRY - ASSOCIATE OF SCIENCE (MAJOR CODE - CHM)

The Chemistry Associate of Science degree prepares students for transfer to a university program in chemistry, biochemistry, chemical engineering, or various health professions. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-S) 37-39 CREDITS

Composition 6 credits
ENG 101   Composition*°   3
ENG 102   English Composition*°   3

Mathematics 3-5 credits
MAT 220   Calculus I*°   5
               or higher (3-5 credits)

Laboratory Sciences 8 credits
PHY 230   Physics with Calculus I*‡   4
               AND
PHY 231   Physics with Calculus II*‡   4

Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Additional Mathematics and/or Laboratory Sciences 6-8 credits
CHM 151   General Chemistry I*‡   4
CHM 152   General Chemistry II*‡   4

Six credits of arts, humanities, or social and behavioral sciences must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 12 CREDITS

CHM 235   General Organic Chemistry I*‡   4
CHM 236   General Organic Chemistry II*‡   4
MAT 231   Calculus II*   4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

COMMUNICATIONS

COMMUNICATIONS - ASSOCIATE OF ARTS (MAJOR CODE - COM)

The Communications Associate of Arts degree prepares students for transfer to a university program in speech and communications. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits
ENG 101   Composition*°   3
ENG 102   English Composition*°   3

Mathematics 3-5 credits
MAT 142   College Mathematics*°   3
               or higher (3-5 credits)

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency
University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 9 CREDITS

COM 102   Essentials of Communication*   3
COM 110   Public Speaking°   3
COM 270   Interpersonal Communications*°   3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

COMPUTER INFORMATION SYSTEMS/COMPUTER SCIENCE

The Computer Information Systems and Computer Science degrees are designed to prepare students for transfer to four-year colleges and universities. The curriculum provides the foundation for many careers, such as applications

programmer, systems programmer, aerospace or engineering programmer, computer engineer and database administrator. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

The various certificates prepare students for employment and/or improved skills in rewarding, technology-related careers.

CIS DEPARTMENT APPROVED ELECTIVES

(PREREQUISITES APPLY.)

CIS 128	Linux Operating System°	4
CIS 128U	Unix Operating System°	4
CIS 129	Introduction to Programming Logic°	1
CIS 130	Programming Logic°	3
CIS 140	Introduction to Operating Systems°	3
CIS 150	Essentials of Networking°	3
CIS 160	Introduction to Information Security°	4
CIS 161	Network Security°	4
CIS 164	Introduction to Scripting Using Python°	4
CIS 179	Applied Technical Writing°	3
CIS 181	Computer Applications°	3
CIS 185	Internet Essentials°	3
CIS 204	C Programming°	4
CIS 208	Java Programming	4
CIS 217	Introduction to Visual C#.NET Programming°	4
CIS 218	Visual Basic Programming°	4
CIS 220B	Data Structures-Assembler	4
CIS 220C	Data Structures-C	4
CIS 220J	Data Structures-Java*	4
CIS 221	Digital Logic°	3
CIS 229	Linux System Administration°	4
CIS 232	Digital Communications and Network Hardware°	4
CIS 236	Microsoft Workstation Operating Systems°	4
CIS 242	World Wide Web Programming	3
CIS 244	World Wide Web Graphics	3
CIS 245	Microsoft Server and Active Directory	4
CIS 248	Perl Scripting°	3
CIS 250	Database Management°	4
CIS 255	Microsoft PowerShell Scripting	4
CIS 259	Advanced Linux Systems Administration°	4
CIS 260	Service and Maintenance of Personal Computers	4
CIS 262	Network Support and Troubleshooting	4
CIS 263	Network Defense°	4
CIS 264	Ruby Programming	4
CIS 267	Mobile Security	3
CIS 268	Technical Presentations°	3
CIS 270	Systems Analysis°	4
CIS 275	Computer Forensics	4
CIS 281	Advanced Computer Applications°	3
CIS 287	World Wide Web Development	3
CIS 291	Practical Applications in Cybersecurity	4
EGR 104	Introduction to Programmable Logic Controllers‡	4

COMPUTER INFORMATION SYSTEMS - ASSOCIATE OF BUSINESS (MAJOR CODE - CISS)

The Computer Information Systems Associate of Business degree prepares students for transfer to a university program in computer information systems. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-B) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3 credits

MAT 212	Calculus for Business*°	3

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits

ECN 201	Principles of Macroeconomics*°~	3
ECN 202	Principles of Microeconomics*°~	3

Technology Literacy 3 credits

CIS 120	Introduction to Information Systems*°	3

General Education Electives 3 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.

Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 29 CREDITS

BUS 201	Financial Accounting*°	3
BUS 202	Managerial Accounting*°	3
BUS 219	Business Statistics*°	3
BUS 233	The Legal Environment of Business°	3
CIS 130	Programming Logic°	3
CIS 181	Computer Applications°	3
CIS 217	Introduction to Visual C#.NET Programming°	4
CIS 270	Systems Analysis°	4
BUS 172	Quantitative Methods in Business°	3

TOTAL DEGREE REQUIREMENTS 64 CREDITS

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

COMPUTER INFORMATION SYSTEMS - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - CIS)

The Computer Information Systems Associate of Applied Science degree provides broad preparation for entry into the field of information technology. Students develop essential skills in networking, operating systems, programming, database management, productivity applications, and technical communications.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 142	College Mathematics*° or higher (3-4 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 34 CREDITS

CIS 130	Programming Logic°	3
CIS 140	Introduction to Operating Systems°	3
CIS 150	Essentials of Networking°	3
CIS 179	Applied Technical Writing°	3
CIS 181	Computer Applications°	3
CIS 185	Internet Essentials°	3
CIS 250	Database Management°	4
CIS 268	Technical Presentations°	3
CIS 281	Advanced Computer Applications°	3
CIS 287	World Wide Web Development	3
CIS 294	Field Experience in Computer Information Systems	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

The CIS Department recommends any course from the list of department approved electives.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

COMPUTER PROGRAMMING - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - CPG)

The Computer Programming Associate of Applied Science degree prepares students to develop software applications that meet the needs of various organizations. Students create solutions to different programming issues across a wide range of modern computing environments.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 142	College Mathematics*° or higher (3-4 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 45 CREDITS

CIS 128	Linux Operating System° OR	4
CIS 236	Microsoft Workstation Operating Systems°	4
CIS 130	Programming Logic°	3
CIS 140	Introduction to Operating Systems°	3
CIS 150	Essentials of Networking°	3
CIS 160	Introduction to Information Security°	4
CIS 164	Introduction to Scripting Using Python°	4
CIS 179	Applied Technical Writing°	3
CIS 181	Computer Applications°	3
CIS 185	Internet Essentials°	3
CIS 217	Introduction to Visual C#.NET Programming°	4
CIS 248	Perl Scripting°	3
CIS 250	Database Management°	4
CIS 270	Systems Analysis°	4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

COMPUTER SCIENCE - ASSOCIATE OF SCIENCE (MAJOR CODE - CSC)

The Computer Science Associate of Science degree prepares students for transfer to a university program in computer science. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor and in consultation with a CIS faculty member.

GENERAL EDUCATION REQUIREMENTS (AGEC-S) 37-39 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 220	Calculus I*° or higher (3-5 credits)	5

Laboratory Sciences 8 credits

PHY 230	Physics with Calculus I*‡ AND	4
PHY 231	Physics with Calculus II*‡	4

Arts 3 credits
Humanities 3 credits

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Social and Behavioral Sciences 6 credits
Additional Mathematics 8 credits

MAT 231	Calculus II*	4
MAT 241	Calculus III*	4

Six credits of arts, humanities, or social and behavioral sciences must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 25 CREDITS

CIS 120	Introduction to Information Systems*°	3
CIS 206	Assembler with Architecture	4
CIS 208	Java Programming	4
CIS 220J	Data Structures-Java*	4
CIS 221	Digital Logic°	3
CHM 151	General Chemistry I*‡	4
MAT 227	Discrete Mathematics*	3

DEPARTMENT APPROVED ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

COMPUTER SCIENCE - ASSOCIATE OF ARTS (MAJOR CODE - CSC)

The Computer Science Associate of Arts degree is designed for students interested in transferring to the University of Arizona South's computer science program. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor and in consultation with a CIS faculty member.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 5 credits

MAT 220	Calculus I*°	5

Laboratory Sciences 8 credits

Laboratory sciences must be chosen from the following:

CHM 151	General Chemistry I*‡	4
CHM 152	General Chemistry II*‡	4
GLG 101	Introduction to Geology I (Physical)*°‡	4
BIO 105	Environmental Biology‡	4
BIO 181	General Biology I (for majors)*‡	4
BIO 182	General Biology II*‡	4
PHY 230	Physics with Calculus I*‡	4
PHY 231	Physics with Calculus II*‡	4

Arts 3 credits
Humanities 3 credits

Social and Behavioral Sciences 6 credits
General Education Electives 4 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 8 CREDITS

Non-English language second-semester proficiency

CORE CURRICULUM 22 CREDITS

MAT 227	Discrete Mathematics*	3
MAT 231	Calculus II*	4
CIS 221	Digital Logic°	3
CIS 206	Assembler with Architecture	4
CIS 208	Java Programming	4
	OR	
CIS 204	C Programming°	4
CIS 220J	Data Structures-Java*	4
	OR	
CIS 220C	Data Structures-C	4

TOTAL DEGREE REQUIREMENTS 65 CREDITS

CYBERSECURITY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - CYB)

The Cybersecurity Associate of Applied Science degree prepares students for employment in the field of information systems security. Major areas of study include network fundamentals, operating systems, network defense, and computer forensics. The courses in this degree combine theory and application in order to develop and implement appropriate information security policies and procedures.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 142	College Mathematics*° or higher (3-4 credits)	3

Liberal Arts 6 credits

PSY 101	Introduction to Psychology*°	3
	Liberal arts	3

Technology Literacy 3 credits

CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 48 CREDITS

CIS 128	Linux Operating System°	4
CIS 140	Introduction to Operating Systems°	3

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

CIS 150	Essentials of Networking°	3
CIS 160	Introduction to Information Security°	4
CIS 161	Network Security°	4
CIS 164	Introduction to Scripting Using Python°	4
CIS 179	Applied Technical Writing°	3
CIS 236	Microsoft Workstation Operating Systems°	4
CIS 255	Microsoft PowerShell Scripting	4
CIS 263	Network Defense°	4
CIS 267	Mobile Security	3
CIS 275	Computer Forensics	4
CIS 291	Practical Applications in Cybersecurity	4

TOTAL DEGREE REQUIREMENTS 66-67 CREDITS

LINUX SYSTEM ADMINISTRATOR - CERTIFICATE (MAJOR CODE - LSA)

The Linux System Administrator Certificate teaches the basic Linux operating skills related to user groups, Perl scripting, and system administration.

CORE CURRICULUM 19 CREDITS

CIS 120	Introduction to Information Systems*°	3
CIS 128	Linux Operating System°	4
CIS 129	Introduction to Programming Logic°	1
CIS 229	Linux System Administration°	4
CIS 248	Perl Scripting°	3
CIS 259	Advanced Linux Systems Administration°	4

TOTAL CERTIFICATE REQUIREMENTS 19 CREDITS

NETWORK TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - NWT)

The Network Technology Associate of Applied Science degree provides students with the knowledge and skills for immediate employment in the field of computer networking. Major areas of study include network fundamentals, Linux, network security, Active Directory, and network troubleshooting.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 142	College Mathematics*° or higher (3-4 credits)	3

Liberal Arts 6 credits

PSY 101	Introduction to Psychology*°	3

	Liberal arts	3

Technology Literacy 3 credits

CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 48 CREDITS

CIS 128	Linux Operating System°	4
CIS 140	Introduction to Operating Systems°	3
CIS 150	Essentials of Networking°	3
CIS 160	Introduction to Information Security°	4
CIS 161	Network Security°	4
CIS 179	Applied Technical Writing°	3
CIS 229	Linux System Administration°	4
CIS 236	Microsoft Workstation Operating Systems°	4
CIS 245	Microsoft Server and Active Directory	4
CIS 260	Service and Maintenance of Personal Computers	4
CIS 262	Network Support and Troubleshooting	4
CIS 270	Systems Analysis°	4
CIS 294	Field Experience in Computer Information Systems	3

TOTAL DEGREE REQUIREMENTS 66-67 CREDITS

COMPUTER MAINTENANCE AND REPAIR - CERTIFICATE (MAJOR CODE - COMR)

The Computer Maintenance and Repair Certificate teaches the skills necessary to integrate computer hardware in a modern, increasingly-connected, networked environment. It prepares students for jobs as computer or hardware technicians.

CORE CURRICULUM 19 CREDITS

CIS 116	Computer Essentials°	3
CIS 140	Introduction to Operating Systems°	3
CIS 150	Essentials of Networking°	3
CIS 185	Internet Essentials°	3
CIS 260	Service and Maintenance of Personal Computers	4
CIS 294	Field Experience in Computer Information Systems	3

TOTAL CERTIFICATE REQUIREMENTS 19 CREDITS

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

WEB DEVELOPER - CERTIFICATE (MAJOR CODE - WEBD)

The Web Developer Certificate teaches the skills necessary to develop and maintain websites. It includes instruction in computer systems and networks, operating systems and servers, web page design and editing, user interface design, and scripts for interactivity.

CORE CURRICULUM 26 CREDITS

CIS 116	Computer Essentials°	3
CIS 120	Introduction to Information Systems*°	3
CIS 128	Linux Operating System°	4
CIS 129	Introduction to Programming Logic°	1
CIS 179	Applied Technical Writing°	3
CIS 185	Internet Essentials°	3
CIS 242	World Wide Web Programming	3
CIS 244	World Wide Web Graphics	3
CIS 287	World Wide Web Development	3

TOTAL CERTIFICATE REQUIREMENTS 26 CREDITS

CISCO AND LINUX NETWORKING - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - CLN)

The Cisco and Linux Networking Associate of Applied Science degree prepares students to become networking associates in small to medium-sized businesses. Students develop multi-faceted skills in networking technology and in Linux-based servers that power the Internet.

GENERAL EDUCATION REQUIREMENTS 18-20 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 37 CREDITS

CIS 128	Linux Operating System°	4
CIS 130	Programming Logic°	3
CIS 160	Introduction to Information Security°	4
CIS 229	Linux System Administration°	4
CIS 248	Perl Scripting°	3
CIS 259	Advanced Linux Systems Administration°	4

CIS 294	Field Experience in Computer Information Systems	3
CNT 140	Introduction to Cisco Networks‡	3
CNT 150	Cisco Routing and Switching Essentials‡	3
CNT 240	Scaling Cisco Networks‡	3
CNT 250	Connecting Cisco Networks‡	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

The CIS Department recommends any course from the list of department approved electives.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

CISCO NETWORKING - CERTIFICATE (MAJOR CODE - CNT)

The Cisco Networking Certificate gives a comprehensive overview of networking, from fundamentals to advanced applications and services. It provides students with the knowledge and skills to design networks, and it trains them to install, operate, and maintain secure networks.

CORE CURRICULUM 16 CREDITS

CIS 160	Introduction to Information Security°	4
CNT 140	Introduction to Cisco Networks‡	3
CNT 150	Cisco Routing and Switching Essentials‡	3
CNT 240	Scaling Cisco Networks‡	3
CNT 250	Connecting Cisco Networks‡	3

TOTAL CERTIFICATE REQUIREMENTS 16 CREDITS

CULINARY ARTS

CULINARY ARTS - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - CUL)

The Culinary Arts Associate of Applied Science degree provides training in the culinary arts for the purpose of direct employment in the field of professional cooking as an assistant to the chef or to the food and beverage director.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics Sciences 3-4 credits

BUS 104	Business Math°	3
MAT 132	Applied Mathematics° or higher (3-4 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information	3

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Systems*°

CORE CURRICULUM 40-43 CREDITS

CUL 105	Nutrition in Food Service	3
CUL 107	Restaurant Sanitation	3
CUL 204	Food Service Purchasing and Control	3
CUL 215	Cooking Essentials‡	3
CUL 217	Saucier‡	3
CUL 220	Breads and Baking Theory‡	3
CUL 221	Pastry Basics‡	3
CUL 224	Field Experience in Culinary Arts	1-4
CUL 225	Garde Manger I‡	3
CUL 226	Garde Manger II‡	3
CUL 242	Dining Service Management	3
CUL 275	International Cuisine‡	3
CUL 280	Advanced Techniques in Gourmet Food Preparation I‡	3
CUL 281	Advanced Techniques in Gourmet Food Preparation II‡	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

CHEF GARDE MANGER APPRENTICE - CERTIFICATE (MAJOR CODE - CGMA)

The Chef Garde Manger Apprentice Certificate provides training in all areas of professional garde manger (cold-food preparation) as well as in food and beverage control and restaurant sanitation. It is intended for those already trained in professional cooking who wish to progress into the garde manger area.

CORE CURRICULUM 21 CREDITS

Cold Foods and Salad

CUL 105	Nutrition in Food Service	3
CUL 107	Restaurant Sanitation	3
CUL 204	Food Service Purchasing and Control	3

Garde Manger Specialty

CUL 215	Cooking Essentials‡	3
CUL 225	Garde Manger I‡	3
CUL 226	Garde Manger II‡	3
CUL 275	International Cuisine‡	3

TOTAL CERTIFICATE REQUIREMENTS 21 CREDITS

CHEF PATISSIER – BAKER'S APPRENTICE - CERTIFICATE (MAJOR CODE - BKRA)

The Chef Patissier – Baker's Apprentice Certificate provides training in the principles of professional baking, food and beverage control, and restaurant sanitation. It is intended for those with a background in cooking who wish to become an assistant baker and work in a bakery.

CORE CURRICULUM 24 CREDITS

CUL 105	Nutrition in Food Service	3
CUL 107	Restaurant Sanitation	3
CUL 204	Food Service Purchasing and Control	3

Baking Specialty

CUL 101	Cake Decorating‡	3
CUL 220	Breads and Baking Theory‡	3
CUL 221	Pastry Basics‡	3
CUL 222	Advanced Confections and Pastries I‡	3
CUL 223	Advanced Confections and Pastries II‡	3

TOTAL CERTIFICATE REQUIREMENTS 24 CREDITS

SOUS CHEF APPRENTICE - CERTIFICATE (MAJOR CODE - SCCA)

The Sous Chef Apprentice Certificate provides training in all areas of professional cooking including food and beverage control, restaurant sanitation, meat cutting, gourmet preparations, baking, and garde manger. It also provides field experience in restaurant and dining-service operations.

CORE CURRICULUM 40-43 CREDITS

CUL 105	Nutrition in Food Service	3
CUL 107	Restaurant Sanitation	3
CUL 204	Food Service Purchasing and Control	3
CUL 215	Cooking Essentials‡	3
CUL 217	Saucier‡	3
CUL 220	Breads and Baking Theory‡	3
CUL 221	Pastry Basics‡	3
CUL 224	Field Experience in Culinary Arts	1-4
CUL 225	Garde Manger I‡	3
CUL 226	Garde Manger II‡	3
CUL 242	Dining Service Management	3
CUL 275	International Cuisine‡	3
CUL 280	Advanced Techniques in Gourmet Food Preparation I‡	3
CUL 281	Advanced Techniques in Gourmet Food Preparation II‡	3

TOTAL CERTIFICATE REQUIREMENTS 40-43 CREDITS

DRAFTING AND DESIGN

COMPUTER-AIDED DRAFTING - CERTIFICATE (MAJOR CODE - CAD)

The Computer-Aided Drafting Certificate teaches computer-aided design (CAD) skills using AutoCAD software. Students generate 2D and 3D technical plans and sketches used by engineers, architects, and other professionals.

CORE CURRICULUM 27 CREDITS

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

BCT 127	Blueprint Reading and Estimating	3
CIS 116	Computer Essentials°	3
CIS 179	Applied Technical Writing°	3
DFT 150	Fundamentals of AutoCAD	3
DFT 201	Topics in Drafting	3
DFT 250	Advanced AutoCAD	3
DFT 270	AutoCAD 3D	3
GTC 105	Manufacturing Materials and Processes	3
MAT 132	Applied Mathematics°	3

TOTAL CERTIFICATE REQUIREMENTS 27 CREDITS

GENERAL COMPUTER-AIDED DRAFTING - CERTIFICATE (MAJOR CODE - GCAD)

The General Computer-Aided Drafting Certificate teaches entry-level computer-aided design (CAD) skills using AutoCAD software.

CORE CURRICULUM 18 CREDITS

BCT 127	Blueprint Reading and Estimating	3
CIS 116	Computer Essentials°	3
DFT 150	Fundamentals of AutoCAD	3
DFT 201	Topics in Drafting	3
DFT 250	Advanced AutoCAD	3
GTC 105	Manufacturing Materials and Processes	3

TOTAL CERTIFICATE REQUIREMENTS 18 CREDITS

ECONOMICS

ECONOMICS - ASSOCIATE OF ARTS (MAJOR CODE - ECN)

The Economics Associate of Arts degree prepares students for transfer to a university program in economics or business. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-5 credits

| MAT 151 | Precalculus Algebra*° or higher (3-5 credits) | 4 |

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.

Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- and fourth-semester proficiency
University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 15 CREDITS

CIS 120	Introduction to Information Systems*°	3
BUS 219	Business Statistics*°	3
MAT 167	Elements of Statistics*°	3
ECN 201	Principles of Macroeconomics*°~	3
ECN 202	Principles of Microeconomics*°~	3
MAT 212	Calculus for Business*°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

EDUCATION

ELEMENTARY EDUCATION-ASSOCIATE OF ARTS (MAJOR CODE - EED)

The Associate of Arts Elementary Education (AAEE) degree serves two primary groups: (1) future teachers seeking entrance into teacher education programs through transfer to one of Arizona's public universities, and (2) future and currently employed teacher aides seeking to comply with federal regulations. The degree allows students to satisfy their Arizona General Education Curriculum (AGEC) requirements and to complete a number of teacher education and/or early childhood education courses. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-5 credits

| MAT 142 | College Mathematics*° or higher (3-5 credits) | 3 |

Laboratory Sciences 8 credits

8 credits must be taken from two different prefixes. BIO 100, BIO 105, BIO 201, GEO 101, PHY 111, CHM 130, AST 180, and GLG 101 are recommended.

Arts 3 credits

ART 120 or MUS 260 is recommended.

Humanities 3 credits

COM 102 is highly recommended; ART 107, ART 108, and MUS 101 are also recommended.

Social and Behavioral Sciences 6 credits

POS 220, HIS 110, and HIS 111 are highly recommended. PSY 101, ECN 201 or ECN 202, and PSY 240 are also recommended.

General Education Electives 4-6 credits

General education electives must be chosen from the general education course list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 18 CREDITS

EDU 201	Introduction to Education	3
EDU 222	Introduction to Special Education°	3
EDU 226	Cultural Diversity in Education	3
EDU 230	Classroom Relationships°	3
MAT 154	Mathematics for Elementary Education Majors I°	3
MAT 156	Mathematics for Elementary Education Majors II°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

Some students will have more than 64 credits because of varying credits in language, mathematics, and other courses. 64 credits represent the minimum for this degree.

EARLY CHILDHOOD CARE AND EDUCATION - ASSOCIATE OF ARTS (MAJOR CODE - ECE)

The Early Childhood Care and Education Associate of Arts degree prepares students for transfer to a university program in the care and education of young children. It offers in-depth child development theory, practical applications in the

workplace, and comprehensive skills for working with children and their families. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 3-5 credits

| MAT 142 | College Mathematics*° or higher (3-5 credits) | 3 |

Laboratory Sciences 8 credits
Arts 3 credits

| ART 120 | Appreciation of Visual Arts OR | 3 |
| MUS 260 | Music Fundamentals through Experience | 3 |

Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 24 CREDITS

ECE 150	Introduction to Early Childhood Care and Education°	3
EDU 201	Introduction to Education	3
EDU 222	Introduction to Special Education°	3
EDU 226	Cultural Diversity in Education	3
MAT 154	Mathematics for Elementary Education Majors I°	3
MAT 156	Mathematics for Elementary Education Majors II°	3

Select two of the following three (6 credits):

ECE 155	Children's Language Development°	3
ECE 156	Children's Literature and Children's Literacy°	3
ECE 160	Early Childhood Growth and Development°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

Note: Some students will have more than 64 credits because of varying credits in language, math, and other courses; 64 credits represent the minimum for this degree.

EARLY CHILDHOOD CARE AND EDUCATION - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - ECE)

The Early Childhood Care and Education Associate of Applied Science degree is designed for those seeking to comply with industry regulations in child care and for those wishing to transfer to a university Bachelor of Applied Science degree program. Completion of this degree does not guarantee state licensure or certification. Students must obtain licensure through appropriate licensing agencies.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics/Laboratory Sciences 3-4 credits

BUS 104	Business Math°	3
	OR	
MAT 142	College Mathematics*° or higher (3-4 credits)	3

Liberal Arts 6 credits

Select two of the following liberal arts courses:

ART 103	Design Fundamentals*‡	3
ART 120	Appreciation of Visual Arts	3
COM 102	Essentials of Communication*	3
MUS 101	Introduction to Music	3
PHI 130	Introduction to Ethics*°~	3
PSY 101	Introduction to Psychology*°	3
SOC 101	Introduction to Sociology*°	3
SOC 160	Sociology of Race and Ethnicity*°~	3
THE 103	Introduction to Theatre°	3

Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 33 CREDITS

ECE 150	Introduction to Early Childhood Care and Education°	3
ECE 152	Observation, Behavior and Guidance	3
ECE 155	Children's Language Development°	3
ECE 158	Health, Safety and Nutrition for Young Children°	3
ECE 160	Early Childhood Growth and Development°	3
ECE 161	Understanding Families, Community and Diversity°	3
ECE 170	Curriculum Development for Early Childhood Education°	3
ECE 172	Teaching Strategies for Early Childhood Education	3
ECE 173	Administration of Early Childhood Care and Education Programs°	3
EDU 201	Introduction to Education	3
EDU 230	Classroom Relationships°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Recommended electives include, but are not limited to, the following: ECE 174, SOC 160, COM 204, PSY 240, EDU 222, and EDU 226. Students should consult an advisor for course selection.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

EDUCATION - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - ED)

The Education Associate of Applied Science degree provides students affiliated with the military with an understanding of the fundamental principles and techniques of learner-centric instruction. Emphasis is on the skills used in training students in military subjects such as intelligence, electronics, and unmanned aerial systems.

THE EDUCATION ASSOCIATE OF APPLIED SCIENCE DEGREE IS RUN THROUGH THE MOS CREDENTIALING PROGRAM ON FORT HUACHUCA AND DOES NOT FOLLOW STANDARD SEMESTER SCHEDULING.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 142	College Mathematics*° or higher (3-4 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 16 CREDITS

EDU 203	Foundations of Instructional Techniques	3
EDU 204	Learner-Centered Instruction	3
EDU 205	Theoretical Dynamics of Instruction	3
EDU 206	Mentoring Practicum	4
EDU 207	Instructional Design for Adult Education	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

* indicates SUN course. ‡ indicates lab fees. ° indicates online. ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

TECHNICAL EDUCATION FACILITATOR - CERTIFICATE (MAJOR CODE - TEF)

The Technical Education Facilitator Certificate teaches students affiliated with the military the theory and skills to serve as adult-learner facilitators. It supports the Army Learning Model, an initiative that emphasizes facilitation over traditional instruction. Emphasis is on increased depth of knowledge, critical thinking skills, and adaptation to an ever-changing environment.

THE TECHNICAL EDUCATION FACILITATOR CERTIFICATE IS RUN THROUGH THE MOS CREDENTIALING PROGRAM ON FORT HUACHUCA AND DOES NOT FOLLOW STANDARD SEMESTER SCHEDULING.

CORE CURRICULUM 16 CREDITS

EDU 203	Foundations of Instructional Techniques	3
EDU 204	Learner-Centered Instruction	3
EDU 205	Theoretical Dynamics of Instruction	3
EDU 206	Mentoring Practicum	4
EDU 207	Instructional Design for Adult Education	3

TOTAL CERTIFICATE REQUIREMENTS 16 CREDITS

ELECTRONICS

ELECTRONICS TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - ELT)

The Electronics Technology Associate of Applied Science degree prepares students for employment in the field of general electronics and computer systems. Focus is on the study of electricity, analog and digital devices and circuits, measurements, electronic communications, microprocessors, microcomputers, and computer networking and software applications.

GENERAL EDUCATION REQUIREMENTS 18 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3 credits

PSY 101	Introduction to Psychology*°	3

Liberal Arts 6 credits

SOC 101	Introduction to Sociology*°	3
COM 102	Essentials of Communication*	3

Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information	3

Systems*°

CORE CURRICULUM 46 CREDITS

CIS 129	Introduction to Programming Logic°	1
CIS 150	Essentials of Networking°	3
CIS 160	Introduction to Information Security°	4
CIS 179	Applied Technical Writing°	3
CIS 181	Computer Applications°	3
ELT 105	Introduction to DC Circuits‡	3
ELT 106	Introduction to AC Circuits‡	4
ELT 125	Electronic Circuits and Systems‡	4
ELT 131	FCC Regulations	2
ELT 135	Digital and Microprocessor Fundamentals‡	4
ELT 222	Semiconductors and Transistors‡	4
ELT 227	Autonomous Systems and Control Stations‡	3
ELT 245	Communication Electronics I‡	4
ELT 247	Communication Electronics II‡	4

TOTAL DEGREE REQUIREMENTS 64 CREDITS

ENGINEERING

ENGINEERING - ASSOCIATE OF SCIENCE (MAJOR CODE - EGR)

The Engineering Associate of Science degree prepares students for transfer to a university program in a wide variety of engineering majors. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-S) 38 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 5 credits

MAT 220	Calculus I*°	5

Laboratory Sciences 8 credits

CHM 151	General Chemistry I*‡ AND	4
CHM 152	General Chemistry II*‡	4

Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Additional Mathematics and/or Laboratory Sciences 6-8 credits

MAT 241	Calculus III*	4
MAT 262	Differential Equations*	3

Six credits of arts, humanities, or social and behavioral sciences must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 22 CREDITS

COM 102	Essentials of Communication*	3
EGR 102	Principles of Engineering*‡	3
EGR 122	Programming for Engineering and Science‡	4
MAT 231	Calculus II*	4
PHY 230	Physics with Calculus I*‡	4
PHY 231	Physics with Calculus II*‡	4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

ENGINEERING - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - EGR)

The Engineering Associate of Applied Science degree prepares students for employment in a variety of engineering fields or for university transfer.

GENERAL EDUCATION REQUIREMENTS 21 CREDITS

Composition 6 credits
| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 5 credits
| MAT 187 | Precalculus*° or higher (5 credits) | 5 |

Liberal Arts 6 credits
ECN 201	Principles of Macroeconomics*°~ OR	3
ECN 202	Principles of Microeconomics*°~	3
	Liberal arts	3

Technology Literacy 3 credits
| EGR 122 | Programming for Engineering and Science‡ | 4 |

CORE CURRICULUM 27 CREDITS

EGR 102	Principles of Engineering*‡	3
MAT 220	Calculus I*°	5
MAT 231	Calculus II*	4
MAT 241	Calculus III*	4
MAT 262	Differential Equations*	3
PHY 230	Physics with Calculus I*‡	4
PHY 231	Physics with Calculus II*‡	4

DEPARTMENT APPROVED ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

CHM 151	General Chemistry I*‡	4
CHM 152	General Chemistry II*‡	4
CIS 221	Digital Logic°	3
EGR 202	Electrical Circuits‡	4
EGR 210	Statics	3
EGR 213	Mechanics of Materials	3
EGR 214	Dynamics	3
MAT 252	Introduction to Linear Algebra	3

EGR 202: Civil and electrical engineering emphasis
EGR 210, EGR 214: Civil and mechanical engineering emphasis
EGR 213: Civil engineering emphasis

TOTAL DEGREE REQUIREMENTS 64 CREDITS

ENGINEERING TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - EGRT)

The Engineering Technology Associate of Applied Science degree provides training in configuring, programming, and networking electronic equipment. Students learn to use common communications test equipment such as oscilloscopes and spectrum analyzers. The program is designed to prepare students for a career in engineering or for further study in the operation of specialized equipment in numerous related fields.

GENERAL EDUCATION REQUIREMENTS 19 CREDITS

Composition 6 credits
| ENG 101 | Composition*° | 3 |
| ENG 102 | English Composition*° | 3 |

Mathematics 4 credits
| MAT 151 | Precalculus Algebra*° or higher (4 credits) | 4 |

Liberal Arts 6 credits
| | Liberal arts | 3 |
| ECN 201 | Principles of Macroeconomics*°~ | 3 |

Technology Literacy 3 credits
| CIS 116 | Computer Essentials° | 3 |

CORE CURRICULUM 42 CREDITS

BUS 167	Business Communications°	3
CED 224	Field Experience in Cooperative Education	2
CHM 130	Fundamental Chemistry*°‡	4
CIS 150	Essentials of Networking°	3
EGR 102	Principles of Engineering*‡	3
EGR 103	Electrical Components and Systems‡	4
EGR 104	Introduction to Programmable Logic Controllers‡	4
EGR 107	Introduction to RF Communication Systems‡	4
EGR 122	Programming for Engineering and Science‡	4
MAT 182	Precalculus Trigonometry°	3
PHY 111	General Physics I*‡	4
PHY 112	General Physics II*‡	4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

ENGLISH

ENGLISH - ASSOCIATE OF ARTS (MAJOR CODE - ENG)

The English Associate of Arts degree prepares students for transfer to a university program in literature or written communication. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits

The English Department recommends a 200-level literature course.

Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 12 CREDITS

ENG 220	British Literature I°~	3
ENG 221	British Literature II°~	3
	200-level literature course	3

Select one of the following (3 credits):

ENG 224	American Literature I°~	3
ENG 225	American Literature II°~	3
ENG 265	Major American Writers~	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com. The degree requires one of the following American literature courses: ENG 224, ENG 225, or ENG 265. The English Department recommends that students satisfy elective credits by selecting ENG 222, ENG 224, ENG 225, ENG 228, ENG 230, ENG 231, ENG 260, ENG 265, and ENG 273.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

EXERCISE SCIENCE, HEALTH AND PHYSICAL EDUCATION, RECREATION AND WELLNESS

EXERCISE SCIENCE, HEALTH AND PHYSICAL EDUCATION, RECREATION AND WELLNESS - ASSOCIATE OF ARTS (MAJOR CODE - HPES)

The Exercise Science, Health and Physical Education, Recreation and Wellness Associate of Arts degree is intended for students interested in fitness, recreation, or sports, and it is designed for transfer into university degree programs in physical education teaching and/or athletic coaching. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*°	3
MAT 151	Precalculus Algebra*° or higher (3-5 credits)	4

Laboratory Sciences 8 credits

BIO 156	Introductory Biology for Allied Health‡ OR	4
BIO 181	General Biology I (for majors)*‡	4
	Laboratory sciences	4

BIO 201 requires BIO 156, BIO 181, or passing score on the biology placement exam.

Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Non-English language second- or fourth-semester proficiency
University non-English language requirements vary. Check
with your advisor.

CORE CURRICULUM 8 CREDITS

BIO 201	Human Anatomy and Physiology I*°‡	4
BIO 202	Human Anatomy and Physiology II*‡	4

BIO 201 requires BIO 156, BIO 181, or passing score on the
biology placement exam.

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or
universities to which the student plans to transfer. See
www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

FIRE SCIENCE TECHNOLOGY

FIRE SCIENCE TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - FST)

The Fire Science Technology Associate of Applied Science
degree prepares students for a career in the fire service.
Coursework covers safety, fitness, wildland firefighting, fire
rescue and hazmat operations, ladder and hose procedures,
fire service apparatus, and emergency medical and support
services. Students acquire field experience in fire science
technology. Emphasis is on applied learning.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 132	Applied Mathematics° or higher (3-4 credits)	3

Liberal Arts 6 credits

Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 37-39 CREDITS

EMT 174	Emergency Medical Technician‡	8
FST 101	Firefighter Safety and Entry-Level Operations‡	6
FST 102	Firefighter Rescue Operations‡	4
FST 103	Firefighter Procedures‡	4
FST 104	Fire Support Services‡	4
FST 113	Firefighter Fitness I	3
FST 114	Firefighter Fitness II	3
FST 115	Fire Service Apparatus Driver/Operator‡	3

FST 224	Field Experience in Fire Science Technology	2-4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

FIRE SCIENCE TECHNOLOGY - CERTIFICATE (MAJOR CODE - FST)

The Fire Science Technology Certificate prepares students for
a career in the fire service. Coursework covers safety,
wildland firefighting, fire rescue and hazmat operations,
ladder and hose procedures, and support services. Emphasis is
on applied learning.

CORE CURRICULUM 18 CREDITS

FST 101	Firefighter Safety and Entry-Level Operations‡	6
FST 102	Firefighter Rescue Operations‡	4
FST 103	Firefighter Procedures‡	4
FST 104	Fire Support Services‡	4

TOTAL CERTIFICATE REQUIREMENTS 18 CREDITS

HAZARDOUS MATERIALS TECHNICIAN - CERTIFICATE (MAJOR CODE - HMT)

The Hazardous Materials Technician Certificate is designed to
train active firefighters for Hazardous Materials Emergency
Response Technician State Certification (OSHA 1910.120 and
NFA 472) Safety and Entry-Level Operations.

CORE CURRICULUM 16 CREDITS

FST 121	Hazmat Technician I	6
FST 222	Hazmat Technician II	5
FST 223	Hazmat Technician III	5

TOTAL CERTIFICATE REQUIREMENTS 16 CREDITS

GENERAL REQUIREMENTS

GENERAL REQUIREMENTS - ASSOCIATE OF ARTS (MAJOR CODE - GENG)

The General Requirements Associate of Arts degree is
designed for students interested in transferring to a four-year
institution with no specific area of emphasis.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*°	3

or higher (3-5 credits)

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.

Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

GENERAL REQUIREMENTS - ASSOCIATE OF SCIENCE (MAJOR CODE - GENG)

The General Requirements Associate of Science degree is designed for students interested in transferring to a four-year institution with no specific area of emphasis.

GENERAL EDUCATION REQUIREMENTS (AGEC-S) 35-39 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 220	Calculus I*° or higher (3-5 credits)	5

Laboratory Sciences 8 credits

BIO 181	General Biology I (for majors)*‡ AND	4
BIO 182	General Biology II*‡ OR	4
CHM 151	General Chemistry I*‡ AND	4
CHM 152	General Chemistry II*‡ OR	4
PHY 230	Physics with Calculus I*‡ AND	4
PHY 231	Physics with Calculus II*‡	4

Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Additional Mathematics and/or Laboratory Sciences 6-8 credits

Based on your major and after consulting with an advisor, select MAT 231, MAT 241, MAT 252, MAT 262, and/or appropriate laboratory sciences courses. See http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec for a complete list.

Six credits of arts, humanities, or social and behavioral sciences must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS) 25-29 CREDITS

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

GENERAL STUDIES

GENERAL STUDIES - ASSOCIATE OF GENERAL STUDIES (MAJOR CODE - AGS)

The General Studies Associate of General Studies degree is designed to provide general knowledge with no specific area of emphasis.

GENERAL EDUCATION REQUIREMENTS 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory Sciences 4 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Foreign Language (100 or higher) or Communications (101 or higher) 3-4 credits
General Education Electives 6-7 credits

General education electives must be chosen from the general education list or HPE 179.

Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses.
See www.cochise.edu/AGEC.

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses may be selected from any Cochise College course at the 100 level or higher.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

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* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

HUMANITIES

HUMANITIES - ASSOCIATE OF ARTS (MAJOR CODE - HUM)

The Humanities Associate of Arts degree prepares students for transfer to a university program in the humanities. It comprises a study of history, art, philosophy, music, literature, and film, all in a cultural context. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 16 CREDITS

Non-English language fourth-semester proficiency
University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 6 CREDITS

HUM 205	Cultural Studies through the Humanities I°~	3
HUM 206	Cultural Studies through the Humanities II°~	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com. The Humanities Department recommends ART 107, ART 108, ENG 220, ENG 221, ENG 228, HIS 240, HIS 241, HIS 242, HUM 101, HUM 110, HUM 115, HUM 200, and HUM 210.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

INTELLIGENCE OPERATIONS STUDIES

Students should contact an advisor at the Fort Huachuca Center regarding the following areas of concentration:

Counterintelligence	(Major Code - IOST/CI)
General Intelligence	(Major Code - IOST/GIO)
Human Intelligence Collector	(Major Code - IOST/HIC)
Imagery Analyst	(Major Code - IOST/IMA)
Intelligence Analyst	(Major Code - IOST/IA)
Linguist	(Major Code - IOST/LIN)
Military Intelligence Systems Maintainer	(Major Code - IOST/MISM)
Signal Collector Analyst	(Major Code - IOST/SCA)
Signals Intelligence Analyst	(Major Code - IOST/SIA)

INTELLIGENCE OPERATIONS STUDIES - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - IOST)

The Intelligence Operations Studies Associate of Applied Science degree addresses career and educational goals of students currently in or preparing for employment in the intelligence field. This degree is intended for current or former military intelligence specialists and for students who are interested in intelligence operations studies.
Military credit toward this degree may be based on skill level, training, and/or coursework from military schools attended. See an academic advisor for details.

GENERAL EDUCATION REQUIREMENTS 18-20 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 21 CREDITS

Any 21 credits from the Cochise College Intelligence Operations Studies (IOS)/Military Intelligence Operations (MIO) course offerings. See schedule for a list of available courses.

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

* indicates SUN course. ‡ indicates lab fees. ° indicates online. ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Note: A minimum of nine credits, from the 64 total credits in this degree, must be completed with 200-level courses.

JOURNALISM AND MEDIA ARTS

JOURNALISM AND MEDIA ARTS - ASSOCIATE OF ARTS (MAJOR CODE - JMA)

The Journalism and Media Associate of Arts degree prepares students for transfer to a university program in journalism and media arts. Students gain practical experience in news writing by contributing to the online college newspaper. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits
ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits
MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
COM 102	Essentials of Communication*	3

Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 9 CREDITS

JRN 101	Introduction to Mass Communications	3
JRN 102	Essentials of News Writing*	3
COM 110	Public Speaking°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

CIS 116	Computer Essentials°	3

TOTAL DEGREE REQUIREMENTS 64 CREDITS

MEDIA PRODUCTION ARTS - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - MPA)

The Media Production Arts Associate of Applied Science degree prepares students for entry-level employment as media specialists. Students gain the knowledge and skills necessary to seek careers in media industries such as broadcasting, music and sound production, marketing, and public relations.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits
ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits
MAT 132	Applied Mathematics° or higher (3-4 credits)	3

Liberal Arts 6 credits
COM 102	Essentials of Communication*	3
JRN 101	Introduction to Mass Communications	3

Technology Literacy 3 credits
CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 35-40 CREDITS

BUS 285	Electronic Commerce°	3
CIS 129	Introduction to Programming Logic°	1
CIS 185	Internet Essentials°	3
CIS 244	World Wide Web Graphics	3
CIS 287	World Wide Web Development	3
COM 110	Public Speaking°	3
DMA 110	Digital Imaging I°‡	3
DMA 111	Computer Animation I°‡	3
DMA 260	Graphic Design I‡	3
DMA 262	Digital Video Production‡	3
DMA 266	Digital Photography‡	3
JRN 102	Essentials of News Writing*	3
JRN 224	Field Experience in Communication and/or Media Technology	1-6

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Department recommended electives include DMA 261, DMA 263, and DMA 267.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

NOTE: Students pursuing a BAS degree must meet with an advisor to determine the appropriate general education and core curriculum requirements. Additional credits required in the general education block for BAS transfer may be used to fulfill core curriculum or elective requirements.

LOGISTICS

LOGISTICS SUPPLY CHAIN MANAGEMENT - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - LGS)

The Logistics Supply Chain Management Associate of Applied Science degree provides students with an understanding of the fundamental principles of logistics and business, and with the working knowledge of inventory control, transportation, and warehouse management required for employment in the field of logistics.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits
ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits
MAT 142	College Mathematics*° or higher (3-4 credits)	3

Liberal Arts 6 credits (Select two of the following.)
COM 102	Essentials of Communication*	3
ECN 201	Principles of Macroeconomics*°~	3
ECN 202	Principles of Microeconomics*°~	3
PHI 130	Introduction to Ethics*°~	3

Technology Literacy 3 credits
CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 39-41 CREDITS

BUS 109	Survey of Business°	3
BUS 123	Human Resource Management°	3
BUS 160	Essential Workplace Success Skills°	3
BUS 167	Business Communications°	3
GEO 121	World Regional Geography°	3
LGS 101	Principles of Logistics	3
LGS 102	Inventory Control	3
LGS 103	Freight Claims and Contracts	3
LGS 104	Computerized Logistics	2
LGS 105	Warehouse Management	3
LGS 106	Transportation and Traffic Management	3
LGS 107	Introduction to Purchasing	3
LGS 108	International Logistics	3
LGS 224	Field Experience in Logistics	1-3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Recommended electives: Students may consider 2–3 co-op credits in LGS 224 to gain additional workplace experience, and any course with a BUS/CIS/ECN prefix. Transfer students should check with transfer school for transferability.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

BASIC LOGISTICS SUPPLY CHAIN MANAGEMENT - CERTIFICATE (MAJOR CODE - LGSB)

The Basic Logistics Supply Chain Management Certificate is designed to prepare students for entry-level positions in the field of logistics by providing them with an understanding of the principles of logistics, inventory control, computerized logistics, and warehouse management. Students may develop further skills by completing the Logistics Supply Chain Management Associate of Applied Science degree.

CORE CURRICULUM 24 CREDITS

BUS 167	Business Communications°	3
CIS 116	Computer Essentials°	3
LGS 101	Principles of Logistics	3
LGS 102	Inventory Control	3
LGS 104	Computerized Logistics	2
LGS 105	Warehouse Management	3
LGS 106	Transportation and Traffic Management OR	3
LGS 108	International Logistics	3
LGS 109	Readiness Skills for Logistics Careers°	1
LGS 224	Field Experience in Logistics	3

TOTAL CERTIFICATE REQUIREMENTS 24 CREDITS

MATHEMATICS

MATHEMATICS - ASSOCIATE OF SCIENCE (MAJOR CODE - MAT)

The Mathematics Associate of Science degree prepares students for transfer to a university program in mathematics, computer science, or natural sciences. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-S) 35-39 CREDITS

Composition 6 credits
ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits
MAT 220	Calculus I*°	5

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online. ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

or higher (3-5 credits)

Laboratory Sciences 8 credits

PHY 230	Physics with Calculus I*‡	4
	AND	
PHY 231	Physics with Calculus II*‡	4

Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Additional Mathematics and/or Laboratory Sciences 6-8 credits

Based on your major and after consulting with an advisor, select PHY 111 and/or additional laboratory science course(s). See http://aztransmac2.asu.edu/cgi-bin/WebObjects/agec for a complete list.

Six credits of arts, humanities, or social and behavioral sciences must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 21 CREDITS

CIS 130	Programming Logic°	3
CIS 204	C Programming°	4
	OR	
CIS 208	Java Programming	4
MAT 227	Discrete Mathematics*	3
MAT 231	Calculus II*	4
MAT 241	Calculus III*	4
MAT 252	Introduction to Linear Algebra	3
	OR	
MAT 262	Differential Equations*	3

CIS 204, CIS 208: After consulting with an advisor in the computer science department, select CIS 204 or CIS 208.
MAT 252, MAT 262: After consulting with an advisor in the mathematics department, select MAT 252 or MAT 262.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

MUSIC

MUSIC - ASSOCIATE OF ARTS (MAJOR CODE - MUS)

The Music Associate of Arts degree prepares students for transfer to a university program in music, interdisciplinary arts and performance, or related areas of study. To ensure seamless transfer, students should develop their specific program of study in close coordination with a Cochise College music instructor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*°	3
	or higher (3-5 credits)	

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 18 CREDITS

MUS 113	Instrument - Individual Instruction‡	2
	OR	
MUS 115	Voice - Individual Instruction‡	2
MUS 132	Music Theory I°	3
MUS 133	Music Theory II°	3
MUS 134	Aural Skills I	1
MUS 135	Aural Skills II	1
MUS 232	Music Theory III*°	3
MUS 233	Music Theory IV*°	3

Select two of the following four (2 credits):

MUS 109	Orchestra	1
MUS 110	Chorus	1
MUS 111	Band	1
MUS 201	Ensemble	1

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

NURSING

NURSING - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - NUR)

Accredited by the National League for Nursing Accrediting Commission and approved by the Arizona State Board of Nursing, the Nursing Associate of Applied Science degree teaches about common physical and psychosocial health needs and problems throughout the human lifespan, the body's responses to stressors, alterations in growth and development, and nursing interventions. Concepts include use of the framework for effective communication, philosophies of

human development, and the utilization of the nursing process with emphasis on intervention and evaluation. The clinical setting helps students develop competence in discharge planning, community nursing, and leadership. Students utilize knowledge of new developments in health care to adapt to changes in the field and to be proactive in the nursing profession.

Students are required to complete program prerequisites prior to admission and must complete courses in the order outlined in the program.

Upon completion of the program, students are eligible to take the National Council Licensure Examination (NCLEX-RN) to be licensed by the State Board of Nursing as a registered nurse.

Acceptance into the nursing program does not guarantee successful completion. Class attendance and clinical experience, which involves travel to various locations in Cochise County and elsewhere, are required. Experience in multiple clinical agencies is essential for completion of the program. Any potential legal impediment to licensure must be made known to the Nursing Department before assignment to any clinical agency. Completion of the program does not guarantee licensure by the Arizona State Board of Nursing.

YEAR 1 PROGRAM PREREQUISITES:

FALL AND SPRING SEMESTERS 17 CREDITS

BIO 201	Human Anatomy and Physiology I*°‡	4
BIO 202	Human Anatomy and Physiology II*‡	4
ENG 101	Composition*°	3
ENG 102	English Composition*°	3
NUR 203	Update on Pharmacology°	3

YEAR 2 FRESHMAN:

FIRST SEMESTER 13 CREDITS

NUR 121A	Medication Math I	2
NUR 122	Nursing I‡	8
PSY 101	Introduction to Psychology*°	3

SECOND SEMESTER 13 CREDITS

NUR 123	Nursing II-A‡	5
NUR 124	Nursing II-B‡	5
PSY 240	Developmental Psychology°~	3

YEAR 3 SOPHOMORE:

THIRD SEMESTER 12 CREDITS

NUR 121B	Medication Math II	2
NUR 232	Nursing III‡	10

FOURTH SEMESTER 14 CREDITS

BIO 205	Microbiology*‡	4
NUR 233	Nursing IV‡	10

TOTAL DEGREE REQUIREMENTS 69 CREDITS

Notes:
Students must complete courses during or prior to the semester listed in the program outline.
All BIO and NUR courses must be completed with a grade of B or better.
BIO 201 may require a prerequisite course. BIO 201, BIO 202, and BIO 205 must have been completed within the last seven (7) years of admission to the Cochise College nursing program with a grade of B or better.
NUR 203 must have been completed within the last five (5) years of admission to the Cochise College nursing program with a grade of B or better.

PHILOSOPHY

PHILOSOPHY - ASSOCIATE OF ARTS (MAJOR CODE - PHI)

The Philosophy Associate of Arts degree prepares students for transfer to university programs in a variety of areas. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 151	Precalculus Algebra*° or higher (3-5 credits)	4

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 9 CREDITS

PHI 111	Introduction to Western Philosophy*°~	3
PHI 113	Introduction to Logic*°~	3
PHI 130	Introduction to Ethics*°~	3

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

PHYSICS

PHYSICS - ASSOCIATE OF SCIENCE (MAJOR CODE - PHY)

The Physics Associate of Science degree prepares students for transfer to a university program in physics, physical science, or astronomy. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-S) 37-39 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 220	Calculus I*°	5
	or higher (3-5 credits)	

Laboratory Sciences 8 credits

CHM 151	General Chemistry I*‡	4
	AND	
CHM 152	General Chemistry II*‡	4

Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
Additional Mathematics and/or Laboratory Sciences 6-8 credits

MAT 231	Calculus II*	4
MAT 241	Calculus III*	4

Six credits of arts, humanities, or social and behavioral sciences must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

CORE CURRICULUM 12-14 CREDITS

PHY 230	Physics with Calculus I*‡	4
PHY 231	Physics with Calculus II*‡	4

SELECT ONE AREA OF EMPHASIS BELOW:

Physics

MAT 252	Introduction to Linear Algebra	3
MAT 262	Differential Equations*	3

Physical Science

GEO 101	Physical Geography°‡	4

Astronomy

AST 180	Introduction to Astronomy°‡	4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

PROFESSIONAL ADMINISTRATIVE ASSISTANT

PROFESSIONAL ADMINISTRATIVE ASSISTANT - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - PAA)

The Professional Administrative Assistant Associate of Applied Science degree prepares students for direct employment as administrative assistants and executive secretaries. The program provides a broad foundation of knowledge and skills needed for employment in business, industry, government, law and medical offices, and public and private agencies.

GENERAL EDUCATION REQUIREMENTS 18-19 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-4 credits

MAT 142	College Mathematics*°	3
	or higher (3-4 credits)	

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 43 CREDITS

BUS 104	Business Math°	3
	OR	
BUS 146	Introduction to Accounting°	3
BUS 106	Administrative Assistant Skills I	4
BUS 160	Essential Workplace Success Skills°	3
BUS 167	Business Communications°	3
BUS 206	Administrative Assistant Skills II	4
BUS 207	Office Administration	3
BUS 209	Business Speech Communications	3
BUS 210	Automated Office Procedures	3
BUS 211	Automated Office Practice	3
BUS 216	Administrative Assistant Skills III	4
BUS 217	Administrative Assistant Skills IV	4
CIS 181	Computer Applications°	3
CIS 268	Technical Presentations°	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

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* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

ADMINISTRATIVE OFFICE AIDE - CERTIFICATE (MAJOR CODE - AOA)

The Administrative Office Aide Entry-Level Certificate is for individuals interested in entry or clerical type work in an office environment. The certificate will teach individuals the basic administrative office skills and procedures in an office environment.

CORE CURRICULUM 16-18 CREDITS

BUS 160	Essential Workplace Success Skills°	3
BUS A193	Excel I	1
BUS B193	Excel II	1
BUS C193	Excel III	1
BUS 210	Automated Office Procedures	3
BUS 213	Word Processing	3
CIS 116	Computer Essentials°	3
	Electives (business approved courses) 1-3	

TOTAL CERTIFICATE REQUIREMENTS 16-18 CREDITS

RECEPTIONIST - CERTIFICATE (MAJOR CODE - RCP)

The Receptionist Certificate teaches students basic business mathematics and communication skills, and it prepares them to perform entry-level tasks involving customer service, word processing, and document preparation.

CORE CURRICULUM 18-19 CREDITS

BUS 104	Business Math°	3
	OR	
BUS 146	Introduction to Accounting°	3
BUS 106	Administrative Assistant Skills I	4
BUS 160	Essential Workplace Success Skills°	3
BUS 167	Business Communications°	3
CIS 116	Computer Essentials°	3
	Elective	2-3

Elective: Field experience course or any CIS or BUS course not used in the certificate.

TOTAL CERTIFICATE REQUIREMENTS 18-19 CREDITS

PSYCHOLOGY

PSYCHOLOGY - ASSOCIATE OF ARTS (MAJOR CODE - PSY)

The Psychology Associate of Arts degree is intended for students interested in education, medicine, law, social work, business, or in human services such as mental health, nursing, child care, and criminal justice. It is also designed for transfer to university programs in psychology. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 13 CREDITS

PSY 101	Introduction to Psychology*°	3
PSY 250	Introduction to Psychological Research, Measurements and Statistics°‡~	3
PSY 290	Experimental Psychology°~	4

Select one of the following (3 credits):

PSY 210	Social Psychology°~	3
PSY 230	Personality Theories and Research°~	3
PSY 240	Developmental Psychology°~	3
PSY 270	Abnormal Psychology°~	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

Social Sciences

Social Sciences - Associate of Arts (Major Code - SS)

The Social Sciences Associate of Arts degree prepares students for transfer to a university program in anthropology, history, political science, sociology, or related areas of study. To ensure seamless transfer, students must develop their specific program in close coordination with a Cochise College advisor and in cooperation with department faculty.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits

HIS 110	History of the United States 1607-1877*° OR	3
HIS 111	History of the United States Since 1877*° AND	3
SOC 101	Introduction to Sociology*°	3

General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 21 CREDITS

ANT 101	The Origin and Antiquity of Humankind°	3
HIS 110	History of the United States 1607-1877*° OR	3
HIS 111	History of the United States Since 1877*°	3
POS 110	American National Government*°	3

SELECT AN AREA OF EMPHASIS BELOW

Anthropology
Select two of the following (6 credits):

ANT 102	Society and Culture°	3
ANT 285	Prehistoric Cultures of North America°~	3
ANT 286	Historic Indian Tribes of North America~	3

Select one of the following (3 credits):

ANT 110	Exploring Archaeology°	3
ANT 235	Principles of Archaeology~	3
ANT 287	Archaeology of the Southwest°	3
ANT 288	Native Peoples of the Southwest~	3

Select one course from another area of emphasis (3 credits).
History
Select two of the following (6 credits):

HIS 240	Survey of Western Civilization I°~	3
HIS 241	Survey of Western Civilization II°~	3
HIS 242	Survey of Western Civilization III°~	3

Select one of the following (3 credits):

HIS 201	History of Women in the United States~	3
HIS 229	History of Mexico I°~	3
HIS 230	History of Mexico II°~	3

Select one course from another area of emphasis (3 credits).
Political Science
Take the following (9 credits):

POS 220	Federal and Arizona Constitution°~	3
POS 230	World Politics*°~	3
POS 240	Comparative Politics*°	3

Select one course from another area of emphasis (3 credits).
Sociology
Select two of the following (6 credits):

SOC 160	Sociology of Race and Ethnicity*°~	3
SOC 202	Social Problems*°~	3
SOC 212	Sociology of Gender°~	3

Select one of the following (3 credits):

SOC 207	Introduction to Social Welfare°	3
SOC 210	Marriage and the Family°~	3
SOC 230	Human Sexuality and Gender Awareness°	3

Select one course from another area of emphasis (3 credits).

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

Social Work

Social Work - Associate of Arts (Major Code - SCW)

The Social Work Associate of Arts degree prepares students for transfer to a university program in social work or human

services. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory Sciences 8 credits

BIO 156	Introductory Biology for Allied Health‡ OR	4
BIO 160	Introduction to Human Anatomy and Physiology°‡ OR	4
BIO 181	General Biology I (for majors)*‡	4
	Laboratory sciences	4

Laboratory sciences must include BIO 160 or BIO 201.

Arts 3 credits
Humanities 3 credits

PHI 111	Introduction to Western Philosophy*°~ OR	3
PHI 130	Introduction to Ethics*°~	3

Social and Behavioral Sciences 6 credits

SOC 101	Introduction to Sociology*°	3
SOC 160	Sociology of Race and Ethnicity*°~ OR	3
AJS 101	Introduction to Administration of Justice*°	3

General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT8-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 15-16 CREDITS

ECN 201	Principles of Macroeconomics*°~	3
PSY 101	Introduction to Psychology*°	3
PSY 240	Developmental Psychology°~	3
SOC 207	Introduction to Social Welfare°	3

Select one of the following (3-4 credits):

BUS 219	Business Statistics*°	3

PSY 250	Introduction to Psychological Research, Measurements and Statistics°‡~	3
PSY 290	Experimental Psychology°~	4

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com.

TOTAL DEGREE REQUIREMENTS 64-67 CREDITS

THEATRE ARTS

THEATRE ARTS - ASSOCIATE OF ARTS (MAJOR CODE - THE)

The Theatre Arts Associate of Arts degree prepares students for transfer to a university program in drama production, education, or theory. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

GENERAL EDUCATION REQUIREMENTS (AGEC-A) 35 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 142	College Mathematics*° or higher (3-5 credits)	3

Laboratory Sciences 8 credits
Arts 3 credits
Humanities 3 credits
Social and Behavioral Sciences 6 credits
General Education Electives 4-6 credits

General education electives must be chosen from the general education list. See www.cochise.edu/AGEC.
Six credits of arts, humanities, social and behavioral sciences, or general education electives must be chosen from the current listing of intensive writing courses. See www.cochise.edu/AGEC.

LANGUAGE REQUIREMENT 0-16 CREDITS

Non-English language second- or fourth-semester proficiency University non-English language requirements vary. Check with your advisor.

CORE CURRICULUM 12 CREDITS

THE 101	Acting I	3
THE 103	Introduction to Theatre°	3
THE 201	Acting II	3
THE 220	Dramatic Structure*	3

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

Elective courses must be transferable to the university or universities to which the student plans to transfer. See www.aztransfer.com. The Theatre Arts Department recommends THE 110 and COM 102.

TOTAL DEGREE REQUIREMENTS 64 CREDITS

UNMANNED AIRCRAFT SYSTEMS

UNMANNED AERIAL VEHICLE FLIGHT OPERATOR - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - UAVO)

The Unmanned Aerial Vehicle Flight Operator Associate of Applied Science degree is intended for current Unmanned Aerial Vehicle (UAV) flight operators seeking to improve their education and career prospects in the field. It focuses on aviation systems and the flight operation of UAVs.

Military credit toward this degree may be based on skill level, training, and/or coursework from military schools attended. See an academic advisor for details.

THE UNMANNED AERIAL VEHICLE FLIGHT OPERATOR ASSOCIATE OF APPLIED SCIENCE DEGREE IS RUN THROUGH THE MOS CREDENTIALING PROGRAM ON FORT HUACHUCA AND DOES NOT FOLLOW STANDARD SEMESTER SCHEDULING.

GENERAL EDUCATION REQUIREMENTS 18-20 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 132	Applied Mathematics° or higher (3-5 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 34 CREDITS

PFT 101	Private Pilot Ground School°	5
PFT 271	Unmanned Aerial Vehicle (UAV) Operator	29

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

UNMANNED AIRCRAFT SYSTEMS TECHNICIAN - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - UAVT)

The Unmanned Aircraft Systems Technician Associate of Applied Science degree is intended for current unmanned aircraft systems technicians seeking to improve their education and career prospects in the Unmanned Aerial Vehicle (UAV) field. It focuses on mechanical and electronic aircraft systems.

Military credit toward this degree may be based on skill level, training, and/or coursework from military schools attended. See an academic advisor for details.

THE UNMANNED AIRCRAFT SYSTEMS TECHNICIAN ASSOCIATE OF APPLIED SCIENCE DEGREE IS RUN THROUGH THE MOS CREDENTIALING PROGRAM ON FORT HUACHUCA AND DOES NOT FOLLOW STANDARD SEMESTER SCHEDULING.

GENERAL EDUCATION REQUIREMENTS 18-20 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3-5 credits

MAT 132	Applied Mathematics° or higher (3-5 credits)	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials° OR	3
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 22-27 CREDITS

Select two of the following:

AMT 210	Unmanned Aerial Vehicle (UAV) Maintenance Technician	14
AMT 212	Unmanned Aerial Vehicle (UAV) Mechanical Technician	13
AVT 211	Unmanned Aerial Vehicle Avionics	9

ELECTIVES (AS NEEDED TO COMPLETE 64 CREDITS)
TOTAL DEGREE REQUIREMENTS 64 CREDITS

WELDING TECHNOLOGY

WELDING TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE (MAJOR CODE - WLD)

The Welding Technology Associate of Applied Science degree is designed to prepare students to enter the workforce in almost any facet of the diverse field of welding technology. It addresses the needs of beginners as well as those of experienced welders looking to upgrade their skills and certifications.

GENERAL EDUCATION REQUIREMENTS 18 CREDITS

Composition 6 credits

ENG 101	Composition*°	3
ENG 102	English Composition*°	3

Mathematics 3 credits

MAT 132	Applied Mathematics°	3

Liberal Arts 6 credits
Technology Literacy 3 credits

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3

CORE CURRICULUM 46 CREDITS

DFT 150	Fundamentals of AutoCAD	3
GTC 105	Manufacturing Materials and Processes	3
WLD 105	Oxyacetylene Welding‡	3
WLD 106	Basic Shield Metal Arc Welding‡	3
WLD 128	Gas Metal Arc Welding‡	3
WLD 202	Welding Survey	4
WLD 203	Blueprint Interpretation	3
WLD 209	Gas Tungsten Arc Welding‡	3
WLD 210	Advanced Shield Metal Arc Welding‡	3
WLD 211	Pipe Fitting and Welding‡	3
WLD 212	Advanced Shield Metal Arc Welding II‡	3
WLD 215	Welding Design and Fabrication‡	3
WLD 217	Pipe Layout and Fitting‡	3
WLD 228	Advanced Gas Metal Arc Welding‡	3
WLD 229	Advanced Flux-Cored Arc Welding‡	3

TOTAL DEGREE REQUIREMENTS 64 CREDITS

GENERAL WELDING TECHNOLOGY - CERTIFICATE (MAJOR CODE - GWLD)

The General Welding Technology Certificate prepares students to enter the workforce with diverse welding skills.

CORE CURRICULUM 18 CREDITS

WLD 105	Oxyacetylene Welding‡	3
WLD 106	Basic Shield Metal Arc Welding‡	3
WLD 128	Gas Metal Arc Welding‡	3
WLD 203	Blueprint Interpretation	3
WLD 209	Gas Tungsten Arc Welding‡	3
WLD 210	Advanced Shield Metal Arc Welding‡	3

TOTAL CERTIFICATE REQUIREMENTS 18 CREDITS

WELDING TECHNOLOGY - CERTIFICATE (MAJOR CODE - WLD)

The Welding Technology Certificate prepares students to enter the workforce with diverse welding skills and with knowledge of design concepts used in the welding industry.

CORE CURRICULUM 30 CREDITS

CIS 179	Applied Technical Writing°	3
DFT 150	Fundamentals of AutoCAD	3
GTC 105	Manufacturing Materials and Processes	3
MAT 132	Applied Mathematics°	3
WLD 105	Oxyacetylene Welding‡	3
WLD 106	Basic Shield Metal Arc Welding‡	3
WLD 128	Gas Metal Arc Welding‡	3
WLD 203	Blueprint Interpretation	3
WLD 209	Gas Tungsten Arc Welding‡	3
WLD 210	Advanced Shield Metal Arc Welding‡	3

TOTAL CERTIFICATE REQUIREMENTS 30 CREDITS

AEROSPACE THERMAL FUSION - CERTIFICATE (MAJOR CODE - AETF)

The Aerospace Thermal Fusion Certificate teaches welding skills along with basic computer skills, applied mathematics skills, and technical writing skills in preparation for entry-level welding jobs in industries such as aviation, aerospace, motorsports, and exotic material fabrication. It also provides the knowledge and skills required for certification under American Welding Society (AWS) or Military Standard (MIL-STD) welding codes.

CORE CURRICULUM 30 CREDITS

CIS 116	Computer Essentials°	3
	OR	
CIS 120	Introduction to Information Systems*°	3
CIS 179	Applied Technical Writing°	3
GTC 105	Manufacturing Materials and Processes	3
MAT 132	Applied Mathematics°	3
WLD 105	Oxyacetylene Welding‡	3
WLD 203	Blueprint Interpretation	3
WLD 209	Gas Tungsten Arc Welding‡	3

* indicates SUN course.   ‡ indicates lab fees.   ° indicates online.   ~ indicates intensive writing.
All prerequisite coursework must be completed with a grade of C or better.

WLD 218	Advanced GTAW - Soft Metals‡	3
WLD 219	Advanced GTAW - Hard Metals‡	3
WLD 220	Advanced GTAW - Exotic Metals‡	3

TOTAL CERTIFICATE REQUIREMENTS 30 CREDITS

AEROSPACE WELDING TECHNOLOGY - CERTIFICATE (MAJOR CODE - AEWT)

The Aerospace Welding Technology Certificate prepares students for entry-level welding jobs in industries such as aviation, aerospace, motorsports, and exotic material fabrication. It provides the knowledge and skills required for certification under American Welding Society (AWS) or Military Standard (MIL-STD) welding codes.

CORE CURRICULUM 18 CREDITS

WLD 105	Oxyacetylene Welding‡	3
WLD 203	Blueprint Interpretation	3
WLD 209	Gas Tungsten Arc Welding‡	3
WLD 218	Advanced GTAW - Soft Metals‡	3
WLD 219	Advanced GTAW - Hard Metals‡	3
WLD 220	Advanced GTAW - Exotic Metals‡	3

TOTAL CERTIFICATE REQUIREMENTS 18 CREDITS

ARIZONA DEPARTMENT OF CORRECTIONS

These programs have been designed for the inmates of the Arizona Department of Corrections in Douglas.

Automotive Technology

BASIC AUTOMOTIVE TECHNOLOGY - CERTIFICATE (MAJOR CODE - BATC)

The Basic Automotive Technology Certificate provides basic knowledge and skills in automotive maintenance and repair. It prepares students for Automotive Service Excellence (ASE) certifications.

CORE CURRICULUM 15 CREDITS

AUT 101	Introduction to Automotive Technology‡	3
AUT 102	Automotive Electrical Fundamentals‡	3
AUT 103	Internal Combustion Engines‡	3
AUT 104	Automotive Brake Systems‡	3
AUT 105	Automotive Suspension and Steering Systems‡	3

TOTAL CERTIFICATE REQUIREMENTS 15 CREDITS

ADVANCED AUTOMOTIVE TECHNOLOGY - CERTIFICATE (MAJOR CODE - AATC)

The Advanced Automotive Technology Certificate provides advanced knowledge and skills in automotive maintenance and repair. It prepares students for Automotive Service Excellence (ASE) certifications.

CORE CURRICULUM 15 CREDITS

AUT 106	Automotive Manual Drive Systems‡	3
AUT 201	Automotive Electrical Systems and Equipment‡	3
AUT 204	Automatic Transmission/Transaxle Diagnostics and Rebuilding‡	3
AUT 205	Automobile Heating, Ventilation, and Air Conditioning‡	3
AUT 206	Engine Performance‡	3

TOTAL CERTIFICATE REQUIREMENTS 15 CREDITS

AUTOMOTIVE SERVICE MANAGER - CERTIFICATE (MAJOR CODE - ASM)

The Automotive Service Manager Certificate provides students with customer relations skills relating to proper parts selection, repair recommendations, and routine maintenance. It prepares students for a management career in the automotive technology industry.

CORE CURRICULUM 12 CREDITS

AUT 107	Automotive Service Consultant	3
AUT 108	Automotive Parts Specialist	3
AUT 207	Automotive Service Management	3
BUS 143	Principles of Management	3

TOTAL CERTIFICATE REQUIREMENTS 12 CREDITS

Building Construction Technology

BASIC BUILDING CONSTRUCTION TECHNOLOGY - CERTIFICATE (MAJOR CODE - BBCT)

The Basic Building Construction Technology Certificate introduces students to carpentry, blueprint reading, building codes, and math skills in preparation for employment in the building trades.

CORE CURRICULUM 13 CREDITS

BCT 100	Technical Mathematics I	3
BCT 102	Carpentry Fundamentals‡	4
BCT 103	International Residential Building Codes	3
BCT 127	Blueprint Reading and Estimating	3

TOTAL CERTIFICATE REQUIREMENTS 13 CREDITS

ADVANCED BUILDING CONSTRUCTION TECHNOLOGY - CERTIFICATE (MAJOR CODE - ABCT)

The Advanced Building Construction Technology Certificate provides students with skills in the electrical, plumbing, and carpentry areas in preparation for employment in the construction trades.

CORE CURRICULUM 16 CREDITS

BCT 104	Electric I‡	4
BCT 111	Plumbing I‡	4
BCT 201	Carpentry Framing and Finishing‡	4
BCT 202	Carpentry Forms‡	4

TOTAL CERTIFICATE REQUIREMENTS 16 CREDITS

CABINETMAKER - CERTIFICATE (MAJOR CODE - CAB)

The Cabinetmaking Certificate provides students with the skills necessary to obtain employment in the cabinetmaking industry.

CORE CURRICULUM 12 CREDITS

BCT 110	Cabinetmaking‡	3
BCT 210	Cabinetmaking II‡	3
BCT 211	Cabinetmaking III‡	3
GTC 121	Painting and Finishing Techniques	3

TOTAL CERTIFICATE REQUIREMENTS 12 CREDITS

Facility Maintenance

AIR CONDITIONING MAINTENANCE TECHNICIAN - CERTIFICATE (MAJOR CODE - ACM)

The Air Conditioning Maintenance Technician Certificate provides students with a broad understanding of the field and the knowledge necessary to enter the air conditioning and refrigeration industry.

CORE CURRICULUM 16 CREDITS

GTC 122	Refrigeration I	3
GTC 128	Hazardous Materials and the EPA	3
GTC 222	Refrigeration II	3
GTC 223	Heating and Air Conditioning	4
GTC 227	Electricity and Wiring for HVAC/R	3

TOTAL CERTIFICATE REQUIREMENTS 16 CREDITS

Telecommunications

TELECOMMUNICATIONS CABLE INSTALLATION - CERTIFICATE (MAJOR CODE - TCI)

The Telecommunications Cable Installation Certificate introduces students to the fundamentals of electronics, networking, and voice and data transmission, and it prepares them for employment in most cabling-related industries.

CORE CURRICULUM 12 CREDITS

CIS 150	Essentials of Networking°	3
ELT 100	Electronics Foundations	3
NET 112	Fundamentals of Voice and Data Cabling I	3
NET 212	Fundamentals of Voice and Data Cabling II	3

TOTAL CERTIFICATE REQUIREMENTS 12 CREDITS

Courses

Hazardous materials: Certain courses may require students to work with potentially hazardous materials as part of their course work in the laboratory, darkroom, or workshop. Instructors will provide information on the safe handling of all materials to include, upon request, material safety data sheets (MSDS). Questions regarding the use of these materials or any required protective equipment should be directed to the instructor or a member of the specific academic department. 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. Visit www.aztransfer.com/sun for more information.

AGR - AGRICULTURE

AGR 101 - Principles of Veterinary Science (3)

A study of the diseases and the health maintenance of domestic animals and livestock. For those interested in animal science or husbandry, or in veterinary science.
3 hours lecture.
Prerequisite(s): None.

AGR 102 - Introduction to Agriculture (3)

An introduction to agriculture which focuses on livestock production. Also deals with plants, soils, biotechnology, natural resources, and sustainable agriculture as it relates to the global food industry. Includes a survey of agricultural careers and safety practices.
3 hours lecture.
Prerequisite(s): None.

AGR 105 - Range Management (3)

An introduction to the principles of range management including rangeland types, characteristics, and management; ecological principles; range inventory and monitoring systems; grazing systems and stocking rates; grazing distribution and range plant identification; and management of range vegetation and wildlife. Also deals with livestock production on rangelands and career opportunities in range management.
3 hours lecture.
Prerequisite(s): ENG 100 or placement in ENG 101; and RDG 110, placement in RDG 122, or exemption.

AGR 107 - Farrier Science (3)

A study of the basic principles of farrier science, including an introduction to the physiology and anatomy of the horse's legs and hooves, horse shoeing, diagnosis of minor hoof and leg problems and proper methods for correcting stride and alignment.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

AGR 142A - Varsity Rodeo I (1)

Designed to provide the rodeo student-athlete with a knowledge of the rules and with the elementary skills and strategies necessary to compete at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): Students must try out for the rodeo team.

AGR 142B - Varsity Rodeo II (1)

Designed to provide the rodeo student-athlete with the basic skills and strategies necessary to compete at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): AGR 142A or permission of instructor.

AGR 142C - Varsity Rodeo III (1)

Designed to provide the rodeo student-athlete with the intermediate skills and strategies necessary to compete at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): AGR 142B or permission of instructor.

AGR 142D - Varsity Rodeo IV (1)

Designed to provide the rodeo student-athlete with the advanced skills and strategies necessary to compete at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): AGR 142C or permission of instructor.

AGR 201 - Artificial Insemination of Domestic Livestock (3)

The history, importance and implications of artificial insemination; advantages and limitations of its use in farm animals. Methods of collection, evaluation, storage of semen, and techniques of insemination are covered. Also, estrus evaluation, determination and synchronization techniques are studied. In addition, the domestic livestock female and male reproductive anatomy is discussed.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): AGR 101 or permission of instructor.

AGR 208 - Animal Science (4)

An introduction to animal science as it relates to nutrition, digestion, breeding, and reproduction. Includes an overview of global agricultural systems and of the fundamental principles of the animal science industries as they relate to dairy, beef, poultry, and swine.

3 hours lecture, 3 hours laboratory.
Prerequisite(s): AGR 102, and RDG 122 or exemption.

AGR 214 - Soil Science (4)

A study of the fundamental principles of soil science including the origin, nature, and composition of soils; their chemical, physical, and biological properties in relation to plant growth; and their non-plant uses.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CHM 130, CHM 138, or CHM 151.

AGR 220 - Agriculture Practicum (4)

In this practicum, students apply knowledge from their agriculture coursework in a work setting. They complete 320 supervised hours in their area of interest with a professional from the agricultural industry.
1 hour lecture, 11 hours laboratory.
Prerequisite(s): AGR 102 or AGR 237, sophomore standing, a declared major in agriculture, and approval of the agriculture committee.

AGR 225 - Principles of Agribusiness (3)

An introduction to the principles of economics and their application to real world agribusiness management. Topics include food production and processing, and marketing systems. Also covers management principles and processes for agricultural business firms in both domestic and international markets, as well as the development of problem-solving skills as they relate to agribusiness management.
3 hours lecture.
Prerequisite(s): MAT 123 or higher, and RDG 122 or exemption.

AGR 230 - Feeds and Feeding (3)

A study of the digestibility of feeds and their nutritive values, grades, and classes. Also covers the principles of selection, evaluation, traditional ration formulation, computer ration formulation, and feeding of livestock and poultry. Includes laws and labeling as they pertain to feeds, and a review of animal nutrition and ruminant and monogastric digestion.
3 hours lecture.
Prerequisite(s): AGR 208 or AGR 237; CHM 130, CHM 138, or CHM 151; and RDG 122 or exemption. Recommended Preparation: MAT 081 or higher.

AGR 237 - Equine Science and Management (4)

An introduction to the light horse industry. Topics include the evolution and fundamentals of Equus, as well as breeds, classes, and methods of identification. Also covers anatomical systems, the hoof, nutrition, disease, health management, and daily care. Introduces the student to various career opportunities in the equine industry.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): ENG 100 or placement in ENG 101, and RDG 122 or exemption.

AGR 243 - Livestock Production and Management (3)

A study of the operational methods of livestock production utilized in the breeding and managing of beef and dairy cattle, swine, sheep, and goats. Emphasis is on economically important traits, animal selection, marketing and management, and on the economic principles of the livestock industry. Covers the impact of biotechnology on livestock. Additional topics include genetic defects, body conditioning scoring techniques within species, and current domestic and global trends in livestock production. Introduces the student to various career opportunities in livestock production.
3 hours lecture.
Prerequisite(s): AGR 102, AGR 208, and RDG 122 or exemption.

AGR 299 - Individual Studies (1-4)

Completion of a research problem or an outlined course of study under the direction of a faculty member, with contract for the individual study agreed upon by the student, the instructor, and the appropriate instructional manager prior to initiation of the study.
Prerequisite(s): Approval of appropriate instructional manager and instructor.

AJS - ADMINISTRATION OF JUSTICE

AJS 100 - Youth Citizen Police Academy (3)

An introduction to the police department and law enforcement in general, including the agency's role in the community and within the criminal justice system. This course is designed to better acquaint the youth of our community with the operation of the local criminal justice system and to foster law enforcement as a career choice.
3 hours lecture.
Prerequisite(s): No prior felony convictions and no misdemeanor charges for offenses involving violence or weapons. No misdemeanor arrests within six months prior to Academy application. Recommended Preparation: High school age.

AJS 101 - Introduction to Administration of Justice (3)

A study of the history, philosophy, ethics, constitutional parameters, organization and terminology of the criminal justice system. Also includes an analysis of crime and social responses to crime; the social and psychological causes of crime; the law enforcement, judicial and corrections components of the criminal justice system; critical analysis of representative criminal justice cases/issues; agency jurisdiction; and career opportunities.
3 hours lecture.
Prerequisite(s): Completion of or concurrent enrollment in RDG 110 or RDG 122, or exemption. Recommended Preparation: Completion of or concurrent enrollment in ENG 100 or higher.

All prerequisite coursework must be completed with a grade of C or better.

AJS 104 - Physical Training (2)

This course will introduce the student to advanced principles of aerobic exercise, strength development and flexibility. It will emphasize methods of stress reduction, the value of nutrition awareness and the development of individual exercise programs.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): None.

AJS 109 - Substantive Criminal Law (3)

This course is the study of the philosophy of legal sanctions and their historical development, from common law to modern American criminal law. It includes the judicial process, classification of crimes, elements of and parties to crimes, general definitions of crimes, and common defenses.
3 hours lecture.
Prerequisite(s): AJS 101, and either RDG 122 or exemption or concurrent enrollment in RDG 122. Recommended Preparation: ENG 100 or higher.

AJS 110 - Defensive Tactics (2)

The focus of attention in this course will be the use of basic techniques. Each technique demonstrated by the instructor will have a variety of uses. All techniques will be designed to incapacitate the object of focus as quickly and professionally as possible. The importance of documentation followed by court testimony techniques will be strictly emphasized throughout the entire course.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): Student must pass pre-admission physical test, and must be enrolled in a certified police academy or is a sworn peace officer.

AJS 113 - Terrorism and Counterterrorism (3)

An examination of the history of terrorism and the tactics and technologies used by terrorist groups. Examines the nature of the terrorist threat and countermeasures to combat terrorism.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: ENG 101. Cross-Listed as: IOS 113.

AJS 120 - Firearms Certification (2)

This course will prepare a student to use firearms safely. The course will be conducted in compliance with the curriculum set forth by the National Rifle Association Police Practical Course. It will cover areas such as semiautomatic handguns, shotguns, use of force, safe handling of guns, ballistics, malfunctions and overall safety.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): Student must be registered as part of a law enforcement or corrections program.

AJS 122 - The Police Patrol Function (3)

A study of the history, theory, duties and responsibilities of the patrol division; communications and development of

observational powers; care and use of protective weapons, patrol vehicles, and other equipment. Handling of emergency requests for assistance, vehicle stops, burglary, robbery, sex offenses, the mentally ill, and other kinds of situations.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: RDG 110 or exemption.

AJS 140 - AZ Detention Officers Basic Training Academy (6)

This course provides the basic training required to become certified as an Arizona detention officer.
5 hours lecture, 3 hours laboratory.
Prerequisite(s): Student must be employed by a recognized Arizona law enforcement agency.

AJS 192 - Special Topics in Administration of Justice (0.5-3)

Seminars designed for professional development and personal skill enhancement within the criminal justice career field with emphasis on the mastery and effective utilization of the topic under study.
Prerequisite(s): Varies by topic. Permission of instructor or Administration of Justice department.

AJS 204 - Elements of Intercultural Communication (3)

An introduction to communication across cultures. Emphasis is on the theory underlying intercultural communication and on the practical application of communication strategies and skills that lead to improved communication among people of diverse cultural backgrounds in a multicultural society and world.
3 hours lecture.
Prerequisite(s): ENG 101 or permission of instructor. Cross-Listed as: COM 204.

AJS 206 - Practical Applications in Asset Protection (3)

A study of advanced private security principles and practices with a focus on current events and their implications for the private security industry. Students identify the elements of an asset protection program and use case studies to review and apply strategies that mitigate risk and reduce asset vulnerabilities.
3 hours lecture.
Prerequisite(s): ENG 101 or permission of instructor. Recommended Preparation: Related security, law enforcement, or military experience.

AJS 212 - Juvenile Justice Procedures (3)

This course is a practical study of the history and development of juvenile justice theories, procedures and institutions.
3 hours lecture.
Prerequisite(s): ENG 101 and either RDG 122 or exemption.

AJS 215 - Penology (3)

A study of correctional management topics including sentencing, classification, "good time" credit, discipline, prisoners' rights and security/control measures; additional

emphases are placed on the guard's role, different management styles, and various correctional models.
3 hours lecture.
Prerequisite(s): AJS 101, ENG 101, and RDG 122 or exemption.

AJS 224 - Field Experience in Administration of Justice (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in administration of justice and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in administration of justice and permission of the cooperative education program coordinator. Recommended Preparation: Sophomore standing and faculty recommendation.

AJS 225 - Criminology (3)

This course is the study of deviance and society's role in defining behavior. It covers theories of criminality and the economic, social, and psychological impact of crime, victimization, and relationships between statistics and crime trends.
3 hours lecture.
Prerequisite(s): ENG 101 and either RDG 122 or exemption. Recommended Preparation: SOC 101 or PSY 101.

AJS 230 - The Police Function (3)

This course examines the study of theories, procedures and methods of operation of public police with emphasis on discretionary powers. It includes a review of career opportunities and current trends in law enforcement.
3 hours lecture.
Prerequisite(s): AJS 101, ENG 101, and either RDG 122 or exemption.

AJS 240 - The Correction Function (3)

This course examines the study of the history and development of correctional theories and institutions.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption.

AJS 260 - Procedural Criminal Law (3)

This course is an introduction to major court holdings, procedural requirements that stem from these holdings, and their effect on daily operations of the criminal justice system.
3 hours lecture.
Prerequisite(s): AJS 109, ENG 101, and either RDG 122 or exemption.

AJS 275 - Criminal Investigations (3)

A study of the theory of criminal investigation, crime scene procedures, case preparation, interviewing, and basic investigative techniques.
3 hours lecture.

Prerequisite(s): AJS 101, ENG 101, and either RDG 122 or exemption.

AMT - AVIATION MAINTENANCE TECHNOLOGY

AMT 210 - Unmanned Aerial Vehicle (UAV) Maintenance Technician (14)

A practical study of the maintenance of the Shadow short-range unmanned aerial vehicle (UAV). Includes operational safety; basic flight principles; inspection, maintenance, and servicing practices; UAV support equipment; and operational procedures.
8 hours lecture, 18 hours laboratory.
Prerequisite(s): Must be a sponsored employee of the Department of Defense (DOD) or of a DOD UAV contractor.

AMT 212 - Unmanned Aerial Vehicle (UAV) Mechanical Technician (13)

A focused study of the maintenance and repair of the Shadow unmanned aerial vehicle (UAV). Emphasis is on the power plant, fuel system, digital central processor assembly, flight control system, electrical power system, and system support equipment. Also covers system performance criteria, operational safety, inspection techniques, and diagnosis of the UAV.
8 hours lecture, 15 hours laboratory.
Prerequisite(s): Must be a sponsored employee of the Department of Defense (DOD) or of a DOD UAV contractor.

ANT - ANTHROPOLOGY

ANT 101 - The Origin and Antiquity of Humankind (3)

A survey of human biological origins, based upon paleontological and archaeological records, including recent developments in physical anthropology.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and ENG 100 or placement in ENG 101; or permission of instructor.

ANT 102 - Society and Culture (3)

A theoretical and practical introduction to cultural anthropology designed to provide insight into cultural forces that affect the human way of life, and to examine the Western history of interpreting the other. Contemporary issues are addressed. Included are the study of material culture, technology, religion and language, and social, political, and economic systems.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and ENG 100 or concurrent enrollment; or permission of instructor.

ANT 110 - Exploring Archaeology (3)

A non-technical introduction to archaeology tracing human cultural development from the earliest stone tools to the initial civilizations of the old and new worlds.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption; and ENG 100 or concurrent enrollment, or placement in ENG 101; or permission of instructor.

ANT 235 - Principles of Archaeology (3)

An introduction to the methods and theories used in archaeological research and interpretation with emphasis upon the practical aspects of archaeology.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and ENG 101.

ANT 285 - Prehistoric Cultures of North America (3)

A survey of prehistoric cultures in North America. Included are basic anthropological, archaeological and ethnological theory methods and concepts.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and ENG 101.

ANT 286 - Historic Indian Tribes of North America (3)

A survey of historical Native cultures in the ten North American environmental regions from contact through the 20th century. Contemporary economic, political and cultural issues are addressed. Included are basic anthropological, historical and ethnological theory, methods and concepts.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and ENG 101.

ANT 287 - Archaeology of the Southwest (3)

A study of the prehistoric people of the American Southwest from the late Pleistocene to the Spanish conquest. The course includes discussions of local archaeological culture emphasizing the process for cultural development within key regions.
3 hours lecture.
Prerequisite(s): None.

ANT 288 - Native Peoples of the Southwest (3)

A survey of southwestern Native American cultures from historic times to the present. Includes Athabaskan, Puebloan, and O'odham societies; adaptations to their respective environments; and cultural effects from historic events.
3 hours lecture.
Prerequisite(s): ENG 101.

ANT 299 - Individual Studies (1-4)

Completion of a research problem or an outlined course of study under the direction of a faculty member with contract for the individual study agreed upon by the student, the instructor, and the appropriate instructional manager prior to initiation of the study.
Prerequisite(s): Approval of appropriate instructional manager and instructor.

ART - ART

ART 103 - Design Fundamentals (3)

An introduction to the basic elements of design: line, shape, value, texture, and color. Students learn to arrange these elements according to the basic principles of organization (harmony and variety) in a two-dimensional or a three-dimensional framework. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): None.

ART 106 - Drawing I (3)

An introduction to representational drawing and pictorial design with local landscapes, still-life objects, and photographs as subject matter. Emphasis is on freehand drawing to improve hand-eye coordination. Students are also encouraged to use their imagination and memory in the development of artistic ideas. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): None.

ART 107 - Survey of World Art: Prehistoric - Gothic (3)

A survey presentation of the art and architecture of Western civilizations through the Gothic era, including prehistoric cultures of the world.
3 hours lecture.
Prerequisite(s): RDG 122, concurrent enrollment, or exemption; or permission of instructor.

ART 108 - Survey of World Art: Renaissance to the Twentieth Century (3)

A survey presentation of the art and architecture of Western civilizations from the Renaissance through the 20th century.
3 hours lecture.
Prerequisite(s): RDG 122, concurrent enrollment, or exemption; or permission of instructor.

ART 120 - Appreciation of Visual Arts (3)

A general overview of the visual arts, including philosophies, history, techniques, various media, and elements of design. Fulfills the art education requirement for teacher certification at the University of Arizona.
3 hours lecture.
Prerequisite(s): ENG 100, placement in ENG 101, or permission of instructor.

ART 130 - Painting for Personal Development I (2)

An introduction to the techniques of either oil or acrylic painting, with an emphasis on materials and composition. For those interested in art as a career, or for personal growth and self-expression.
1 hour lecture, 3 hours studio.
Prerequisite(s): None. Recommended Preparation: ART 103.

All prerequisite coursework must be completed with a grade of C or better.

ART 131 - Painting for Personal Development II (2)

A continued study of either oil or acrylic painting, with emphasis on developing unique, expressive pictorial skills. For those interested in art as a career, or for personal growth and self-expression.
1 hour lecture, 3 hours studio.
Prerequisite(s): ART 130 or permission of instructor.

ART 216 - Drawing II (3)

A continued study of representational drawing and pictorial design with local landscapes, still-life objects, and photographs as subject matter. Students use their creative initiative to develop individual projects, and they further improve their hand-eye coordination. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 106 or permission of instructor. Recommended Preparation: In addition, art majors must have ART 103 or permission of instructor.

ART 220 - Printmaking I (3)

An introductory course in printmaking as a visual language of expression. Various relief printmaking processes are addressed through the exploration of basic tools, equipment and techniques used in these processes. Emphasis is placed on the proper use of the tools and equipment and the development of skills pertaining to form and content in the creation of individual works of art.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 103, ART 106, or permission of instructor. Recommended Preparation: ART 216 and ART 245.

ART 225 - Printmaking II (3)

An intermediate course in printmaking as a visual language of expression. Various relief printmaking processes are addressed through the exploration of basic tools, equipment and techniques used in these processes. Emphasis is placed on the proper use of the tools and equipment and the continued development of skills pertaining to form and content in the creation of individual works of art.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 220 and either ART 103, ART 106, or permission of instructor. Recommended Preparation: ART 216 and ART 245.

ART 230 - Color and Design (3)

Continued investigations into the elements and principles of design including line, shape, value, texture, and color within a two-dimensional framework. A variety of media and techniques will be used, and an emphasis will be placed on color and design theory.
2 hours lecture, 4 hours studio.
Prerequisite(s): None.

ART 231 - Three-Dimensional Design and Sculpture (3)

An introduction to the basic elements of three-dimensional design: form, volume, space, mass, line, plane, proportion, balance, texture, structure, and site. Focus is on arranging these elements within a three-dimensional framework through techniques such as sculpting, carving, building, and assembling. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): None. Recommended Preparation: Art majors must have ART 103, ART 106, or permission of instructor.

ART 245 - Figure Drawing (3)

An introduction to figure drawing using live models. Designed to develop perceptual and pictorial skills, with an emphasis on the human figure in its environment. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 106 or permission of instructor.

ART 270 - Ceramics I (3)

An introduction to clay and glaze, and to their contribution to the development of contemporary ceramic art. Covers techniques involved in the processes of hand building and wheel throwing. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): None. Recommended Preparation: Art majors must have ART 103 or ART 106, and ART 231; or permission of instructor.

ART 273 - Ceramics IIA (3)

A continuation of ART 270 which includes intermediate and advanced hand-building techniques and fabrication methods. Students develop projects with formal elements, build skills in surface treatment and firing, and explore topics on the history of clay. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 270. Recommended Preparation: In addition, art majors must have ART 103, ART 106, and ART 231; or permission of instructor.

ART 274 - Ceramics IIB (3)

A continuation of ART 270 which includes intermediate and advanced wheel-throwing techniques and fabrication methods. Students develop projects with formal elements, build skills in surface treatment and firing, and explore topics on the history of clay. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 270. Recommended Preparation: In addition, art majors must have ART 103, ART 106, and ART 231; or permission of instructor.

ART 275A - Ceramics III (3)

All prerequisite coursework must be completed with a grade of C or better.

A continued study of ceramics with emphasis on developing unique, creative skills in hand building and fabrication or in wheel throwing and trimming. Students work on projects involving formal elements and various firing techniques, and they explore topics on the history of clay. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 273 or ART 274. Recommended Preparation: In addition, art majors must have ART 103, ART 106, and ART 231; or permission of instructor.

ART 276 - Soda and Salt Firing (1)

An introduction to the traditional advanced process of soda and salt firing of ceramics. Topics include kiln loading, the use of refractory materials, and the introduction of sodium. Students will experiment with various techniques and materials, including clay bodies, slips, engobes, oxides, and glazing. They will also explore historical and contemporary approaches to atmospheric sodium firings. For students interested in art for career opportunities or for personal growth and self-expression.
1 hour lecture, 1 hour studio.
Prerequisite(s): ART 270 and concurrent enrollment in ART 231, ART 275A, ART 290, or ART 292. Recommended Preparation: ART 275A.

ART 280 - Painting I (3)

An introduction to the techniques of either oil or acrylic painting, with emphasis on color theory and mixing. Also covers the preparation of various painting surfaces. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): None. Recommended Preparation: Art majors must have ART 103, ART 106, or permission of instructor.

ART 281 - Painting II (3)

A continued study of either oil or acrylic painting, with emphasis on developing unique, expressive pictorial skills. Also covers three-dimensional techniques. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 280 or permission of instructor. Recommended Preparation: In addition, art majors must have ART 103 and ART 106, or permission of instructor.

ART 285 - Beginning Photography (3)

An introduction to cameras and the darkroom. Covers techniques involved in black-and-white film development and printing as well as principles and elements of design and aesthetics in photography. Students must have access to an adjustable 35mm camera.
2 hours lecture, 4 hours studio.
Prerequisite(s): None.

ART 286 - Intermediate Photography (3)

An intermediate course in photography for those with a foundation in the basics of black-and-white film exposure, development, and printing. Emphasis is on photojournalism, art photography, portraiture, and landscapes, with additional attention to design and aesthetics. Students must have access to an adjustable 35mm camera.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 285 or permission of instructor.

ART 290 - Sculpture I (3)

An introduction to traditional and contemporary sculptural concepts, mediums, and techniques. Students are involved in the process of selecting raw materials and creating a sculpture. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): None. Recommended Preparation: Art majors must have ART 103 or ART 106, and ART 231; or permission of instructor.

ART 291 - Sculpture II (3)

A continuation of ART 290 which covers traditional and contemporary sculpture concepts, mediums, and techniques, with emphasis on basic designs. Students expand their ideas and develop their craftsmanship on sculptural forms. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 290. Recommended Preparation: In addition, art majors must have ART 103, ART 106, and ART 231; or permission of instructor.

ART 292 - Advanced Topics in Art (0.5-4)

A rotating forum/seminar/workshop emphasizing regional art forms and the development and practical application of artistic skills using a variety of media. Topics will vary in accordance with changes in student needs and interests. Cochise College elective credit only unless otherwise designated in degree programs. For students interested in art for career opportunities as well as personal growth and self-expression.
Prerequisite(s): None.

ART 293 - Sculpture III (3)

A continuation of ART 291 which covers traditional and contemporary sculpture concepts, mediums, and techniques, with an emphasis on intermediate designs. Students continue to expand their ideas and develop their craftsmanship on sculptural forms. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 291. Recommended Preparation: In addition, art majors must have ART 103, ART 106, and ART 231; or permission of instructor.

ART 294 - Sculpture IV (3)

All prerequisite coursework must be completed with a grade of C or better.

A continuation of ART 293 which covers traditional and contemporary sculpture concepts, mediums, and techniques, with an emphasis on advanced designs, aesthetic forms, and fabrication methods. Students receive individual direction while working on projects involving formal elements and advanced techniques, and they explore the process involved in creating a sculptural form from raw material. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 293. Recommended Preparation: In addition, art majors must have ART 103, ART 106, and ART 231; or permission of instructor.

ART 295 - Watercolor Painting I (3)

An introduction to watercolor painting which explores basic materials and techniques, with an emphasis on color theory and mixing. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): None. Recommended Preparation: Art majors must have ART 103, ART 106, or permission of instructor.

ART 296 - Watercolor Painting II (3)

A continued study of watercolor painting, with emphasis on developing unique, expressive pictorial skills. For those interested in art as a career, or for personal growth and self-expression.
2 hours lecture, 4 hours studio.
Prerequisite(s): ART 295 or permission of instructor. Recommended Preparation: In addition, art majors must have ART 103 and ART 106, or permission of instructor.

ART 297 - Portfolio Review (1)

A beginning through advanced studio course dealing with the process and purpose of artistic portfolios. This course will cover technical and aesthetic aspects of various artistic portfolios and their development and provide students with the opportunity for a critical/professional analysis and peer review of their portfolios.
0.5 hour lecture, 2 hours studio.
Prerequisite(s): None. Recommended Preparation: Three semesters of art coursework, including 200-level courses in chosen discipline, or permission of instructor.

ASL - AMERICAN SIGN LANGUAGE

ASL 101 - American Sign Language I (4)

An introduction to American Sign Language (ASL) which includes the development of sign vocabulary, fingerspelling, and numbers, all at the beginner skill level. Also presents a brief history of ASL and an overview of Deaf culture.
4 hours lecture, 1 hour laboratory.
Prerequisite(s): None.

ASL 102 - American Sign Language II (4)

A continuation of ASL 101 which further develops sign vocabulary, fingerspelling, and numbers, all at the advanced-beginner skill level. Also examines the Deaf community and Deaf culture in a hearing society.
4 hours lecture, 1 hour laboratory.
Prerequisite(s): ASL 101 or permission of instructor.

ASL 201 - American Sign Language III (4)

A continuation of ASL 102 which integrates receptive and expressive skills and presents grammar and syntax at the intermediate skill level. Covers idioms and introduces ASL linguistics and cross-cultural communication. Also examines complex issues related to the Deaf community and Deaf culture in a hearing society.
4 hours lecture, 1 hour laboratory.
Prerequisite(s): ASL 102 or permission of instructor.

ASL 202 - American Sign Language IV (4)

A continuation of ASL 201 which expands sign vocabulary and sharpens skills in fingerspelling, numbers, grammar, and syntax at the advanced-intermediate skill level. Offers further instruction in ASL linguistics and conversational techniques in a cross-cultural framework, and introduces passage translation. Also examines more complex issues related to the Deaf community and Deaf culture in a hearing society.
4 hours lecture, 1 hour laboratory.
Prerequisite(s): ASL 201 or permission of instructor.

AST - ASTRONOMY

AST 180 - Introduction to Astronomy (4)

A survey of astronomy, including the history of astronomy, celestial motion, terrestrial evolution, the solar system, structure and evolution of the stars, the Milky Way, galaxies and cosmology. Labs include nighttime observing sessions. Field trips to planetariums and observations will be included.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 123.

AUT - AUTOMOTIVE TECHNOLOGY

AUT 101 - Introduction to Automotive Technology (3)

A study of basic automotive systems, and of the diagnosis and repair of problems common to them. Students acquire skills in the care and maintenance of engine, suspension, brake, electrical, body control, and drivetrain systems.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

AUT 102 - Automotive Electrical Fundamentals (3)

A study of automotive electrical and electronic systems, and of the diagnosis and repair of problems common to them. Students examine Ohm's Law and apply its principles in solving electrical system failures, and they use wiring and current-flow diagrams to diagnose and repair electrical and

electronic systems in preparation for the Automotive Service Excellence (ASE) Certification test on electrical and electronic systems.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

AUT 103 - Internal Combustion Engines (3)

A study of the theory of internal combustion engines, and of the diagnosis and repair of problems common to them. Students dismantle and reassemble engines in preparation for the Automotive Service Excellence (ASE) certification test on engine repair.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): AUT 101 and AUT 102.

AUT 104 - Automotive Brake Systems (3)

A study of the theory of automotive brake systems, and of the diagnosis and repair of problems common to them. Students repair and test various types of brake systems in preparation for the Automotive Service Excellence (ASE) Certification test on brake systems.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): AUT 101 and AUT 102.

AUT 105 - Automotive Suspension and Steering Systems (3)

A study of the theory of automotive suspension and steering systems, and of the diagnosis and repair of problems common to them. Students repair and test various suspension and steering systems in preparation for the Automotive Service Excellence (ASE) certification test on suspension and steering.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): AUT 101 and AUT 102.

AUT 106 - Automotive Manual Drive Systems (3)

A study of the theory of automotive manual drive systems, and of the diagnosis and repair of problems common to them. Students dismantle and reassemble different manual drive systems in preparation for the Automotive Service Excellence (ASE) certification test on manual drivetrain systems.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): AUT 101 and AUT 102.

AUT 107 - Automotive Service Consultant (3)

This course will provide a study of the responsibilities of an automotive service consultant. It is designed to provide an understanding of how to maximize customer satisfaction and service facility profitability. Course content follows the tasks identified by Automotive Service Excellence (ASE) for Automotive Service Consultant testing.
3 hours lecture.
Prerequisite(s): None.

AUT 108 - Automotive Parts Specialist (3)

This course will provide a study of the tasks performed by an automotive parts specialist in overseeing inventory

responsibilities and in managing the flow of parts and accessories in and out of an automotive shop.
3 hours lecture.
Prerequisite(s): None.

AUT 110 - Basic Auto Body Repair (3)

This course will provide a basic study of automotive collision repair procedures. The course is designed to provide students with the basic knowledge necessary to perform minor auto body repair and preparation for painting.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): None.

AUT 111 - Automotive Paint and Refinish (3)

A continuation of Basic Auto Body Repair that focuses on the necessary skills used to paint and refinish an automobile to commercially acceptable standards.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): AUT 110.

AUT 201 - Automotive Electrical Systems and Equipment (3)

A study of the theory of automotive electrical systems and equipment, and of the diagnosis and repair of problems common to them, in preparation for the Automotive Service Excellence (ASE) certification test on electrical systems.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): AUT 101 and AUT 102.

AUT 204 - Automatic Transmission/Transaxle Diagnostics and Rebuilding (3)

A study of the theory of automatic transmissions and transaxles, and of the diagnosis and repair of problems common to them. Students dismantle and rebuild transmissions in preparation for the Automotive Service Excellence (ASE) certification test on automatic transmissions.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): AUT 101 and AUT 102.

AUT 205 - Automobile Heating, Ventilation, and Air Conditioning (3)

A study of heating, ventilation, and air conditioning systems, and of the diagnosis and repair of problems common to them. Students acquire the skills necessary to diagnose, test, and repair these systems in preparation for the Automotive Service Excellence (ASE) Certification test on heating, ventilation, and air conditioning.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): AUT 101 and AUT 102.

AUT 206 - Engine Performance (3)

A study of the theory of the components involved in engine performance, and of the diagnosis and repair of problems common to them, in preparation for the Automotive Service Excellence (ASE) certification test on engine performance.
2 hours lecture, 3 hours laboratory.

All prerequisite coursework must be completed with a grade of C or better.

Prerequisite(s): AUT 103.

AUT 207 - Automotive Service Management (3)

Designed for those interested in a career in automotive service, this course provides a study of the responsibilities of an automotive service manager/director.
3 hours lecture.
Prerequisite(s): AUT 107 and AUT 108, or permission of instructor.

AUT 210 - ASE Test Preparation (3)

This course reviews the skills and knowledge required to pass Automotive Service Excellence (ASE) certification tests A1 thru A8. This course is for experienced technicians as well as for students who have completed the required automotive courses.
3 hours lecture.
Prerequisite(s): AUT 103, AUT 104, AUT 105, AUT 106, AUT 201, AUT 204, and AUT 205; or permission of instructor.

AUT 224 - Field Experience in Automotive Technology (1-6)

A supervised cooperative education work experience involving the combined efforts of educators and employers to accomplish career skills objectives in the automotive field. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): Prior approval of the cooperative education program coordinator. Recommended Preparation: One semester of Cochise College AUT coursework and declared major in automotive technology.

AVT - AVIONICS TECHNOLOGY

AVT 104 - Introduction to Electronics (7)

An introduction to direct current (DC) and alternating current (AC) circuits, with emphasis on Ohm's Law, Kirchoff's Law, and network theorems used in the analysis of basic electronic circuits. Also teaches the algebra and trigonometry used in electronics, including real number systems, linear equations, exponents, and graphing.
6 hours lecture, 2 hours laboratory.
Prerequisite(s): One year of high school algebra.

AVT 107 - Avionics Fundamentals to Include Unmanned Aerial Systems (4)

An introduction to avionics fundamentals with emphasis on the navigation and communication systems required to support flight operations including those necessary for unmanned aerial systems.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): AVT 104 or concurrent enrollment.

AVT 112 - Electronic Devices and Circuits I (8)

A study of semiconductor devices at the operational level. Emphasis is on the analysis of diodes, power supplies, filters,

transistors, frequency responses, feedback, and field effect transistor amplifiers. Also covers DC biasing, AC signal analysis, load lines, hybrid parameters, and multi-stage systems.
6 hours lecture, 4 hours laboratory.
Prerequisite(s): AVT 104.

AVT 115 - Digital and Microprocessor Fundamentals (8)

A study of digital concepts, logic elements, control applications, programming, interfacing, basic networking, and networking to data links. Emphasis is on combinational and sequential logic, and on the memory and support circuits of various components of microcomputers.
7 hours lecture, 2 hours laboratory.
Prerequisite(s): AVT 104.

AVT 202 - Electronic Communications to Include Unmanned Aerial Systems (8)

A study of communications and circuits, including those used in unmanned aerial systems. Topics include amplitude modulation and frequency modulation techniques as well as microwave technology and data communications. Covers radio transmitters, receivers, antennas, filters, coupling, frequency synthesizers, phased locked loops, and fiber optics. Also covers high-tech communication components, circuits, and equipment.
6 hours lecture, 4 hours laboratory.
Prerequisite(s): AVT 112.

AVT 205 - Electronic Devices and Circuits II (4)

A continuation of the study of semiconductor devices including metal oxide semiconductor field effect transistors (MOSFETs), operational amplifiers, thyristors, optical electronic devices, unijunction transistors, and other electronic devices. Emphasis is on the analysis and application of practical amplifier circuits, negative feedback, oscillators, solid-state switching circuits, and silicon-controlled rectifiers.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): AVT 112.

AVT 208 - FCC/FAA Regulations (3)

An in-depth preparation for the Federal Communications Commission examination, and an introduction to the Federal Aviation Administration and its rules and regulations.
3 hours lecture.
Prerequisite(s): AVT 112 and AVT 115.

AVT 211 - Unmanned Aerial Vehicle Avionics (9)

A study of unmanned aerial vehicle avionics focusing on development of the knowledge and skills necessary to safely operate, inspect, troubleshoot, and repair Hunter Unmanned Aerial Vehicle (UAV) avionics systems and subsystems down to the lowest replaceable unit (LRU). Emphasis on shelter theory of operation, performance criteria, data link operation, electrical power systems, emergency recovery systems and ground support equipment.

All prerequisite coursework must be completed with a grade of C or better.

4 hours lecture, 13 hours laboratory.
Prerequisite(s): AMT 210 or concurrent enrollment, and sponsored employment with the Department of Defense or with a DOD UAV contractor.

AVT 218 - Unmanned Aerial Systems and Ground Control Stations (4)

A study of unmanned aerial systems and their capabilities, of ground control stations, and of electrical power and flight computer sub-systems. Topics include automated takeoff and landing systems, navigation sub-systems, data link sub-systems and data processing equipment, tactical communication sub-systems, and ground control workstations.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): AVT 107, AVT 220, and AVT 228.

AVT 220 - Navigation Systems to Include Unmanned Aerial Systems (4)

An in-depth study of the aerial systems navigation, communications, and avionic sub-systems interfacing--to include unmanned aerial systems and ground station systems--required to support flight operations for a variety of aircraft.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): AVT 107.

AVT 224 - Autopilot and Control Systems to Include Unmanned Aerial Systems (3)

An in-depth analysis of the principles and operations of autopilot and control systems including those used in unmanned aerial systems.
3 hours lecture.
Prerequisite(s): AVT 107.

AVT 228 - Aircraft Radar Systems to Include Unmanned Aerial Systems (4)

A study of waveforms, nonlinear waveshaping, and multi-vibrators. Includes an in-depth study of avionics with emphasis on the radar and pulsed radar systems required to support in-flight operations for a variety of aircraft including those in unmanned aerial systems.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): AVT 107.

BCT - BUILDING CONSTRUCTION TECHNOLOGY

BCT 100 - Technical Mathematics I (3)

A review of arithmetic and the study of fundamentals of algebra and geometry applied to practical problems of the drafting room, machine shop, and engineering.
3 hours lecture.
Prerequisite(s): None.

BCT 102 - Carpentry Fundamentals (4)

An introduction to fundamental carpentry techniques. Students learn and apply these techniques to develop basic skills comparable to those acquired in a one-year carpentry apprenticeship. Focus is on shop safety, hand and power tools, floor systems, wall, ceiling, and roof framing, building materials, fasteners and adhesives, plans and elevations, concrete work, windows and doors, and basic stair layout.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

BCT 103 - International Residential Building Codes (3)

This course is an introduction to the current international residential building codes for one and two family dwellings. The codes' relationship to local code enforcement and blueprint reading will be covered. Inspectors, contractors, designers, draftsmen, and anyone associated with the building industry will benefit from this course.
3 hours lecture.
Prerequisite(s): None.

BCT 104 - Electric I (4)

An introduction to fundamental electrical theory and techniques. Students learn and apply these techniques to develop basic skills comparable to those acquired in a one-year electrical apprenticeship. Focus is on electrical safety, circuits and theory, and on the National Electrical Code, device boxes, conduit, raceways and fittings, conductors and cables, electrical drawings, residential services, and test equipment.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

BCT 105 - Electrical Theory (3)

An introduction to the fundamentals of electricity. Topics include Ohm's law, series and parallel circuits, the power factor, and harmonics as well as electrical meters, motors, generators, and transformers.
3 hours lecture.
Prerequisite(s): None.

BCT 106 - National Electrical Code I (3)

A study of the National Electrical Code, Articles 90 through 424, which covers general wiring requirements. Designed for those already working in the electrical field--electricians, inspectors, and maintenance workers--and those seeking employment in the construction trades.
3 hours lecture.
Prerequisite(s): None.

BCT 107 - Home Maintenance (3)

A do-it-yourself home maintenance course covering use of common hand and power tools for routine electrical, carpentry, and plumbing repairs.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): None.

All prerequisite coursework must be completed with a grade of C or better.

BCT 108 - Basics in Construction (2)

Students will receive a working knowledge of shop safety and the use of basic hand and power tools. They will learn the soft skills necessary to be successful in the construction industry. Students successfully completing this course will receive the Core Curriculum Certificate, which is required before any other certification in the National Center for Construction Education and Research (NCCER) curriculum.
2 hours lecture.
Prerequisite(s): None.

BCT 109 - Construction Safety (3)

An introduction to the Occupational Safety and Health Administration's workplace and jobsite safety policies and procedures. Includes a study of safety practices, preventive measures, construction hazards, personal protective devices and equipment, and hazardous materials handling.
3 hours lecture.
Prerequisite(s): None.

BCT 110 - Cabinetmaking (3)

This course will provide the students with a basic working knowledge of cabinetmaking. Students will acquire competency in constructing and installing cabinets and countertops.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

BCT 111 - Plumbing I (4)

An introduction to fundamental plumbing techniques. Students learn and apply these techniques to develop basic skills comparable to those acquired in a one-year plumbing apprenticeship. Focus is on plumbing safety, tools, math skills, and drawings; plastic, copper, and carbon steel pipes and fittings; tubing, fixtures, and faucets; drain, waste, and vent systems; and water distribution systems.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

BCT 112 - Introduction to the Utility Industry (3)

An introduction to the utility industry and careers such as electric utility line technician, gas industry technician, telecommunications technician, and utility supervisor. Topics include utility infrastructures, land and gas surveying techniques, power delivery, basic safety principles, systems troubleshooting, and regulatory issues.
3 hours lecture.
Prerequisite(s): None.

BCT 122 - HVAC I (3)

An introductory course in the refrigeration process that covers types of refrigerants, tools and equipment, and refrigerant management. Emphasis is on the recovery, recycling, and reclamation of refrigerants.
2 hours lecture, 3 hours laboratory.

Prerequisite(s): None.

BCT 127 - Blueprint Reading and Estimating (3)

A course to provide the student with proficiency in reading and understanding blueprints and their use in locating plumbing, electrical and waste disposal systems. The student will learn the symbols and abbreviations used by architects and draftsmen, how to apply them to construction applications, and how to estimate material from architectural specifications.
3 hours lecture.
Prerequisite(s): None.

BCT 130 - Introduction to Green Building (3)

An introduction to the fundamentals of green or sustainable building practices. Topics include energy use and efficiency, renewable energy technologies, water conservation, and basic building sciences. Also examined are the history of the green building industry, building retrofitting, rating and certification systems, sustainable materials, and careers within the industry.
3 hours lecture.
Prerequisite(s): None.

BCT 201 - Carpentry Framing and Finishing (4)

A study of carpentry framing and finishing techniques. Students learn and apply these techniques to develop advanced skills comparable to those acquired in a two-year carpentry apprenticeship. Focus is on roofing, thermal and moisture protection, exterior finishing, steel framing, drywall installation and finishing, doors and door hardware, suspended ceilings, trim work, and cabinet installation and fabrication.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): BCT 102 or permission of instructor.

BCT 202 - Carpentry Forms (4)

A study of advanced carpentry techniques as they relate to concrete-form framing, placement, pouring, and finishing. Students develop skills operating circular and reciprocating saws, drills, impact wrenches, hand power planers, pneumatic nail guns, and various hand tools of the trade; and they develop proficiency comparable to that of a third-year carpentry apprentice.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): BCT 102 or permission of instructor.

BCT 204 - Electric II (4)

An introduction to advanced electrical theory and techniques. Students learn and apply these techniques to develop advanced skills comparable to those acquired in a two-year electrical apprenticeship. Focus is on alternating current, motors, electric lighting, conduit bending, pull and junction boxes, conductor installations, terminations and splices, grounding and bonding, circuit breakers and fuses, and control systems.
3 hours lecture, 3 hours laboratory.

All prerequisite coursework must be completed with a grade of C or better.

Prerequisite(s): BCT 104.

BCT 210 - Cabinetmaking II (3)

This course provides students with a better understanding of, and increased skills in, the design, style, and construction of cabinets and countertops.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): BCT 110.

BCT 211 - Cabinetmaking III (3)

This course prepares students for employment in the areas of finish carpentry, cabinetmaking, cabinet installation, and countertop manufacturing and installation.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): BCT 110 and BCT 210, or permission of instructor.

BCT 220 - Grounding and Bonding (3)

A study of wiring methods and of the theories of grounding and bonding as defined in Article 250 of the National Electrical Code. Covers the difference between grounding and bonding. Also covers how the provisions of this article apply to various devices and equipment to include swimming pools.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: BCT 104, BCT 105, BCT 106, and BCT 204.

BCT 222 - HVAC II (3)

A continuation of the fundamentals of refrigeration that covers electrical troubleshooting, and the functions of motors, controls, and other components of refrigeration systems--evaporators, condensers, compressors, and expansion devices.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): BCT 122.

BCT 223 - HVAC III (4)

An introduction to the various types of air conditioning systems that covers superheating, subcooling, pressures, and temperatures. Emphasis is on troubleshooting and repair.
4 hours lecture.
Prerequisite(s): BCT 222.

BCT 224 - Field Experience in Building Construction Technology (1-6)

A supervised cooperative education work experience involving the combined efforts of educators and employers to accomplish career skills objectives in the building/construction field. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): Prior approval of the cooperative education program coordinator. Recommended Preparation: One semester of Cochise College BCT coursework and declared major in building construction technology.

BCT 224 - Field Experience in Building Construction Technology (3)

A supervised cooperative education work experience involving the combined efforts of educators and employers to accomplish career skills objectives in the building construction field. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): Prior approval of the cooperative education program coordinator. Recommended Preparation: One semester of Cochise College BCT coursework and declared major in building construction technology.

BCT 225 - HVAC IV (4)

An advanced course in heating, ventilating, and air conditioning that covers the installation, operation, and repair of heat pumps and other modern heating equipment.
2 hours lecture, 4 hours laboratory.
Prerequisite(s): BCT 223.

BIO - BIOLOGICAL SCIENCES

BIO 100 - General Biology (for non-majors) (4)

A laboratory science course for non-majors that surveys the concepts of introductory biology. Topics include scientific inquiry, cell biology, metabolism, cell division, genetics, evolution, ecology, and a survey of life on Earth.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): RDG 122 or exemption.

BIO 105 - Environmental Biology (4)

Fundamentals of ecology and their relevance to human impact on natural ecosystems. An introductory course in environmental biology with emphasis on the major themes of ecology and environmental biology. The student will receive instruction covering evaluation of scientific data, resource management, principles of ecology, human ecology, ethics and politics of the environment movement. Open to non-biology majors.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None. Recommended Preparation: MAT 081 and ENG 101.

BIO 156 - Introductory Biology for Allied Health (4)

An introductory course for allied health majors which concentrates on human biology. Covers the fundamental concepts of chemistry and biology including cell biology, metabolism, microbiology, genetics, evolution, and histology.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): RDG 122 or exemption. Recommended Preparation: MAT 081 or higher.

BIO 160 - Introduction to Human Anatomy and Physiology (4)

All prerequisite coursework must be completed with a grade of C or better.

An examination of the structure and dynamics of the human body based on the chemical, physical, cellular, and tissue levels of organization. Includes the major structures and functions of the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. For students in programs that require a one-semester anatomy and physiology course, or for students fulfilling a one-semester laboratory science requirement.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): RDG 122 or exemption. Recommended Preparation: ENG 101 and MAT 081.

BIO 181 - General Biology I (for majors) (4)

A study of the structure and function of living things at the molecular, cellular, and organismic levels of organization. Topics include cell structure, metabolism, reproduction, genetics, and evolution.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): RDG 122 or exemption. Recommended Preparation: CHM 130, CHM 138, or one year of high school chemistry; ENG 100; and some knowledge of college algebra and/or trigonometry.

BIO 182 - General Biology II (4)

Additional principles of structure and function of living things at molecular, cellular and organismic and higher levels of organization.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): BIO 181. Recommended Preparation: General Chemistry.

BIO 192 - Special Topics and Applications in Biology (0.25-4)

A rotating forum/seminar/course or supplement to an existing biology course emphasizing biology related topics. The title and credit hours for this course will vary each term depending on the topic.
Prerequisite(s): None. Recommended Preparation: Permission of the instructor is strongly recommended.

BIO 201 - Human Anatomy and Physiology I (4)

An integrated study of the physical, structural, and functional features of tissues, and of the integumentary, skeletal, muscular, and nervous systems.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): BIO 156, BIO 181, or passing score on the biology placement exam. Recommended Preparation: CHM 138.

BIO 202 - Human Anatomy and Physiology II (4)

An integrated study of the physical, structural, and functional features of the endocrine, cardiovascular, respiratory, lymphatic, urinary, digestive, and reproductive systems.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): BIO 201.

BIO 205 - Microbiology (4)

A study of the structure and characteristics of the major groups of microorganisms and their importance to humans. Emphasis is on best methods for the control and treatment of microbial infection and disease.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): BIO 156, BIO 181, or passing score on the biology placement exam. Recommended Preparation: ENG 101 and MAT 081.

BIO 226 - Ecology (4)

An introduction to ecological concepts and methods in biology including: ecological niche, species diversity, population biology, ecosystems, life history strategies, environmental factors, environmental cycles, animal behavior and evolution, and their functions in the environment.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 081, ENG 101, and either BIO 100, BIO 105, BIO 160, BIO 181, or BIO 201.

BUS - Business Administration

BUS 104 - Business Math (3)

This course examines the fundamentals of business mathematics and the use of the number language to communicate in the business world.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: Knowledge of basic mathematics.

BUS 106 - Administrative Assistant Skills I (4)

An introduction to keyboarding skills as they apply to letters, memos, and reports, with an expected outcome of 35 words per minute for five minutes. Emphasis is on formatting and editing.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): CIS 116. Recommended Preparation: Keyboarding skills of 30 WPM.

BUS 109 - Survey of Business (3)

An examination of the fundamental characteristics and functions of modern business, with emphasis on career opportunities.
3 hours lecture.
Prerequisite(s): None.

BUS 123 - Human Resource Management (3)

A study of human resource management policies and techniques pertaining to the recruitment, selection, development, compensation, evaluation, retention, and promotion of personnel within an organization.
3 hours lecture.
Prerequisite(s): None.

BUS 127 - Leadership and Supervision (3)

All prerequisite coursework must be completed with a grade of C or better.

An in-depth study of the supervision and leadership functions of management, with an emphasis on case studies.
3 hours lecture.
Prerequisite(s): None.

BUS 143 - Principles of Management (3)

A study of managerial principles emphasizing effective business decisions for planning, organizing, leading, and motivating, and for controlling variables in today's changing global business environment. Also covers issues of ethics, social responsibility, diversity, and ethnicity.
3 hours lecture.
Prerequisite(s): None.

BUS 145 - Principles of Marketing (3)

A study of marketing principles involved in the distribution, from producer to consumer, of goods and services. Topics include wholesaling, retailing, direct selling, risk taking, and warehousing.
3 hours lecture.
Prerequisite(s): None.

BUS 146 - Introduction to Accounting (3)

The basic accounting cycle for service and merchandising firms: analyzing business transactions, journalizing and posting entries, developing financial statements, administering end-of-accounting-period activities, controlling cash, and preparing payroll.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): None. Recommended Preparation: BUS 104 or MAT 123.

BUS 160 - Essential Workplace Success Skills (3)

Designed to teach the skills needed for successful employment. Topics include job seeking and communication skills, professional dress and self-esteem, and decision-making and stress-coping strategies.
3 hours lecture.
Prerequisite(s): None.

BUS 167 - Business Communications (3)

A study of internal and external business communications such as letters, memos, proposals, and reports. Emphasis is on writing fundamentals--usage, syntax, and organization--and on listening and speaking skills. Also deals with the technology used to conduct research and create documents.
3 hours lecture.
Prerequisite(s): CIS 116 and placement in ENG 101.

BUS 170 - Understanding and Managing Conflict (3)

A study of the causes of conflict and its personal and interpersonal effects. Includes an analysis of the impact of both healthy and unhealthy conflict on organizational and personal goal achievement. Provides conceptual and practical tools to effectively minimize, manage, and resolve conflict resulting from social interaction and interpersonal communication.
3 hours lecture.
Prerequisite(s): None.

BUS 172 - Quantitative Methods in Business (3)

An introduction to the application of quantitative methods and modeling that support optimal business decision making.
3 hours lecture.
Prerequisite(s): MAT 151 or permission of instructor.
Recommended Preparation: Knowledge of Excel spreadsheets or completion of CIS 181.

BUS 183 - Starting a Business (3)

An investigation and evaluation of business opportunities with emphasis on acquiring skills and knowledge to establish a business. Covers practical problems in marketing, management, organization, and financial analysis and control.
3 hours lecture.
Prerequisite(s): None.

BUS 193 - Current Office Applications (1)

One-unit modules designed for personal/professional improvement. Principles and practice of various office applications; each session covering mastery of a particular application, with emphasis on the effective use of the application under study.
1 hour lecture.
BUS A193 Excel I
BUS B193 Excel II
BUS C193 Excel III
Prerequisite(s): None.

BUS A193 - Excel I (1)

One-unit modules designed for personal/professional improvement. Principles and practice of various office applications; each session covering mastery of a particular application, with emphasis on the effective use of the application under study.
1 hour lecture.
BUS A193 Excel I
BUS B193 Excel II
BUS C193 Excel III
Prerequisite(s): None.

BUS B193 - Excel II (1)

One-unit modules designed for personal/professional improvement. Principles and practice of various office applications; each session covering mastery of a particular application, with emphasis on the effective use of the application under study.
1 hour lecture.
BUS A193 Excel I
BUS B193 Excel II
BUS C193 Excel III
Prerequisite(s): None.

All prerequisite coursework must be completed with a grade of C or better.

BUS C193 - Excel III (1)

One-unit modules designed for personal/professional improvement. Principles and practice of various office applications; each session covering mastery of a particular application, with emphasis on the effective use of the application under study.
1 hour lecture.
BUS A193 Excel I
BUS B193 Excel II
BUS C193 Excel III
Prerequisite(s): None.

BUS 201 - Financial Accounting (3)

An introductory course in gathering, recording, and using the financial data of a business. Focus is on the accounting cycle, debits and credits, classification of accounts, recording of transactions, and preparation of financial statements for single proprietorships, partnerships and corporations.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): BUS 104, MAT 123, or placement in MAT 151. Recommended Preparation: Knowledge of Excel spreadsheets or completion of CIS 181.

BUS 202 - Managerial Accounting (3)

An introductory course in accounting concepts, methods, and techniques used by managers to support financial and operational decision making within an organization.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): BUS 201 and CIS 181.

BUS 206 - Administrative Assistant Skills II (4)

A continuation of keyboarding skills used in preparing business letters, printed forms, manuscripts, and tables, with an expected outcome of 40 words per minute for five minutes. Emphasis is on increased proficiency.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): BUS 106 or permission of instructor.

BUS 207 - Office Administration (3)

An analysis of the functions of office departments which is designed for prospective office supervisors, training directors, administrative assistants, and executive secretaries. Topics include office organization, administration, and management; human relations; and information management systems.
3 hours lecture.
Prerequisite(s): BUS 167 and CIS 116, or permission of instructor.

BUS 209 - Business Speech Communications (3)

A study of the principles of business speech communications including topic selection, research, organization, audience, and delivery. Also covers listening skills, verbal and nonverbal language, one-on-one communication, and effective interview techniques. Students prepare persuasive speeches for small and large groups.

3 hours lecture.
Prerequisite(s): None.

BUS 210 - Automated Office Procedures (3)

A study of computer applications, information processing, project development, and workflow procedures and standards. Also covers a variety of data entry applications for spreadsheets and databases, and for accounting, banking, and point-of-sale entries.
3 hours lecture.
Prerequisite(s): CIS 116 and CIS 181, or permission of instructor.

BUS 211 - Automated Office Practice (3)

A study of best practices for the modern office as they relate to business communications, information systems, meetings, and travel plans. Also covers administrative duties and responsibilities as well as resumes and interviews.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): BUS 210 or BUS 216.

BUS 213 - Word Processing (3)

An application of word processing skills using current systems and equipment, with emphasis on editing and formatting techniques.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): CIS 116. Recommended Preparation: Keyboarding skills of 25 WPM.

BUS 216 - Administrative Assistant Skills III (4)

A further development of computer skills including word processing, spreadsheets, presentations, and the integration of applications. Students develop an electronic employment portfolio.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): CIS 116 and CIS 181, or permission of instructor.

BUS 217 - Administrative Assistant Skills IV (4)

An integration of word processing, spreadsheet, database, and presentation applications. Students in this capstone course complete an electronic employment portfolio.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): BUS 216 or permission of instructor.

BUS 219 - Business Statistics (3)

Business applications of descriptive and inferential statistics, measurement of relationships, and statistical process management.
3 hours lecture.
Prerequisite(s): MAT 142 or MAT 151. Recommended Preparation: Knowledge of Excel spreadsheets or completion of CIS 181.

BUS 224 - Field Experience in Business Administration (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in business administration and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in business and permission of the cooperative education program coordinator.
Recommended Preparation: Sophomore standing and faculty recommendation.

BUS 227 - Field Experience in Legal Procedures (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in law or public administration and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major at Cochise College and permission of the cooperative education program coordinator.
Recommended Preparation: Sophomore standing and faculty recommendation.

BUS 228 - Financial Planning (3)

An introduction to the principles and techniques of personal financial planning, including preparation of personal financial statements; budgeting; goal setting; investing; determining insurance needs; and tax, retirement, and estate planning. A strong emphasis is placed on the process of drawing up a personal financial plan.
3 hours lecture.
Prerequisite(s): BUS 104, BUS 146, or BUS 201.

BUS 233 - The Legal Environment of Business (3)

An examination of the legal framework that governs the rules of conduct affecting policy making among businesses. Topics include laws, torts, government regulations, business ethics, and corporate responsibility in today's business environment.
3 hours lecture.
Prerequisite(s): None.

BUS 245 - Seminar: Trends and Practices in Business (3)

A capstone business management course applying problem-solving and decision-making techniques to practical business situations. Students produce a major project or presentation using current business theories and practices.
3 hours lecture.
Prerequisite(s): BUS 146; BUS 160; BUS 167 or concurrent enrollment; ECN 201 or ECN 202; ENG 101; and BUS 104 or MAT 123 or higher. Recommended Preparation: Sophomore standing.

BUS 283 - Small Business Management (3)

Analysis of the practical problems of organizing and managing a successful small business. Practical problems in marketing, research, financial analysis and control, budgeting,

management, and organization for small businesses are emphasized with the aid of the microcomputer.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): BUS 183.

BUS 285 - Electronic Commerce (3)

Examines the components and practices of electronic commerce. Addresses advertising and marketing on the World Wide Web. Examines security and payment systems to support online transactions. Introduces writing web pages for business.
3 hours lecture.
Prerequisite(s): CIS 116, CIS 120, or CIS 185.

CED - COOPERATIVE EDUCATION

CED 224 - Field Experience in Cooperative Education (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in an area of study at Cochise College. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major at Cochise College and permission of the cooperative education program coordinator.
Recommended Preparation: Sophomore standing and faculty recommendation.

CED 224 - Field Experience in Cooperative Education (2)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in an area of study at Cochise College. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major at Cochise College and permission of the cooperative education program coordinator.
Recommended Preparation: Sophomore standing and faculty recommendation.

CHM - CHEMISTRY

CHM 128 - Forensic Chemistry (4)

A one-semester course introducing the fundamentals of chemistry with emphasis placed on principles important to understanding forensic science. Topics include an introduction to the interdisciplinary nature of forensic science, the identification, evaluation and preservation of physical and chemical evidence found at crime scenes, and methods for analyzing such evidence. Additional topics include an introduction to nuclear chemistry, the structure and analysis of drugs, and DNA structure and its importance in criminal investigation. Open to science and non-science majors.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 081 or higher.

All prerequisite coursework must be completed with a grade of C or better.

CHM 130 - Fundamental Chemistry (4)

Introduces students with no prior chemistry instruction to the fundamentals of general inorganic chemistry, and prepares them for General Chemistry I.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 081 or higher, and RDG 122 or exemption.

CHM 138 - Chemistry for Allied Health (4)

An introduction to the fundamentals of general inorganic, organic, and biological chemistry focusing on the principles important to the understanding of human biological functions and their related medical aspect. Especially adapted to the needs of students in health related fields and nursing.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 081 or higher, and RDG 122 or exemption.

CHM 151 - General Chemistry I (4)

An introduction to the general principles of inorganic chemistry, with focus on quantitative relationships including properties of matter, chemical bonding and structure, nomenclature, chemical equations, stoichiometry, gas laws, thermochemistry, states of matter, and reactions in aqueous solutions.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CHM 130, CHM 138, or one year of high school chemistry; MAT 123 or higher; and RDG 122 or exemption.

CHM 152 - General Chemistry II (4)

A continuation of General Chemistry I and the general principles of inorganic chemistry, with focus on quantitative relationships including acids and bases, equilibrium, kinetics, electrochemistry, and nuclear chemistry.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CHM 151.

CHM 192 - Special Topics and Applications in Chemistry (0.25-4)

A rotating forum/seminar/course or supplement to an existing chemistry course emphasizing chemistry related topics. The title and credit hours for this course will vary each term depending on the topic.
Prerequisite(s): None. Recommended Preparation: Permission of the instructor is strongly recommended.

CHM 235 - General Organic Chemistry I (4)

An introduction to the naming, structure, and properties of organic compounds with an emphasis on alkanes, stereochemistry, alkyl halides, alkenes, and spectroscopy. Focus is on the mechanisms that reveal the relationships between these different classes of organic compounds. Deals with general techniques unique to organic chemistry,

separations, chromatography, boiling and melting points, and other physical properties.
3 hours lecture, 3.5 hours laboratory.
Prerequisite(s): CHM 152.

CHM 236 - General Organic Chemistry II (4)

A continued study of the naming, structure, and properties of organic compounds with an emphasis on alcohols, ethers, epoxides, aromatics, ketones, aldehydes, amines, carboxylic acids and their derivatives, enols, and enolate ions. Focus is on mechanisms and syntheses that reveal the relationships between these different classes of organic compounds.
3 hours lecture, 3.5 hours laboratory.
Prerequisite(s): CHM 235.

CHM 299 - Individual Studies (1-4)

Completion of a research problem or an outlined course of study under the direction of a faculty member, with contract for the individual study agreed upon by the student, the instructor, and the appropriate instructional manager prior to the initiation of the study.
Prerequisite(s): Approval of appropriate instructional manager and instructor.

CIS - COMPUTER INFORMATION SYSTEMS

CIS 116 - Computer Essentials (3)

A hands-on introduction to the operating system and applications of the personal computer and to the Internet. Emphasis is placed on Word, Excel, and PowerPoint, and on the integration of these applications.
3 hours lecture.
Prerequisite(s): None.

CIS 120 - Introduction to Information Systems (3)

An introduction to digital basics, hardware, software, operating systems, local area networks, wide area networks, Internet, Web, email, digital media, basic programming, and the computer industry. Also includes an in-depth application of the business intelligence perspective, which uses database and spreadsheet software packages to achieve efficient and effective problem solving.
3 hours lecture.
Prerequisite(s): None.

CIS 128 - Linux Operating System (4)

An introduction to the Linux operating system which covers its history, internal organization, and directory and file system. Additional topics include installation, vi editor, user commands, and utilities. For those interested in Linux as well as those interested in pursuing the CompTIA Linux+ certification.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 120.

CIS 128U - Unix Operating System (4)

An introductory course in the Unix operating system. Topics include the history, internal organization, directory and file system, vi editor, user commands and utilities, the shell, and an introduction to shell programming.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

CIS 129 - Introduction to Programming Logic (1)

An introduction to software and programming concepts for students interested in visual or scripting languages. Topics include notations, data, operators, sequence, selection, repetition, and subprograms.
1 hour lecture.
Prerequisite(s): None.

CIS 130 - Programming Logic (3)

A study of software and programming concepts. Topics include programming methodologies, structures, and functions; notations and expressions; data, data types, and data files; file processing; and the software life cycle.
3 hours lecture.
Prerequisite(s): None.

CIS 140 - Introduction to Operating Systems (3)

Provides students with a knowledge of operating systems and prepares them to take the CompTIA A+ Essentials certification examination. Topics include system components, storage, networking, security, and system management.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): None. Recommended Preparation: CIS 116.

CIS 150 - Essentials of Networking (3)

Provides students with knowledge of networking technologies and prepares them to take the CompTIA Network+ certification examination. Topics include networking basics, Ethernet, implementation, wireless networking, security, and network management.
3 hours lecture.
Prerequisite(s): None.

CIS 160 - Introduction to Information Security (4)

Provides students with a knowledge of security concepts and with the skills required to react to security incidents, and prepares them to take the CompTIA Security+ certification examination. Topics include network security; compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; and cryptography.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): None.

CIS 161 - Network Security (4)

A detailed study of network security principles and their implementation. Topics include the fundamentals of network security: implementation of firewalls, infrastructure security, and Windows operating system security and its impact on network security. Also covers the various utilities used to manage network security and troubleshoot problems.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 140, CIS 150, and CIS 160; or permission of instructor.

CIS 164 - Introduction to Scripting Using Python (4)

An introduction to scripting using Python. Topics include basic data types, control structures, decision constructs, regular expressions, input and output techniques, and textual analysis.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): CIS 120.

CIS 179 - Applied Technical Writing (3)

An application of technical writing skills used in organizational reports and communications. Focus is on the processes for reporting technical information, with emphasis on writing mechanics and syntax, forms and formatting, and technical style.
3 hours lecture.
Prerequisite(s): ENG 100 or placement in ENG 101, RDG 122 or exemption, and CIS 116 or CIS 120.

CIS 181 - Computer Applications (3)

An introduction to the uses of spreadsheets and database software. Spreadsheet emphasis is on the use of formulas and functions, the development of charts and graphs, the creation and manipulation of lists, the creation of pivot tables, and the role of the Internet in spreadsheets. Database software emphasis is on data entry, on the creation of queries, forms, and reports, and on the design and maintenance of databases.
3 hours lecture.
Prerequisite(s): CIS 116 or CIS 120.

CIS 185 - Internet Essentials (3)

A survey of the Internet that covers browser capabilities and management, real-time and mass communications, and social networks. Also covers email management, ecommerce, online security, and other Internet services; and teaches the basics of HTML.
3 hours lecture.
Prerequisite(s): CIS 116 or concurrent enrollment.

CIS 204 - C Programming (4)

An introduction to the C programming language. Includes syntax and semantics, data types, operators, looping and decision structures, functions, arrays, pointers, and file handling.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 130 or score of 70 or higher on the waiver exam.

CIS 206 - Assembler with Architecture (4)

A detailed study of the assembly programming language for 8086 and 8088 microprocessors in which individual

instructions written in symbolic form are converted into machine code. Provides an introduction to the architecture, organization, and structure of major hardware components of a microcomputer to include primary memory, the control unit, and the arithmetic logic unit.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 221 and either CIS 130 or a score of 70 or higher on the waiver exam.

CIS 208 - Java Programming (4)

An introduction to the Java programming language. Includes a study of the basic concepts associated with object-oriented programming, terminology, notation, and the syntax and semantics of the language.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 130 or a score of 70 or higher on the waiver exam.

CIS 217 - Introduction to Visual C#.NET Programming (4)

A study of the fundamentals of computer programming using Visual C#.NET. Emphasis is on the Microsoft Integrated Development Environment (IDE) and the .NET environment, as well as on proper programming strategies with Visual C#.NET.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 129 or concurrent enrollment, or CIS 130.

CIS 218 - Visual Basic Programming (4)

A study of the fundamentals of computer programming within the Windows environment. Emphasis is on the use of Visual Basic objects, events, and projects to create Windows programs.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 129 or concurrent enrollment, or CIS 130.

CIS 220B - Data Structures-Assembler (4)

A study of data structures and advanced programming concepts. Includes the design, implementation, and application of stacks, queues, lists, trees, and sequential and direct access to files. Students implement the data structures in Assembler.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 206.

CIS 220C - Data Structures-C (4)

A study of data structures and advanced programming concepts. Includes the design, implementation, and application of stacks, queues, lists, trees, and sequential and direct access to files. Students implement the data structures in C.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 204.

CIS 220J - Data Structures-Java (4)

A study of data structures and advanced programming concepts. Includes the design, implementation, and

application of stacks, queues, lists, trees, and sequential and direct access to files. Students implement the data structures in Java.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 208.

CIS 221 - Digital Logic (3)

A study of number systems, conversion methods, binary and complement arithmetic, Boolean and switching algebra, circuit minimizations, read-only memory, programmable logic arrays, flip-flops, synchronous sequential circuits, and register transfer design.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): CIS 116 or CIS 120, and CIS 129 or CIS 130; or permission of instructor.

CIS 229 - Linux System Administration (4)

An introductory course in Linux system administration. Covers starting, stopping, backing up, tuning, and troubleshooting the system; administering users and groups; and scripting. Also deals with file systems, terminals, printers, disks, and electronic mail.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 128.

CIS 232 - Digital Communications and Network Hardware (4)

Course topics include binary and hex number systems, Boolean algebra, circuit optimization, switches, routers, firewall configuration and installations. Students will implement network management.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CNT 140 or CIS 150, and CIS 128 or CIS 236.

CIS 236 - Microsoft Workstation Operating Systems (4)

Microsoft is the leading supplier of desktop operating systems for home and business use. This course will use the most current and widely accepted version of Microsoft's business desktop operating system. Students will learn proper installation of the operating system, the features of the system, maximum utilization of the user interface, and efficient file handling. They will also learn to create, edit and delete user profiles, create a functional user environment, create and utilize shared network resources, and utilize and administer the workstation as a server in a hands-on environment. They will also utilize troubleshooting skills to overcome simple and complex problems in the Microsoft operating system environments.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 140, CIS 160, and either CNT 140 or CIS 150.

CIS 242 - World Wide Web Programming (3)

This capstone course for the Web Developer Certificate provides an advanced study of web programming. Emphasis is

All prerequisite coursework must be completed with a grade of C or better.

on server-side scripting and the use of databases on web sites. Also covers web design and ecommerce issues.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): CIS 129 or CIS 130, and CIS 287.
Recommended Preparation: CIS 244.

CIS 244 - World Wide Web Graphics (3)

An overview of the creation and modification of graphics for the World Wide Web. Topics include their formatting and optimization. Students create a variety of graphics and incorporate them into a web site.
3 hours lecture.
Prerequisite(s): CIS 185, and CIS 287 or concurrent enrollment. Recommended Preparation: DMA 110 or prior digital imagery experience.

CIS 245 - Microsoft Server and Active Directory (4)

Fundamentals of Microsoft Server and Active Directory. Topics include server hardware, installation, and configuration; Active Directory replication; Microsoft Group Policy; and system security. Explores the role of the network administrator and offers hands-on application of various approaches to user and server management.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 236.

CIS 248 - Perl Scripting (3)

A study of the creation and maintenance of the Perl script programming language. Emphasis is on the application of Perl scripts to the World Wide Web and on their applications in different operating system environments.
3 hours lecture.
Prerequisite(s): CIS 129 or CIS 130.

CIS 250 - Database Management (4)

A study of the management of data in business organizations. Students are presented with the opportunity to combine theory with a hands-on emphasis on techniques for developing and using databases.
4 hours lecture.
Prerequisite(s): CIS 181.

CIS 255 - Microsoft PowerShell Scripting (4)

A study of the fundamentals of the Microsoft PowerShell scripting language, which is used to automate various tasks on Windows-based systems. Emphasis is on Windows PowerShell command-line features and techniques.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): CIS 164.

CIS 259 - Advanced Linux Systems Administration (4)

An advanced course in Linux System Administration. Topics include implementing Dynamic Host Control Protocol (DHCP) and Domain Name Service (DNS); managing file systems; securing networks; maintaining and troubleshooting servers.

3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 229 and CIS 248.

CIS 260 - Service and Maintenance of Personal Computers (4)

Theory and application of servicing personal computers. Students diagnose and repair common problems. Topics include advanced configuration and hardware problems, workstation setup for configuration, storage and optical drives, random-access memory modules, and motherboard-level diagnosis and repair.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 140.

CIS 262 - Network Support and Troubleshooting (4)

A capstone course in network support and troubleshooting. Topics include installation of network operating software, local area network (LAN) diagnostic utilities, installation and configuration of client software and of adaptor cards, physical and data link layer troubleshooting of networks, bridging and routing, and configuration problems.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 229, CIS 245, and CIS 260.

CIS 263 - Network Defense (4)

An advanced course in cybersecurity principles and techniques. Topics include the tools and tactics used in assessing the security posture of computer networks; the steps involved in a penetration testing methodology-network footprinting and discovery, service enumeration, attack vector evaluation, and vulnerability assessments; and the legal and ethical issues raised by penetration testing.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 128, CIS 161, CIS 236, and CIS 255.

CIS 264 - Ruby Programming (4)

A study of the fundamentals of the Ruby programming language. Emphasis is on the proper development of Ruby programs, on the language's syntax and semantics, and on appropriate debugging techniques for the language.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): CIS 164.

CIS 267 - Mobile Security (3)

A survey of mobile security as it relates to mobile computing devices such as smart phones and tablets. Focus is on the technologies, policies, and procedures used to secure these devices and on the security of their wireless transmissions.
3 hours lecture.
Prerequisite(s): CIS 160. Recommended Preparation: CIS 120.

CIS 268 - Technical Presentations (3)

A practical application of the principles of effective communication. Students integrate current technologies to prepare and deliver effective, professional presentations.

All prerequisite coursework must be completed with a grade of C or better.

3 hours lecture.
Prerequisite(s): CIS 116 or CIS 120.

CIS 270 - Systems Analysis (4)

An investigation of the analysis, design, and implementation of computer information systems. Students study the methods used to analyze both existing and proposed systems and projects, and they incorporate various software, techniques, and methodologies.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 120.

CIS 275 - Computer Forensics (4)

Fundamentals of computer forensics. Topics include forensic evidence preservation, computer forensic tools, evidence analysis, chain of custody, and data retrieval from computer hardware and software applications using both Windows and Linux operating systems. Explores the role of the computer forensics examiner and offers hands-on application of various computer forensic tools, evidence preservation techniques, and documentation.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 236. Recommended Preparation: CIS 120.

CIS 281 - Advanced Computer Applications (3)

Advanced applications of spreadsheet and database software to solve practical problems. Spreadsheet emphasis is on formulas and functions; data analysis, reporting, and importing; spreadsheet applications; and macros. Database emphasis is on relational databases, advanced querying techniques, forms with multiple tables, advanced report forms, macros, and development of database applications.
3 hours lecture.
Prerequisite(s): CIS 181.

CIS 287 - World Wide Web Development (3)

An introduction to the principles of good web page design. Topics include the use of HyperText Markup Language (HTML) and Cascading Style Sheets (CSS) to create multimedia pages, interactive forms, and mobile sites for the web that are compatible with the latest standards. Students create and post a web site on the Internet.
3 hours lecture.
Prerequisite(s): CIS 185.

CIS 291 - Practical Applications in Cybersecurity (4)

Examines the combination of technical, management, and presentation skills needed by cybersecurity professionals. Integrates the planning, implementation, maintenance, and defense of organizational networks, using a variety of tools and techniques. Provides extensive hands-on exercises to reinforce key course concepts.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 161, CIS 236, and CIS 267.

CIS 294 - Field Experience in Computer Information Systems (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in computer information systems and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in a computer information systems discipline and permission of the cooperative education program coordinator. Recommended Preparation: Sophomore standing and faculty recommendation.

CIS 294 - Field Experience in Computer Information Systems (3)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in computer information systems and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in a computer information systems discipline and permission of the cooperative education program coordinator. Recommended Preparation: Sophomore standing and faculty recommendation.

CNT - CISCO NETWORK TECHNOLOGY

CNT 140 - Introduction to Cisco Networks (3)

An introduction to the architecture, structure, functions, components, and models of the Internet and other computer networks. Topics include the principles and structure of Internet Protocol (IP) addressing and the fundamentals of Ethernet concepts, media, and operations. Students build simple local area networks (LANs), perform basic configurations for routers and switches, and implement IP addressing schemes. This is the first in a series of four courses in the Cisco Networking Technology (CNT) curriculum.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): None.

CNT 150 - Cisco Routing and Switching Essentials (3)

A study of the architecture, components, and operations of routers and switches in a small network. Students configure routers and switches for basic and advanced functionality, and troubleshoot and resolve common problems-in both IPv4 and IPv6 networks-with Routing Information Protocol (RIPv1 and RIPv2), single-area and multi-area Open Shortest Path First (OSPF), virtual local area networks (VLANs), and inter-VLAN routing. This is the second in a series of four courses in the Cisco Networking Technology (CNT) curriculum.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): CNT 140.

CNT 240 - Scaling Cisco Networks (3)

An investigation into the architecture, components, and operations of routers and switches in a large, complex network. Students configure routers and switches for advanced functionality, and troubleshoot and resolve common problems-in both IPv4 and IPv6 networks-with Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Spanning Tree Protocol (STP), and VLAN Trunk Protocol (VTP). Students develop the knowledge and skills needed to implement Dynamic Host Configuration Protocol (DHCP) and Domain Name System (DNS) operations in a network. This is the third in a series of four courses in the Cisco Networking Technology (CNT) curriculum.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): CNT 150.

CNT 250 - Connecting Cisco Networks (3)

An examination of the Wide Area Network (WAN) technologies and network services required in converged applications in a complex network. Covers the criteria for selecting network devices and WAN technologies to meet network requirements. Students troubleshoot and resolve common problems with network devices and data link protocols; and they implement Network Address Translation (NAT), IP security (IPSec), and virtual private network (VPN) operations in a complex network. This is the last in a series of four courses in the Cisco Networking Technology (CNT) curriculum.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): CNT 240.

COM - COMMUNICATIONS

COM 102 - Essentials of Communication (3)

A study of the communication process as it relates to a variety of communication situations: one-on-one dialogues, small group discussions, and large group presentations. The course covers basics in communication, including listening skills, verbal and nonverbal language analysis, communication styles, gender and cultural comparisons, and bridging strategies.
3 hours lecture.
Prerequisite(s): ENG 100 or placement in ENG 101.

COM 110 - Public Speaking (3)

A study of public speaking that reviews the fundamentals of speech as they relate to communicating with an audience, with special emphasis on the theories and techniques of persuasion. Students give speeches and they critique those of others from the perspective of topic selection, organization, and delivery.
3 hours lecture.
Prerequisite(s): COM 102 or permission of instructor.

COM 204 - Elements of Intercultural Communication (3)

An introduction to communication across cultures. Emphasis is on the theory underlying intercultural communication and on the practical application of communication strategies and skills that lead to improved communication among people of diverse cultural backgrounds in a multicultural society and world.
3 hours lecture.
Prerequisite(s): ENG 101 or permission of instructor. Cross-Listed as: AJS 204.

COM 270 - Interpersonal Communications (3)

A course to develop self-awareness and insight into interpersonal relationships with emphasis upon the development of communication skills and techniques for one-on-one professional communication.
3 hours lecture.
Prerequisite(s): ENG 101.

COM 271 - Communications in Small Groups (3)

A continuation of COM 270 refining skills and techniques learned and adding analysis and presentation with emphasis on small-group communication processes.
3 hours lecture.
Prerequisite(s): COM 270 or permission of instructor.

COR - CORRECTIONS

COR 109 - Prisoners' Rights (1)

A practical overview of prisoners' procedural due process and substantive constitutional rights. Credit awarded for successful completion of the Arizona Correctional Officer Training Academy.
1 hour lecture.
Prerequisite(s): None.

COR 113 - Crisis Intervention (1)

A practical study of conflict-resolution techniques, including assertive communication, force, safety procedures, and referrals. Emphasis on appropriate use by police and correctional officers. Credit awarded for successful completion of the Arizona Correctional Officer Training Academy.
1 hour lecture.
Prerequisite(s): None.

COR 118 - Communications in Criminal Justice (1)

A practical study of effective intradepartmental and interdepartmental communication within the criminal justice profession, including barriers to effective communication, communication with the community, and communication within the courtroom. Credit awarded for successful completion of the Arizona Correctional Officer Training Academy.
1 hour lecture.
Prerequisite(s): None.

CPD - COUNSELING AND PERSONAL DEVELOPMENT

CPD 101 - College Seminar (1)

A course designed to promote academic success by helping students enhance their motivation and learning strategies. Review of research and theory regarding motivation and learning lead to self-management studies. Students, traditional and nontraditional, will also have an opportunity to become familiar with a campus-wide support system.
1 hour lecture.
Prerequisite(s): None.

CPD 117 - Personal Development (2)

Students will learn skills that will enable them to more successfully participate in our society. Skills include: communication, budgeting, time management, and problem solving/decision making.
2 hours lecture.
Prerequisite(s): None.

CPD 150 - Academic Excellence Seminar (3)

An introduction to higher education learning, with focus on the development of critical thinking, research, time management, communication, and stress management skills. Incorporates academic and career goal-setting strategies, and develops financial literacy.
3 hours lecture.
Prerequisite(s): None.

CPD 150A - Academic Excellence Seminar, Part I (1)

An introduction to higher education learning, with focus on the development of critical thinking, reading, and time management skills. Incorporates academic and career goal-setting strategies.
1 hour lecture.
Prerequisite(s): None.

CUL - CULINARY ARTS

CUL 101 - Cake Decorating (3)

Covers all aspects of cake decorating including leveling and torting, and introduces butter cream and fondant cakes, borders, flowers, color flow, and gum paste and fondant work.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): None.

CUL 105 - Nutrition in Food Service (3)

An introduction to the principles of culinary nutrition. Topics include the scientific aspects of nutrition, the impact of lifestyle on food production and consumption, and the practical applications of nutrition in food service.
3 hours lecture.

Prerequisite(s): None.

CUL 107 - Restaurant Sanitation (3)

An examination of techniques for controlling sanitation in food service operations. Includes a kitchen orientation and basic knife handling and safety. Prepares students to take the ServSafe industry certification. (Students wishing to re-certify may pay a fee for the certification test without having to retake the course.)
2 hours lecture, 2 hours laboratory.
Prerequisite(s): None.

CUL 204 - Food Service Purchasing and Control (3)

A study of the principles in selecting sources, quality, and types of food, and in determining purchase quantities. Also deals with receiving operations and volume assurance including planning, control systems, cost analysis, sales income, and labor costs.
3 hours lecture.
Prerequisite(s): BUS 104 or placement in MAT 123.
Recommended Preparation: CUL 215.

CUL 215 - Cooking Essentials (3)

An introduction to food costs, recipes, pre-preparation, and basic cooking principles. Involves the preparation of stocks and sauces, vegetables, starches, breakfast products, meats, poultry, fish, and shellfish.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): CUL 107, concurrent enrollment, or permission of instructor.

CUL 217 - Saucier (3)

Focus is on the cooking principles and techniques used in the preparation of stocks, soups, classic and contemporary sauces and accompaniments, and on the pairing of sauces with a variety of foods.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): CUL 107, concurrent enrollment, or permission of instructor.

CUL 220 - Breads and Baking Theory (3)

An introduction to the essentials of baking theory, gluten development, and baking mathematics, with a focus on the use of proper kitchen equipment. Includes instruction in the preparation of yeast doughs and the baking of quick breads, lean and rich dough breads, and artisan breads.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): CUL 107, concurrent enrollment, or permission of instructor.

CUL 221 - Pastry Basics (3)

A continuation of CUL 220 that includes advanced baking principles as they relate to pastry cream, meringues, icings, pie doughs, eclair paste, pie production, cakes, cookies and their characteristics, custards and mousses; frozen desserts; fruit desserts; souffles, doughnuts, and crepes. Additional

All prerequisite coursework must be completed with a grade of C or better.

topics include dessert presentation and baking for special diets.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): CUL 220.

CUL 222 - Advanced Confections and Pastries I (3)

Continued instruction in baking skills focusing on sophisticated pastry techniques including advanced laminated dough, specialty gateau and torten (gourmet cakes), and complex sauces and creams.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): CUL 221.

CUL 223 - Advanced Confections and Pastries II (3)

Advanced confectionary-showpiece work designed to develop chocolate decorative techniques such as tempering, molding, rolling, curling, shaving, and others, as well as sophisticated methods used in working with pulled, blown, poured, spun, and cast sugar.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): CUL 222.

CUL 224 - Field Experience in Culinary Arts (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in culinary arts and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in culinary arts, permission of the cooperative education program coordinator, and CUL 107. Recommended Preparation: Sophomore standing and faculty recommendation.

CUL 224 - Field Experience in Culinary Arts (1-4)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in culinary arts and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in culinary arts, permission of the cooperative education program coordinator, and CUL 107. Recommended Preparation: Sophomore standing and faculty recommendation.

CUL 225 - Garde Manger I (3)

Covers the creation and storage of salads, sandwiches, and appetizers. Includes purchasing practices, food platter layout and presentation, and cooking methods. Also includes salads and dressings, poultry, seafood, meats, show pieces, and canapes and hors d'oeuvres.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): CUL 215.

CUL 226 - Garde Manger II (3)

This course is a continuation of CUL 225. It includes review of the garde manger department, aspic and chaud froid, garde manger department production, purchasing and procurement of specialty products, various force meats, dinner and theme buffets, ice carvings, plate presentations, cheeses, cured and smoked products, and charcuterie.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): CUL 225.

CUL 242 - Dining Service Management (3)

A study of the concepts of dining room operations and the duties of a table server. Includes creative selling, basic etiquette and styles of service, electronic service, teamwork, generic and varietal wines, wine and food pairings, and bar service. Does not include mixology or wine tasting.
3 hours lecture.
Prerequisite(s): None.

CUL 275 - International Cuisine (3)

An introduction to regional ingredients in traditional international cuisine, with focus on planning, preparation, and presentation of foods from around the world. Emphasis is on trends, flavor profiles, plate presentations, and cooking techniques unique to various world regions.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): CUL 226 or permission of instructor.

CUL 280 - Advanced Techniques in Gourmet Food Preparation I (3)

The first of two capstone courses in the culinary arts program with emphasis on advanced techniques for the preparation of gourmet food including proper flavorings, spirits, garnishes, and flambé in haute cuisine.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): CUL 217 and CUL 275, or permission of instructor.

CUL 281 - Advanced Techniques in Gourmet Food Preparation II (3)

The second of two capstone courses in the culinary arts program with emphasis on advanced techniques for the preparation of gourmet food including proper flavorings, spirits, garnishes, and flambé in haute cuisine.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): CUL 280.

DFT - DRAFTING

DFT 150 - Fundamentals of AutoCAD (3)

An introduction to automated computer-aided design using Autodesk's AutoCAD software. Focus is on developing the knowledge and skills required to create, edit, and manipulate simple drawings using AutoCAD.
2 hours lecture, 3 hours laboratory.

All prerequisite coursework must be completed with a grade of C or better.

Prerequisite(s): None. Recommended Preparation: Computer literacy with a working knowledge of Windows and its functions, and a basic knowledge of drafting.

DFT 201 - Topics in Drafting (3)

An application of automated computer-aided design using Autodesk's AutoCAD software. Topics include architectural, civil, mechanical, and electrical drafting. Covers how different drafting disciplines are used in current fields of technology.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): DFT 150.

DFT 250 - Advanced AutoCAD (3)

An advanced application of automated computer-aided design using Autodesk's AutoCAD software. Covers complex two-dimensional drawings, and three-dimensional drawings and modelings.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): DFT 150.

DFT 270 - AutoCAD 3D (3)

An introduction to the concepts and methodologies of 3D modeling and rendering using Autodesk's AutoCAD 3D software. Covers solids, surfaces, space, visualizations, and drawings.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 116, DFT 150, and DFT 250.

DMA - DIGITAL MEDIA ARTS

DMA 110 - Digital Imaging I (3)

An introduction to the creation, manipulation, and enhancement of digital images. Using appropriate software, students apply fundamental composition and image-preparation techniques to create basic digital images and to resolve simple image problems.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): CIS 116, CIS 120, or permission of instructor.

DMA 111 - Computer Animation I (3)

A study of the beginning and intermediate features of animation software developed through the practical application of basic computer animation skills.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): None.

DMA 140 - Digital Photography for Personal Growth (2)

An introduction to the use and function of the digital camera and the hardware, software, and techniques necessary to electronically store, transfer, manipulate, and print digital photographs. Students will learn basic design concepts as they relate to digital photography as an art form. This includes skill development in basic elements of design: line, shape, value, texture, and color. Students will acquire skills in using a digital camera as a photographic tool for career, work or personal pleasure and self-expression.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): None.

DMA 210 - Digital Imaging II (3)

An advanced study of the creation, manipulation, and enhancement of digital images. Using appropriate software, students apply advanced composition and image-preparation techniques to create complex digital images and to resolve difficult image problems.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): DMA 110. Recommended Preparation: ART 103 or ART 106.

DMA 211 - Computer Animation II (3)

A study of the advanced and multifaceted features of animation software as they are developed through the practical application of advanced computer animation skills.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): DMA 111. Recommended Preparation: ART 103 or ART 106.

DMA 214 - Creating Multimedia Presentations (4)

This course is the capstone course in the 2D animation and imagery series. This course will produce multimedia presentations encompassing techniques learned in all the prerequisite courses. This course is taught in a hands-on environment.
4 hours lecture.
Prerequisite(s): DMA 110, DMA 111, DMA 210, and DMA 211.

DMA 260 - Graphic Design I (3)

A studio course introducing the process and purpose of graphic design. Studio, research, and problem-solving methodologies; review of basic design principles; and design applications to include identity and information, editorial, promotional, and advertising. This class serves as the foundation for intermediate and advanced graphic design course work and will focus on the use of Macintosh computers and Adobe software including Photoshop and Illustrator.
2 hours lecture, 4 hours laboratory.
Prerequisite(s): ART 103, ART 106, or permission of instructor.

DMA 261 - Graphic Design II (3)

An advanced studio course dealing with the process and purpose of graphic design. Studio, research, and problem-solving methodologies; review of basic design principles; and design applications to include identity and information, editorial, promotional, and advertising. This class serves the intermediate and advanced graphic designer and will focus on the use of Macintosh computers and Adobe software including Photoshop and Illustrator.

All prerequisite coursework must be completed with a grade of C or better.

2 hours lecture, 4 hours laboratory.
Prerequisite(s): DMA 260 and either ART 103, ART 106, or permission of instructor.

DMA 262 - Digital Video Production (3)

This course will introduce the student to the fundamental aspects of video production. It will include a history of digital video, an introduction to the digital video camera, camera lenses and associated computer equipment. Students will also work as members of a production team and receive instruction on composition, portfolio preparation, and possible career options.
2 hours lecture, 4 hours laboratory.
Prerequisite(s): None. Recommended Preparation: Art majors must have ART 103 and DMA 266, or permission of instructor. Additional preparation may include ART 285.

DMA 263 - Digital Video Production II (3)

An advanced studio course dealing with the process and production of the digital video. This course will include: advanced digital topics in camera usage, digital formats and scripting, production plan, lighting equipment in/on various locations, post production, editing approaches, developing a visual storyline, and building a portfolio.
2 hours lecture, 4 hours laboratory.
Prerequisite(s): DMA 262. Recommended Preparation: ART 103.

DMA 266 - Digital Photography (3)

An introduction to digital photography which will emphasize technical and aesthetic issues associated with this medium. This course is designed to acquaint students with the history of still photography, aspects of the digital medium, camera and computer requirements, lighting, lenses, elements of composition, portfolio, and career options in this artistic field.
2 hours lecture, 4 hours laboratory.
Prerequisite(s): None. Recommended Preparation: Art majors must have ART 103 or permission of instructor. Additional preparation may include ART 285.

DMA 267 - Digital Photography II (3)

This course is a continuation of DMA 266 Digital Photography I which will emphasize intermediate technical and aesthetic issues associated with this medium. This course will address intermediate, aspects of digital photography including: digital output, lighting, computer/computer software and digital camera usage, composition, critical analysis, and portfolio development.
2 hours lecture, 4 hours laboratory.
Prerequisite(s): DMA 266. Recommended Preparation: ART 103 and DMA 260.

ECE - EARLY CHILDHOOD EDUCATION

ECE 150 - Introduction to Early Childhood Care and Education (3)

An overview of early childhood, the early childhood teaching profession, and current issues in early childhood education with emphasis on the role, qualifications, and responsibilities in the classroom. Explanation of topics relevant to the classroom teacher, i.e., methods, ethics and current issues and trends.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: Concurrent employment in an early childhood care or education facility, or concurrent enrollment in Cooperative Education in an early childhood care or education facility.

ECE 152 - Observation, Behavior and Guidance (3)

An introductory course in communication skills, concepts, and techniques for observing and recording child characteristics and behaviors in the early childhood setting. Areas of focus are objective observation techniques, guidance, behavior modification techniques, listening skills, and classroom management. Meaningful two-way communication is emphasized.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: Concurrent employment in an early childhood care or education facility, or concurrent enrollment in Cooperative Education in an early childhood care or education facility.

ECE 155 - Children's Language Development (3)

An overview of children's language growth from birth to age five: the development of sounds, structures, and meaning. Implications of family and social input, including mixed or multiple languages. Consideration of special cases (hearing or vision impaired, for example) and of the relationship of spoken to written language. Application to childcare or preschool setting.
3 hours lecture.
Prerequisite(s): Placement in or completion of ENG 100. Recommended Preparation: Concurrent employment in an early childhood care or education facility, or concurrent enrollment in Cooperative Education in an early childhood care or education facility.

ECE 156 - Children's Literature and Children's Literacy (3)

An overview of the process by which children become literate (able to read and write), with emphasis on language growth from birth to age five. An extensive survey with key examples of literature and language activities which support children's readiness for literacy. Implications of family and social input, including mixed or multiple languages and inclusion of literature from a variety of languages and cultures. Consideration of special cases (hearing or vision impaired, for example) and of the relationship of spoken to written language. Application to childcare or preschool setting.
3 hours lecture.
Prerequisite(s): Placement in or completion of ENG 100. Recommended Preparation: Concurrent employment in an

All prerequisite coursework must be completed with a grade of C or better.

early childhood care or education facility, or concurrent enrollment in Cooperative Education in an early childhood care or education facility.

ECE 158 - Health, Safety and Nutrition for Young Children (3)

In-depth examination of comprehensive health, mental health, safety, and nutrition concepts and their applications and implications for developing quality child development and early childhood education programs.
3 hours lecture.
Prerequisite(s): None.

ECE 160 - Early Childhood Growth and Development (3)

This course addresses growth and development from conception to middle childhood, and socialization from infancy to middle childhood, with implications for childcare providers and primary school teachers. Topics covered also include health, safety, and nutrition.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: Concurrent employment in an early childhood care or education facility, or concurrent enrollment in Cooperative Education in an early childhood care or education facility.

ECE 161 - Understanding Families, Community and Diversity (3)

An introduction to skills for early childhood caregivers and teachers to use with families through reading, classroom participation, lectures, discussions, observations, and practical experience. Emphasis will be placed on recognizing and understanding the role of cultural and community diversity in the education of young children.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: Concurrent employment in an early childhood care or education facility, or concurrent enrollment in Cooperative Education in an early childhood care or education facility.

ECE 170 - Curriculum Development for Early Childhood Education (3)

Emphasis on methods of selecting and presenting developmentally appropriate practices and creating activities which enhance optimal growth for infants to age 8. Also included will be planning quality daily activities, establishing routines, and program assessment.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: Concurrent employment in an early childhood care or education facility, or concurrent enrollment in Cooperative Education in an early childhood care or education facility.

ECE 172 - Teaching Strategies for Early Childhood Education (3)

This course provides an overview of a variety of techniques to reach all learning styles, while utilizing developmentally appropriate practices when teaching young children. Emphasis will be on consistent planning and teaching activities which support development of all children creating an environment where children experience optimum growth.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: Concurrent employment in an early childhood care or education facility, or concurrent enrollment in Cooperative Education in an early childhood care or education facility.

ECE 173 - Administration of Early Childhood Care and Education Programs (3)

Topics include in-depth examination of child development and preschool program management principles and practices, legal responsibilities and mandates, and developmentally, culturally, and geographically sound programming.
3 hours lecture.
Prerequisite(s): ENG 100 or placement in ENG 101, and six credit hours in ECE coursework.

ECE 174 - Behavior Management (3)

Designed for teachers, prospective teachers, parents or caregivers of young children to learn behavior management techniques. Topics discussed will include learning styles, communicating and maintaining behavioral expectations, stress management, leadership styles, bias and prejudice, behavior modification, self-assessment, and setting up positive environments for young children.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: Concurrent working or work-study placement with young children.

ECN - ECONOMICS

ECN 201 - Principles of Macroeconomics (3)

A broad overview of the national and international macroeconomy. The course focuses on the study of total supply and demand as applied to the macroeconomic problems of unemployment, inflation, and economic growth. Specific areas of study will include national income accounting, fiscal policy, monetary policy, and international trade theory.
3 hours lecture.
Prerequisite(s): ENG 101.

ECN 202 - Principles of Microeconomics (3)

A study of individual market interaction with a focus on individual supply and demand. Specific topics include the study of consumer theory, cost and production for the individual firm, pure competition, pure monopoly, and the international finance markets.
3 hours lecture.
Prerequisite(s): ENG 101.

EDU - EDUCATION

EDU 020 - Fundamental Academic Skills Training (3)

A review of reading comprehension strategies, vocabulary, and practical mathematics. Provides students with the skills required for further developmental English and mathematics courses.
3 hours lecture.
Prerequisite(s): Placement test score and recommendation of the Army Education Center counselor.

EDU 021 - ASVAB Test Preparation (1)

Designed to improve basic test-taking skills for the Armed Services Vocational Aptitude Battery (ASVAB). Emphasis is on arithmetic reasoning, word analysis, and reading comprehension.
1 hour lecture.
Prerequisite(s): Placement test score and recommendation of the Army Education Center counselor.

EDU 101 - Fundamentals of Education (3)

This course provides instruction in education career choices, education structure and systems, and the legal/ethical responsibilities of educators. It provides instruction in developmental stages of children in education theory and in pedagogy and methodology. This course is designed to articulate with high school Education Profession programs.
3 hours lecture.
Prerequisite(s): Enrollment in Arizona Tech Prep Education Professions program.

EDU 201 - Introduction to Education (3)

An overview of public education: the education profession, educational institutions, and educational systems within American society. Includes the study of current educational issues and of educators' roles, responsibilities, and qualifications; and offers the opportunity to apply educational theories and methodologies during 32 hours of supervised classroom observations in public school settings. Requires appropriate Department of Public Safety fingerprint clearance and related fees.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): ENG 101 or concurrent enrollment, and RDG 122 or exemption.

EDU 203 - Foundations of Instructional Techniques (3)

A study of learner-centric instructional techniques. Emphasis is on verbal and nonverbal instructional behaviors, and on classroom management strategies. Attention is paid to collaborative problem-solving and active learning techniques, generational attributes, and various learning styles.
3 hours lecture.
Prerequisite(s): None.

EDU 204 - Learner-Centered Instruction (3)

An in-depth study of how to structure student-centric instruction, with emphasis on critical thinking and lifelong learning.
3 hours lecture.
Prerequisite(s): EDU 203 or permission of instructor.

EDU 205 - Theoretical Dynamics of Instruction (3)

An analysis of various learning and motivational theories and their application to adult learning.
3 hours lecture.
Prerequisite(s): EDU 204 or permission of instructor.

EDU 206 - Mentoring Practicum (4)

A practical application of mentoring theory based on the pairing of an experienced instructor with a protégé. Requires a minimum of 45 hours of direct mentoring.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): EDU 205 or permission of instructor.

EDU 207 - Instructional Design for Adult Education (3)

An introduction to the instructional design technique of Analysis, Design, Development, Implementation, and Evaluation (ADDIE). Topics include learning rubrics, assessment, and delivery considerations.
3 hours lecture.
Prerequisite(s): EDU 205 or permission of instructor.

EDU 208 - Capstone Practicum in Instructional Techniques (4)

A capstone project that applies both learner-centric instructional techniques and the elements of Analysis, Design, Development, Implementation, and Evaluation (ADDIE) to a curriculum of the student's choosing.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): EDU 207.

EDU 218 - Introduction to Structured English Immersion (3)

This course addresses current educational and legal requirements for serving English Language Learners (ELL). Topics include ELL proficiency standards, assessment, foundations of Structured English Immersion (SEI), and SEI strategies. Focus is on SEI; however, comparison and evaluation of various types of language education models, such as English as a Second Language (ESL) and bilingual instruction, are included. This course meets Arizona Department of Education requirements for three semester hours (45 contact hours) and leads to augmented provisional SEI endorsement, required for Teaching and/or Administrative certification.
3 hours lecture.
Prerequisite(s): Arizona Teaching and/or Administrative certification or departmental approval.

EDU 221 - English as a Second Language/Structured English Immersion Teaching Methods (3)

All prerequisite coursework must be completed with a grade of C or better.

This course will provide the student with the methodologies of planning, developing and evaluating lesson plans in all content areas as they relate to Structured English Immersion (SEI) and English Language Learners (ELL) standards. Emphasis is placed on components of curriculum content, teaching strategies, SEI foundations, Assessment and Data analysis and the role of culture in learning. This course meets Arizona Department of Education requirements for SEI endorsement (45 contact hours) and Teaching/Administrator certificate.
3 hours lecture.
Prerequisite(s): Arizona teaching and/or Administrative certification or departmental approval.

EDU 222 - Introduction to Special Education (3)

The study of special education with emphasis on current educational practices and related educational theories; and on identification and characteristics of emotionally disabled, learning disabled, mentally disabled and gifted children. Includes a review of cultural considerations; autism; AA and ADHD; early childhood and K-12 special education; student transitioning within the school and between the school and the community; and appropriate classroom and community-based approaches to accommodating the special education student.
3 hours lecture.
Prerequisite(s): ENG 101, and RDG 122 or exemption.

EDU 224 - Field Experience in Education (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in education and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in education and permission of the cooperative education program coordinator.
Recommended Preparation: Sophomore standing and faculty recommendation.

EDU 226 - Cultural Diversity in Education (3)

An analysis of the relationship of cultural values to the formation of the child's self-concept and learning style as well as an examination of the impact of prejudice, stereotyping and cultural incompatibilities on the efficacy of the educational process. This course emphasizes preparing future teachers who will provide an equal educational opportunity to all students regardless of their racial/cultural group or background.
3 hours lecture.
Prerequisite(s): ENG 101, and RDG 122 or exemption.

EDU 230 - Classroom Relationships (3)

Foundation in classroom management and communication techniques. Topics discussed will include learning styles, discipline, stress management, leadership styles, bias and prejudice, behavior management, self-assessment, and positive learning environments.
3 hours lecture.
Prerequisite(s): EDU 201.

EDU 280 - Methodology for Teaching at the Community College (1)

An exploration of the role of the community college and its service to the community. Emphasized are teaching and learning styles, adult learning and motivation theory, teaching strategies, assessment techniques, and legal issues related to teaching on the community college level.
1 hour lecture.
Prerequisite(s): Cochise College instructor qualified.
Recommended Preparation: Basic computer skills.

EDU 281 - Teaching in an Online Environment (1)

A study of web-based techniques and methods used for online, blended, and face-to-face instruction. Topics include instructional design, cybergogy, best practices, college and campus policies, and the Virtual Learning Environment (VLE).
1 hour lecture.
Prerequisite(s): None. Recommended Preparation: Basic computer skills.

EGR - ENGINEERING

EGR 102 - Principles of Engineering (3)

An introduction to general engineering principles and to the role of systems, design, and testing in the engineering process. Students investigate the interaction between engineering and various business departments. They also use tools such as Excel and MATLAB for data reduction and presentations, and they apply learned skills while working on group projects.
3 hours lecture.
Prerequisite(s): MAT 151 and MAT 182, MAT 187, or concurrent enrollment in MAT 220.

EGR 103 - Electrical Components and Systems (4)

An introduction to the basics of electrical components in a complex system. Students investigate the physical properties and functions of these components and the role they play within the system. Students also utilize technical documents such as data sheets, schematics, circuit and timing diagrams, and system specifications to identify, localize, and correct malfunctions in the system; and they perform preventive maintenance on the system's components.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

EGR 104 - Introduction to Programmable Logic Controllers (4)

An introduction to the fundamentals of digital logic and to programmable logic controllers (PLCs) in a complex system. Using computer simulations, students explore the role PLCs

play within a given system and its subsystems, and they demonstrate PLC functions by writing basic programs and testing them on the actual system. They also apply troubleshooting strategies to identify malfunctioning PLCs and to localize problems caused by PLC hardware.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

EGR 107 - Introduction to RF Communication Systems (4)

An overview of modern communication waveforms. Topics include the radio spectrum; radio propagation; co-channel and adjacent channel interference; power and spectral measurement; data capture, reduction, and presentation; and the safe and correct handling of RF equipment connections.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): EGR 103 and MAT 182.

EGR 122 - Programming for Engineering and Science (4)

An introduction to computer programming with an emphasis on problem-solving applications in the fields of engineering and science. Includes structured programs, data types, operations, repetitions, arrays, functions, data files, address pointers, and character strings.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): MAT 151.

EGR 202 - Electrical Circuits (4)

A fundamental study of electrical and electronic circuits, and of the principles for analyzing linear and nonlinear circuits. Topics include circuit elements, Ohm's Law, Kirchhoff's Laws, the superposition theorem, Thevenin's and Norton's theorems, amplifiers, electrical networks with capacitors and/or inductors, and alternating current (AC) power.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 262 and PHY 231.

EGR 210 - Statics (3)

A basic analysis of static mechanical systems for civil, as well as structural, and mechanical engineering students. Topics include vector algebra, equilibrium of particles and rigid bodies, forces, moments, couples, equivalent force systems, analysis of simple structures (trusses, beams, frames, cables, and simple machines), friction, and first and second moments of area (moment of inertia).
3 hours lecture.
Prerequisite(s): MAT 231 and PHY 230.

EGR 213 - Mechanics of Materials (3)

An introduction to the analysis of the mechanical properties of materials for civil as well as structural engineering students. Topics include thin-walled pressure vessels, direct shear stresses, torsion, shearing force and bending moment, and elastic deflection of beams, columns, combined stresses, and members subject to combined loadings.
3 hours lecture.
Prerequisite(s): EGR 210.

EGR 214 - Dynamics (3)

An advanced analysis of dynamic mechanical systems (the study of the motion of body under the action of forces) for civil, as well as structural, and mechanical engineering students. Topics include rectilinear and curvilinear motion; and rectangular, tangential, normal, radial, and transverse components. Also covers acceleration, D'Alembert's principle, plane of a rigid body, and rotation.
3 hours lecture.
Prerequisite(s): EGR 210.

ELT - ELECTRONICS

ELT 100 - Electronics Foundations (3)

An introduction to the principles of electronics. Topics include direct and alternating circuits, passive and active components, Ohm's and Watt's Laws, network theorems, series and parallel resonance, and schematic diagrams. This course is offered only at the Arizona Department of Corrections in Douglas.
3 hours lecture.
Prerequisite(s): None.

ELT 102 - Basic Information Systems Installation (8)

A theoretical and practical study of the installation and repair of information systems, focusing on standard practices and techniques of communications-electronics installation.
4 hours lecture, 12 hours laboratory.
Prerequisite(s): Approval of the Army Training and Doctrine Command.

ELT 105 - Introduction to DC Circuits (3)

The analysis of direct current resistive circuits, with an emphasis on Ohm's Law and Kirchhoff's Laws, the superposition theorem, and Thevenin's and Norton's theorems.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

ELT 106 - Introduction to AC Circuits (4)

An introduction to alternating current passive circuits and the application of basic trigonometry and vectors to circuit solutions.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): ELT 105.

ELT 110 - Mathematics for Electronics (3)

A review of basic arithmetic and the study of algebraic principles as they relate to electronic circuitry. Includes fractions, decimals, fundamental algebra, scientific notation, graphing, linear equations, and DC electric circuits.
3 hours lecture.
Prerequisite(s): One year of high school algebra or equivalent.

ELT 125 - Electronic Circuits and Systems (4)

All prerequisite coursework must be completed with a grade of C or better.

A study of large signal diode and filter analysis, voltage, and current regulation, with an emphasis on the field effect transistor as an amplifier, the Miller Effect, frequency response, and feedback.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): ELT 106.

ELT 131 - FCC Regulations (2)

An in-depth preparation for the Federal Communications Commission examination.
2 hours lecture.
Prerequisite(s): None.

ELT 133 - Digital Circuits and Systems (4)

A study of number systems, Boolean algebra, and combinational and sequential logic circuits and systems.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): One year of high school algebra or equivalent.

ELT 135 - Digital and Microprocessor Fundamentals (4)

A study of digital concepts, logic elements, control applications, programming, interfacing, basic networking, and networking to data links. Emphasis is on combinational and sequential logic, and on the memory and support circuits of various components of microcomputers.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): ELT 106.

ELT 222 - Semiconductors and Transistors (4)

A comprehensive study of semiconductor devices, with an emphasis on the qualitative and quantitative analysis of semiconductor circuits. Includes the small signal analysis of diodes and transistors, DC biasing, load lines, approximate hybrid parameters, and multistate systems.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): ELT 106.

ELT 227 - Autonomous Systems and Control Stations (3)

A study of autonomous systems and their capabilities, of control stations, and of electrical power and computer sub-systems. Topics include automated takeoff and landing systems, navigation sub-systems, data link sub-systems and data processing equipment, tactical communication sub-systems, and control workstations.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): ELT 222.

ELT 245 - Communication Electronics I (4)

The application of qualitative and quantitative theoretical concepts to communications circuits. Includes AM and FM receiver systems, voltage and power amplifiers, feedback, oscillators, resonance, filters, coupling, frequency synthesizers, and phaselock techniques.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): ELT 125.

ELT 247 - Communication Electronics II (4)

A continuation of ELT 245 that includes AM and FM transmitter systems, transmission lines, antennas, and propagation devices. Emphasis is on the use of electronic test equipment in the analysis and adjustment of receivers and transmitters.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): ELT 245.

ELT 265 - Microprocessors and Microcomputers (4)

An introduction to the architecture of microprocessors and to the organization, programming, interfacing, and control applications of microcomputers.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): ELT 133.

EMT - EMERGENCY MEDICAL TECHNOLOGY

EMT 174 - Emergency Medical Technician (8)

A study of anatomy and physiology, signs and symptoms of illness and injury, patient assessment, procedures associated with the provision of emergency medical care, triage, basic life support systems, and basic legal responsibilities. Equips students with the knowledge and skills required by the National Registry of Emergency Medical Technicians (NREMT) and the Arizona Department of Health Services - Bureau of Emergency Medical Services (ADHS-BEMS) to practice as an Emergency Medical Technician. Students desiring NREMT/ADHS-BEMS certification must complete the state-required number of clinical experience hours with an Emergency Medical Service provider of out-of-hospital emergency care. Meets the ADHS-BEMS guidelines and is approved by the state of Arizona and the National Registry of EMTs.
Medical Direction: Arizona Certified EMTs are authorized to provide treatment, perform procedures, and utilize skills--as defined by the 2009 National EMS Education Standards--only under the medical control of an approved medical director or certified base hospital.
7 hours lecture, 3 hours laboratory.
Prerequisite(s): RDG 122 or exemption. Students taking this course for state or national certification must be 18 within six months of course completion.

ENG - ENGLISH

ENG 001 - Study Skills (1)

A review of basic techniques for success in college, including practical exercises in listening to lecturers, concentration, time management, note-taking, test-taking, textbook analysis and review, outlining, summarizing, writing essay questions, and using the library and the microcomputer to study spelling and vocabulary.
1 hour lecture.

Prerequisite(s): None.

ENG 090 - English Fundamentals I (3)

Intensive instruction in English grammar and mechanics, terminology and rules, writing and editing at the sentence level, and vocabulary development; emphasis on self-assessment, with the goal of helping students identify their own idiosyncratic patterns of grammar and mechanical errors, including extensive computer-based practice.
3 hours lecture.
Prerequisite(s): Placement test score or permission of instructor.

ENG 095 - English Fundamentals II (3)

A review of standard written English that continues the developmental sequence begun in ENG 090, with focus on grammar, mechanics, and the writing process at the paragraph level, including extensive computer-based practice.
3 hours lecture.
Prerequisite(s): Placement test score, ENG 090, or permission of instructor.

ENG 100 - Intermediate Writing (3)

Introduction to and review of paragraph and essay writing skills with emphasis on unity, support, and coherence of ideas. A general review of vocabulary, homophones, grammar, punctuation, and usage. An introduction to college-level research skills and analysis of short fiction.
3 hours lecture.
Prerequisite(s): Placement test score, ENG 095, or permission of instructor. Recommended Preparation: Keyboarding skills.

ENG 101 - Composition (3)

A study of and practice in the process of writing, methods of organization, and expository patterns. Students write a documented paper based on library and other sources.
3 hours lecture.
Prerequisite(s): Placement test score, or ENG 100 or its equivalent.

ENG 101A - Composition - Flex A (3)

Study of and practice in the process of writing, methods of organization, expository patterns, and a documented paper based on library and other resources, with a review of usage and syntax.
3 hours lecture.
Prerequisite(s): Placement test score, ENG 100, or previous English instructor recommendation. Recommended Preparation: Keyboarding skills.

ENG 101B - Composition - Flex B (3)

Study of and practice in the process of writing, methods of organization, expository patterns, and a documented paper based on library and other resources, with a review of usage and syntax.
3 hours lecture.

Prerequisite(s): Placement test score, ENG 101A, or instructor recommendation. Recommended Preparation: Keyboarding skills.

ENG 102 - English Composition (3)

A continuation of ENG 101 with special emphasis on the techniques involved in writing argument, persuasion, and literary analysis.
3 hours lecture.
Prerequisite(s): ENG 101.

ENG 102H - English Composition (3)

A continuation of ENG 101 with special emphasis on the techniques involved in writing argument, persuasion and literary analysis.
3 hours lecture.
Prerequisite(s): ENG 101 with a grade of A, recommendation of ENG 101 instructor, minimum 3.5 GPA, completion of 12 Cochise College transfer credits, or permission of instructor.

ENG 119 - Creative Writing (3)

An introduction to creative writing which models examples of narrative prose, poetry, and drama. In addition, students' original work is analyzed and critiqued.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 219 - Advanced Creative Writing (3)

A continuation of creative writing which models examples of narrative prose, poetry, and drama. In addition, students' original work is analyzed and critiqued.
3 hours lecture.
Prerequisite(s): ENG 119 or permission of instructor.

ENG 220 - British Literature I (3)

A survey of the major British authors from the beginnings to the early 18th century.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 221 - British Literature II (3)

A survey of the major British authors from the 18th century to the present.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 222 - Introduction to Shakespeare (3)

An exploration of selected histories, tragedies, and problem plays/comedies by William Shakespeare.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 224 - American Literature I (3)

A survey of American literature from the pre-colonial period to 1860.
3 hours lecture.

All prerequisite coursework must be completed with a grade of C or better.

Prerequisite(s): ENG 102 or permission of instructor.

ENG 225 - American Literature II (3)

A survey of selected works by major American authors from post-Civil War to the present.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 228 - Mythology and Folklore (3)

A survey of myths and folktales from classical to present times. Covers the basic concepts of myths and the approaches to understanding them. Includes the role of folklore in culture.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 230 - Literature of the Southwest (3)

Introduction to the literature of the American Southwest, spanning historical through contemporary times. Emphasis on the environmental, historical, and cultural influences on southwestern literary styles, genres, themes, and images.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 231 - Native American Literature (3)

An introduction to Native American literature which includes oral traditions and stories, autobiographies, fiction, and poetry. Emphasis is on the influences of culture and history on Native themes and symbols.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 255 - Introduction to the English Language (3)

An introduction to the basic concepts in the study of the English language: structure, interpretation, variation and changes. Overview of several specializations within linguistics with special attention to language acquisition and application to the teaching of English.
3 hours lecture.
Prerequisite(s): ENG 101, ENG 102, or permission of instructor.

ENG 257 - Literary Magazine Production (3)

Production of the college literary and arts magazine. Includes application of promotion, editing, design, layout, and production techniques.
3 hours lecture.
Prerequisite(s): ENG 101. Cross-Listed as: JRN 257.

ENG 260 - Irish Literature (3)

An exploration of selected traditional, modern, and contemporary Irish literary works.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 265 - Major American Writers (3)

An exploration of selected works by major American authors from the last century to the present.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

ENG 273 - Women and Literature (3)

This course is a survey of literature by and about women, including the study of issues concerning women in literature and the changing images of women. It includes literary analysis of selected writings.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

EQS - EQUINE SCIENCE

EQS 105 - Western Equitation I (3)

An introduction to basic horsemanship and to the fundamental skills of western riding. Topics include safe handling, grooming, and hoof picking. Also covers western saddling and bridling techniques.
1 hour lecture, 4 hours laboratory.
Prerequisite(s): Concurrent enrollment in EQS 120. Prior to enrollment, students must meet the following requirements: 1) score of 75% or higher on horsemanship practical entrance exam, 2) passing evaluation of their horse during the entrance exam, 3) documentation of current vaccines and negative Coggins test, and 4) acceptance into the equine program.

EQS 115 - Equine Evaluation (3)

An introduction to the evaluation of a horse's conformation, structural soundness, athletic potential, trainability, and longevity as they all relate to performance. Covers terms used in judging horses.
3 hours lecture.
Prerequisite(s): None.

EQS 120 - Equine and Stable Management I (3)

A hands-on introduction to daily stable operations in the care and management of horses. Students gain practical experience in basic horse husbandry, horsemanship, and stable management. Topics include feeding, watering, stable sanitation, vaccines, parasite control, safety, horse behavior, health, wounds and their treatments, and recordkeeping.
1 hour lecture, 4 hours laboratory.
Prerequisite(s): Concurrent enrollment in EQS 105. Prior to enrollment, students must meet the following requirements: 1) score of 75% or higher on horsemanship practical entrance exam, 2) passing evaluation of their horse during the entrance exam, 3) documentation of current vaccines and negative Coggins test, and 4) acceptance into the equine program.

EQS 145 - Equine Anatomy and Physiology (3)

An examination of the anatomy and physiology of equine body systems as they apply to raising, conditioning, training, and managing horses. Topics include the skeletal, muscular,

cardiovascular, respiratory, digestive, urinary, nervous, integumentary, and endocrine systems.
3 hours lecture.
Prerequisite(s): AGR 237.

EQS 205 - Western Equitation II (3)

A continuation of basic horsemanship, including improved body position and control, and an advanced western riding skill set. Focus is on rider control, transitions and advanced maneuvers, and riding patterns.
1 hour lecture, 4 hours laboratory.
Prerequisite(s): EQS 105 and concurrent enrollment in EQS 220. Recommended Preparation: Score of 85% or higher on the EQS 105 riding final.

EQS 215 - Equine Lameness (3)

A continuing study of basic equine skeletal anatomy with emphasis on the normal function of front and hind legs and feet. Covers methods of evaluating various deviations that present as lameness in horses. Topics include bodily response to injury, forms of therapy, types of conditioning, and rehabilitative techniques for returning horses to usefulness and performance.
3 hours lecture.
Prerequisite(s): EQS 115.

EQS 220 - Equine and Stable Management II (3)

Advanced hands-on experience in horse and stable management. Students gain additional practical and supervisory experience in daily stable operations and in the care and management of horses. Topics include nutrition, diseases and their prevention, parasite and rodent control, safety, horse handling, wounds and their treatments, inventory control, recordkeeping, and industry-standard operating procedures.
1 hour lecture, 4 hours laboratory.
Prerequisite(s): EQS 120 and concurrent enrollment in EQS 205.

EQS 245 - Equine Reproduction (3)

A study of equine reproduction--selection, breeding, and management practices-in the industry. Topics include anatomy and physiology of the mare and the stallion; detection of the in--heat mare and breeding practices; and management of the pregnant mare, nutritional considerations during pregnancy and lactation, complications of pregnancy and foaling, foaling practices, and management of the foal.
3 hours lecture.
Prerequisite(s): AGR 237 and EQS 145.

ESL - ENGLISH AS A SECOND LANGUAGE

ESL 010 - ESL Grammar I (3)

An introduction to basic English grammar skills for beginning to high-beginning students whose native language is not English, with emphasis on the syntax and structure of simple sentences.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): Placement test score.

ESL 012 - ESL Reading I (3)

An introduction to basic reading skills for beginning to high-beginning students whose native language is not English, with emphasis on vocabulary development, comprehension, and structure.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): Placement test score.

ESL 014 - ESL Writing I (3)

An introduction to basic English writing skills for beginning to high-beginning students whose native language is not English, with emphasis on writing paragraphs about simple topics using certain specific tenses.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): Placement test score.

ESL 016 - ESL Oral Communication I (3)

An introduction to oral communication skills in English for beginning to high-beginning students whose native language is not English, with emphasis on vocabulary, pronunciation, and basic listening and speaking skills.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): Placement test score.

ESL 017 - ESL Intensive Reading and Writing I (3)

An introduction to basic reading and writing skills for beginning to high-beginning students whose native language is not English, with emphasis on vocabulary, reading comprehension, paragraph development, and writing mechanics.
3 hours lecture.
Prerequisite(s): Placement test score.

ESL 018 - ESL Intensive Grammar, Listening, and Speaking I (3)

An introduction to basic grammar and oral communication skills for beginning to high-beginning students whose native language is not English, with emphasis on syntax and structure, pronunciation, and basic listening and speaking skills.
3 hours lecture.
Prerequisite(s): Placement test score.

ESL 020 - ESL Grammar II (3)

A continuation of basic English grammar skills and strategies for high-beginning to low-intermediate students whose native language is not English, with emphasis on the syntax and structure of simple and compound sentences.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 010 or placement test score.

ESL 022 - ESL Reading II (3)

All prerequisite coursework must be completed with a grade of C or better.

A continuation of basic reading skills and strategies for high-beginning to low-intermediate students whose native language is not English, with emphasis on vocabulary development, comprehension, and structure.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 012 or placement test score.

ESL 024 - ESL Writing II (3)

A continuation of basic English writing skills and strategies for high-beginning to low-intermediate students whose native language is not English, with emphasis on topic sentences, paragraph development, and organization.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 014 or placement test score.

ESL 026 - ESL Oral Communication II (3)

A continuation of oral communication skills in English for high-beginning to low-intermediate students whose native language is not English, with emphasis on additional vocabulary, pronunciation, and listening and speaking skills.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 016 or placement test score.

ESL 027 - ESL Intensive Reading and Writing II (3)

A continuation of basic reading and writing skills and strategies for high-beginning to low-intermediate students whose native language is not English, with emphasis on additional vocabulary, reading comprehension, paragraph development, and writing mechanics.
3 hours lecture.
Prerequisite(s): Either ESL 012 and ESL 014, ESL 017, or placement test score.

ESL 028 - ESL Intensive Grammar, Listening, and Speaking II (3)

A continuation of basic grammar and oral communication skills and strategies for high-beginning to low-intermediate students whose native language is not English, with emphasis on syntax and structure, pronunciation, and listening and speaking skills in controlled situations.
3 hours lecture.
Prerequisite(s): ESL 010 and ESL 016, ESL 018, or placement test score.

ESL 030 - ESL Grammar III (3)

A review of English grammar skills and strategies for low-intermediate to intermediate students whose native language is not English, with emphasis on the syntax and structure of simple, compound, and complex sentences.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 020 or placement test score.

ESL 032 - ESL Reading III (3)

A review of reading skills and strategies for low-intermediate to intermediate students whose native language is not English, with emphasis on vocabulary development, comprehension, structure, and basic study skills.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 022 or placement test score.

ESL 034 - ESL Writing III (3)

A review of English writing skills and strategies for low-intermediate to intermediate students whose native language is not English, with emphasis on multi-paragraph development leading to short essays with clearly stated theses.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 024 or placement test score.

ESL 036 - ESL Oral Communication III (3)

A review of oral communication skills and strategies for low-intermediate to intermediate students whose native language is not English, with emphasis on more advanced vocabulary, pronunciation, and listening and speaking skills.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 026 or placement test score.

ESL 037 - ESL Intensive Reading and Writing III (3)

A review of reading and writing skills and strategies for low-intermediate to intermediate students whose native language is not English, with emphasis on more advanced vocabulary, reading comprehension, paragraph development, and writing mechanics.
3 hours lecture.
Prerequisite(s): ESL 022 and ESL 024, ESL 027, or placement test score.

ESL 038 - ESL Intensive Grammar, Listening, and Speaking III (3)

A review of grammar and oral communication skills and strategies for low-intermediate to intermediate students whose native language is not English, with emphasis on advanced sentence structure, and listening and speaking skills in various situations.
3 hours lecture.
Prerequisite(s): ESL 020 and ESL 026, ESL 028, or placement test score.

ESL 040 - ESL Grammar IV (3)

A review of English grammar skills and strategies for intermediate to high-intermediate students whose native language is not English. Focus is on increasing mastery of syntax and improving command of simple, compound, and complex sentence structures.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 030 or placement test score.

ESL 042 - ESL Reading IV (3)

A review of reading skills and strategies for intermediate to high-intermediate students whose native language is not English. Focus is on expanding vocabulary, increasing

All prerequisite coursework must be completed with a grade of C or better.

comprehension and the understanding of structure, and improving study skills.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 032 or placement test score.

ESL 044 - ESL Writing IV (3)

A review of English writing skills and strategies for intermediate to high-intermediate students whose native language is not English. Focus is on improved writing mechanics leading to coherent essays and well developed academic discourse.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 034 or placement test score.

ESL 046 - ESL Oral Communication IV (3)

A review of oral communication skills and strategies for intermediate to high-intermediate students whose native language is not English. Focus is on expanding vocabulary, improving pronunciation, and developing academic listening and speaking skills.
3 hours lecture, 2 hours laboratory.
Prerequisite(s): ESL 036 or placement test score.

ESL 047 - ESL Intensive Reading and Writing IV (3)

A review of fundamentals and an introduction to more complex reading and writing skills and strategies for intermediate to high-intermediate students whose native language is not English. Focus is on increasing vocabulary and on improving reading comprehension and writing mechanics.
3 hours lecture.
Prerequisite(s): ESL 032 and ESL 034, ESL 037, or placement test score.

ESL 048 - ESL Intensive Grammar, Listening, and Speaking IV (3)

A review of fundamentals and an introduction to more complex grammar and oral communication skills and strategies for intermediate to high-intermediate students whose native language is not English. Focus is on improving sentence structure, and on improving listening and speaking skills in various situations.
3 hours lecture.
Prerequisite(s): ESL 030 and ESL 036, ESL 038, or placement test score.

ESL 070 - ESL for Professionals I (6)

An introduction to basic grammar and oral communication skills for students with little or no knowledge of English. Emphasis is on basic vocabulary, pronunciation, and listening and speaking skills used in daily activities.
6 hours lecture.
Prerequisite(s): Placement test score.

ESL 072 - ESL for Professionals II (6)

A continuation of basic grammar and oral communication skills for high-beginning students whose native language is not English. Emphasis is on vocabulary, pronunciation, and listening and speaking skills used in daily activities and professional communications.
6 hours lecture.
Prerequisite(s): ESL 070 or placement test score.

ESL 074 - ESL for Professionals III (6)

A review of grammar and oral communication skills and strategies for low-intermediate students whose native language is not English. Focus is on advanced sentence structure and on listening and speaking skills used to express personal views and to voice professional communications.
6 hours lecture.
Prerequisite(s): ESL 072 or placement test score.

ESL 076 - ESL for Professionals IV (6)

A review of grammar and oral communication skills and strategies for high-intermediate students whose native language is not English. Emphasis is on expanding vocabulary, improving sentence structure, and developing advanced listening and speaking skills for professional communications.
6 hours lecture.
Prerequisite(s): ESL 074 or placement test score.

FON - FOOD AND NUTRITION

FON 101 - Nutrition (3)

This course provides a study of basic nutrition principles and their application to the normal diet, and to health and cultural patterns. Some emphasis will be placed on diet modification in common health disorders, i.e., obesity, heart disease, and diabetes.
3 hours lecture.
Prerequisite(s): RDG 110, placement in or completion of RDG 122, or exemption.

FON 201 - Applied Nutrition (3)

This course provides an understanding of the various aspects of nutrition and prepares students for further study of health and how it is related to nutrition and activity. Students will increase their awareness of nutrition, the structure and function of the digestive system, aspects of nutrition within our society, and methods to enhance health by dietary changes.
3 hours lecture.
Prerequisite(s): FON 101 or permission of instructor.

FOR - FORENSIC SCIENCE

FOR 105 - Forensic Science: Physical Evidence (4)

An introduction to the basic concepts of physical science and their application to forensic science, including the scientific

examination, comparison, and analysis of physical evidence for forensic purposes. Topics include the role of forensic science and evidence analysis as they relate to motion, optics, pattern evidence, and firearms and ballistics. The course also examines the basic principles of atomic theory, nuclear chemistry, and weapons of mass destruction.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 081 or higher, and RDG 122 or exemption.

FST - FIRE SCIENCE

FST 100 - Introduction to Firefighting (3)

An introduction to firefighting including safety, fire behavior, equipment, operations, rescue, and communications.
3 hours lecture.
Prerequisite(s): None.

FST 101 - Firefighter Safety and Entry-Level Operations (6)

The first in a series of four courses designed to train the student for a career in the fire service. This course will cover topics such as basic wildland firefighting, hazardous material first responder operations, firefighter orientation, fire behavior, building construction, and firefighter safety.
5 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

FST 102 - Firefighter Rescue Operations (4)

The second in a series of four courses designed to train students for a career in the fire service. Covers chapters 6-10 of Essentials of Fire Fighting, published by the International Fire Service Training Association (IFSTA). Topics include portable fire extinguishers, ropes and knots, rescue operations, extrication, forcible entry tools, ground ladders, and ventilation operations.
3 hours lecture, 1.5 hours laboratory.
Prerequisite(s): FST 101 or permission of fire science program coordinator.

FST 103 - Firefighter Procedures (4)

The third in a series of four courses designed to train students for a career in the fire service. Covers chapters 11-18 of Essentials of Fire Fighting, published by the International Fire Service Training Association (IFSTA). Topics include ventilation, basic hose procedures, loss control, fire control, and communications.
3 hours lecture, 1.5 hours laboratory.
Prerequisite(s): FST 102 or permission of fire science program coordinator.

FST 104 - Fire Support Services (4)

The last in a series of four courses designed to train students for a career in the fire service. Covers chapters 11-18 of Essentials of Fire Fighting, published by the International Fire Service Training Association (IFSTA).Topics include

hazardous-materials first responder operations, fire detection systems, basic causes and origins of fires, and fire education.
3 hours lecture, 1.5 hours laboratory.
Prerequisite(s): FST 103 or permission of fire science program coordinator.

FST 113 - Firefighter Fitness I (3)

A practical application of the skills taught in FST 101 and FST 102 with an emphasis on developing the basic level of fitness required in the firefighter profession. Identifies and introduces required firefighter skills, proper nutrition principles, strength-training and endurance techniques, and job-related agility assessments.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): Concurrent enrollment in FST 101 or FST 102.

FST 114 - Firefighter Fitness II (3)

A practical application of the skills taught in FST 103 and FST 104 with an emphasis on further developing basic firefighter skills as they pertain to job-related fitness levels. Includes the mental aspects of job performance as well as agility and personal fitness assessments.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): FST 113, and concurrent enrollment in FST 103 or FST 104.

FST 115 - Fire Service Apparatus Driver/Operator (3)

An introduction to the operation of different types of fire service apparatus. Includes driver/operator responsibilities, operation of emergency vehicles and aerial apparatus; inspection, testing, and maintenance of apparatus; and water supply systems, hydraulic calculations, and fire pump operations.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): None. Recommended Preparation: Fire department affiliation, or FST 101 and FST 102.

FST 121 - Hazmat Technician I (6)

This course is the first in a series of three courses designed to train students in advanced techniques of hazardous materials emergency response. Upon completion of the three-course segment, students will be eligible to test for state Technician Certification in Hazardous Materials Emergency Response (OSHA 1910.120 & NFPA 472) Safety and Entry Level Operations.
6 hours lecture.
Prerequisite(s): Fire department affiliation.

FST 222 - Hazmat Technician II (5)

This course is the second in a series of three courses designed to train students in advanced techniques of hazardous materials emergency response. Upon completion of the three-course segment, students will be eligible to test for state Technician Certification in Hazardous Materials Emergency

All prerequisite coursework must be completed with a grade of C or better.

Response (OSHA 1910.120 and NFPA 472) Safety and Entry Level Operations.
5 hours lecture.
Prerequisite(s): FST 121 and fire department affiliation.

FST 223 - Hazmat Technician III (5)

This course is the third in a series of three courses designed to train students in advanced techniques of hazardous materials emergency response. Upon completion of the three-course segment, students will be eligible to test for state Technician Certification in Hazardous Materials Emergency Response (OSHA 1910.120 and NFPA 472) Safety and Entry Level Operations.
5 hours lecture.
Prerequisite(s): FST 121, FST 222, and fire department affiliation.

FST 224 - Field Experience in Fire Science Technology (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in fire science technology and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in fire science technology and permission of the cooperative education program coordinator. Recommended Preparation: Sophomore standing and faculty recommendation.

FST 224 - Field Experience in Fire Science Technology (2-4)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in fire science technology and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in fire science technology and permission of the cooperative education program coordinator. Recommended Preparation: Sophomore standing and faculty recommendation.

GEO - GEOGRAPHY

GEO 101 - Physical Geography (4)

An introduction to the various features of the earth's physical environment including the origin and development of landforms and the composition of the earth's crust, weather, climate, vegetation, soils and mineral resources.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): RDG 122 or exemption, and completion of or concurrent enrollment in MAT 081 or higher, and ENG 100 or concurrent enrollment.

GEO 121 - World Regional Geography (3)

An exploration of major world geographical regions with emphasis upon human cultural adaptation to the physical habitat.
3 hours lecture.
Prerequisite(s): ENG 101 or concurrent enrollment, and RDG 122 or exemption.

GLG - GEOLOGY

GLG 101 - Introduction to Geology I (Physical) (4)

An introduction to the physical aspects of the Earth's crust. Includes scientific measurements, maps, and the scientific method; the hands-on identification and assessment of rocks and minerals; and basic geology--earth composition, surface processes, subsurface processes, investigative tools, geologic structures, geologic resources, and Earth history.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None. Recommended Preparation: MAT 081 or higher, and RDG 122 or exemption.

GLG 102 - Introduction to Geology II (Historical) (4)

An introduction to the basic geologic principles underlying historical geology and the evolution of landforms and life forms through geologic time. Deals with the identification and classification of major fossil groups; the identification and interpretation of rocks and of sedimentary textures, environments, and structures; plate tectonics, geologic time, and planetary evolution; and human evolution. Teaches how geologic features such as rock types and fossils are used to interpret and date past events. Emphasizes the evolving geology of North America and the evolution of life on Earth.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None. Recommended Preparation: GLG 101, MAT 081 or higher, and RDG 122 or exemption.

GLG 192 - Special Topics and Applications in Geology (0.25-4)

A rotating forum/seminar/course or supplement to an existing geology course emphasizing geology or related topics. The title and credit hours for this course will vary each term depending on the topic.
Prerequisite(s): None. Recommended Preparation: Permission of instructor is strongly recommended.

GTC - GENERAL TECHNOLOGY

GTC 105 - Manufacturing Materials and Processes (3)

The study of manufacturing materials, operations, procedures, and processes, with emphasis on their utilization in manufacturing design.
3 hours lecture.
Prerequisite(s): None.

GTC 121 - Painting and Finishing Techniques (3)

Student preparation for proficiency in patching, repainting, and maintaining painted surfaces on the interior and exterior of building and structures with an emphasis on surface preparation, the selection of paints, their application and the safe and proper storage of all painting materials and tools. This course is offered only at the Arizona Department of Corrections in Douglas.
2 hours lecture, 4 hours laboratory.
Prerequisite(s): None.

GTC 122 - Refrigeration I (3)

A course to provide the student with proficiency in inspecting, troubleshooting, repairing and maintaining air conditioning and evaporative cooling systems with an emphasis on scheduling of seasonal maintenance, start-up and shut-down procedures. This course is offered only at the Arizona Department of Corrections in Douglas.
2 hours lecture, 4 hours laboratory.
Prerequisite(s): None.

GTC 128 - Hazardous Materials and the EPA (3)

An introduction to the safe handling of refrigerants and hazardous materials in relation to the air conditioning and refrigeration field. Emphasis will be placed on EPA regulations and guidelines. This course is offered only at the Arizona Department of Corrections in Douglas.
3 hours lecture.
Prerequisite(s): None.

GTC 222 - Refrigeration II (3)

A continuation of the fundamentals of refrigeration with an emphasis on the function of motors, controls, and the major components of the refrigeration system, to include evaporators, condensers, compressors, and expansion devices. This course is offered only at the Arizona Department of Corrections in Douglas.
3 hours lecture.
Prerequisite(s): GTC 122.

GTC 223 - Heating and Air Conditioning (4)

An introduction to the various types of heating and air conditioning systems. Electrical devices, valves, controls and duct systems will also be explored. An emphasis will be placed on troubleshooting and repair. This course is offered only at the Arizona Department of Corrections in Douglas.
4 hours lecture.
Prerequisite(s): GTC 222.

GTC 227 - Electricity and Wiring for HVAC/R (3)

A comprehensive study of electrical circuits and wiring diagrams used in the heating, ventilation, air conditioning, and refrigeration fields. This course will challenge students' understanding of electrical concepts, simple circuits, wiring techniques, troubleshooting, and repair strategies. This course is offered only at the Arizona Department of Corrections in Douglas.

2 hours lecture, 2 hours laboratory.
Prerequisite(s): None.

HIS - HISTORY

HIS 110 - History of the United States 1607-1877 (3)

A study of the development of the American nation from its colonial beginnings through Reconstruction, with emphasis on the events and forces leading to the Revolution, the Constitution, westward expansion, sectionalism, and the Civil War.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption.

HIS 111 - History of the United States Since 1877 (3)

A study of the social, economic, and political forces that have shaped the United States from the post-Reconstruction era to the present. Emphasis is on domestic and foreign affairs in the country's last century of development.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption.

HIS 192 - Special Topics in History (0.5-1)

Topics emphasizing local, regional, and international historical events vary according to student needs and interests.
Prerequisite(s): None.

HIS 201 - History of Women in the United States (3)

The history of women in United States society from colonial times to the present with an emphasis on female leadership; the social, political, and economic roles of women; and the impact of women on the United States' historical evolution.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and ENG 101.

HIS 229 - History of Mexico I (3)

A study of political, economic, social, and cultural developments from pre-Columbian civilizations to the War for Independence.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and ENG 101.

HIS 230 - History of Mexico II (3)

A study of political, economic, social, and cultural developments from the War for Independence to modern times.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and ENG 101.

HIS 240 - Survey of Western Civilization I (3)

A study of major historical trends from the emergence of western civilization through the legacy of Rome, with emphasis on the cultural development of humankind and historical relationships.
3 hours lecture.
Prerequisite(s): ENG 101, and RDG 122 or exemption.

All prerequisite coursework must be completed with a grade of C or better.

HIS 241 - Survey of Western Civilization II (3)

A study of major historical trends in western civilization from the Middle Ages to the emergence of nation-states and the Enlightenment, with emphasis on the cultural development of humankind and historical relationships.
3 hours lecture.
Prerequisite(s): ENG 101, and RDG 122 or exemption.

HIS 242 - Survey of Western Civilization III (3)

A study of major historical trends in western civilization from the eve of the French Revolution to the present, with emphasis on the cultural development of humankind and historical relationships.
3 hours lecture.
Prerequisite(s): ENG 101, and RDG 122 or exemption.

HIS 274 - The Holocaust (3)

A study of the causes, events, and legacies of World War II's Holocaust. Includes the history of European anti-Semitism, the historical antecedents and preconditions of the Holocaust, the Third Reich and the creation of a racial state, the "Final Solution," and the aftermath of the Holocaust. Also addresses the challenges posed by similar genocides in contemporary history. 3 hours lecture.
Prerequisite(s): ENG 101.

HLT - HEALTH TECHNOLOGY

HLT 100 - Health Technology Careers (3)

An exploration of healthcare careers and related job skills. Topics include ethics and professional conduct, safety and infection control practices, communication, and basic anatomy and physiology.
3 hours lecture.
Prerequisite(s): None.

HLT 101 - Medical Terminology (2)

An introduction to the body systems approach to learning medical language. Students use word parts to build, analyze, define, and spell medical terms. Topics include structural, directional, surgical, and diagnostic terms; disease and disorders; and pronunciations and abbreviations.
2 hours lecture.
Prerequisite(s): RDG 122 or exemption.

HLT 109 - Nursing Assistant (5)

Approved by the Arizona State Board of Nursing to prepare students for nursing assistant certification. Emphasis is on communication, patient safety, anatomy and physiology, specific patient-care skills, and patient rights. Includes the nursing process and the legal and professional responsibilities of the nursing assistant. Also covers the basic physical, psychosocial, and cultural needs of all patients, with special emphasis on the geriatric population.
3 hours lecture, 6 hours laboratory.

Prerequisite(s): Appropriate placement test score, or MAT 071 or higher; RDG 110, placement into RDG 122, or exemption; and current American Heart Association CPR and First Aid certification for healthcare providers or concurrent enrollment in HLT 111. Students taking this course for state certification must be 16 prior to course completion, provide documentation of U.S. citizenship or qualifying alien status, undergo fingerprinting, pass a background check, and have received absolute discharge from the sentence for any felony conviction no less than 5 years prior to submitting their application for state certification.

HLT 110 - CPR (0.5)

Training in cardiopulmonary resuscitation for healthcare providers in compliance with American Heart Association requirements. A CPR card for healthcare providers is awarded upon successful course completion.
0.5 hour lecture.
Prerequisite(s): None.

HLT 111 - CPR and First Aid (1)

Training in cardiopulmonary resuscitation and basic first aid for healthcare providers in compliance with American Heart Association requirements. CPR and first aid cards for healthcare providers are awarded upon successful course completion.
1 hour lecture.
Prerequisite(s): None.

HLT 112 - Assisted Living Facility Caregiver (2)

Training in personal, supervisory, and direct care services for current Arizona certified nursing assistants. Topics include medication management, infection control, nutrition and safety, and emergency management; communication, mental health, and social needs; and legal and ethical issues. Upon course completion, students are eligible to take the Arizona Assisted Living Facility Caregiver exam for certification in the state of Arizona.
2 hours lecture, 1 hour laboratory.
Prerequisite(s): Current CPR, first aid, and CNA certifications; minimum 18 years of age and three months of related experience.

HLT 128 - Medication Assistant - Certified (3)

The first of two courses approved by the Arizona State Board of Nursing to prepare Certified Nursing Assistants for medication assistant licensure. Emphasis is on the role of the medication assistant, drug laws, medication calculations, and the safe administration of various medications.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): HLT 109 or equivalent, and six months working experience as a Certified Nursing Assistant.

HLT 129 - Medication Assistant Externship (3)

The second of two courses approved by the Arizona State Board of Nursing to prepare Certified Nursing Assistants for

All prerequisite coursework must be completed with a grade of C or better.

medication assistant licensure. Emphasis is on the safe administration and proper documentation of drugs in a long-term care clinical setting, under the supervision of a licensed nurse.
3 hours lecture.
Prerequisite(s): HLT 128.

HLT 139 - Medical Assistant I (8)

Teaches the concepts, skills, and terminology necessary to function as a medical assistant. Emphasis is on entry-level administrative skills and clinical functions required in a medical office, and on communication skills for patient care assessment. The laboratory portion of the course simulates various situations which teach the specific skills needed in a medical office.
7 hours lecture, 3 hours laboratory.
Prerequisite(s): BIO 160 or concurrent enrollment, HLT 101 or concurrent enrollment, MAT 081 or higher, and placement in RDG 122 or exemption. Prior to enrollment, students must also meet the following requirements: 1) Minimum 18 years of age upon course completion, 2) negative tuberculin (TB) skin test or negative chest x-ray report, 3) current Arizona Department of Public Safety Fingerprint Clearance Card, and 4) acceptance into the medical assistant program.

HLT 140 - Medical Assistant II (12)

A continuation of HLT 139, this course teaches students additional concepts, skills, and terminology. Emphasis is on administrative aspects of running a medical practice, such as billing and coding, scheduling appointments, and keeping electronic medical records. The laboratory portion of the course simulates hands-on application in a medical office setting. The clinical externship focuses on therapeutic skills and on effective communication with clients, physicians, physician assistants, nurse practitioners, and other health care professionals. Students learn the front and back office skills required to pass the Medical Assistant certification examination.
7 hours lecture, 16 hours laboratory.
Prerequisite(s): BIO 160, HLT 101, HLT 111, and HLT 139.

HON - HONORS

HON 101 - Introduction to Honors (1)

An introduction to the honors philosophy, and a study of critical and creative thinking skills, learning techniques, academic ethics, research methods, and presentation practices.
1 hour lecture.
Prerequisite(s): None.

HON 250 - Honors: Individual Project (1-4)

A contractual project between student and faculty mentor focusing on creative scholarship. Contracts for honors projects are available at www.cochise.edu/honors.

Prerequisite(s): Permission of the honors chair. Recommended Preparation: ENG 102H.

HON 260 - The Human Quest for Utopia (3)

An interdisciplinary exploration of the history, literature, culture, art, philosophy, technology, sciences, and economies of utopian communities.
3 hours lecture.
Prerequisite(s): ENG 102 and permission of the honors chair. Recommended Preparation: ENG 102H.

HPE - HEALTH AND PHYSICAL EDUCATION

HPE 104A - Sculpt and Stretch (1)

An introduction to exercises and activities focusing on the development of muscular strength, muscular endurance, and overall flexibility. Also includes the discussion and practice of breathing and relaxation techniques that promote wellness.
1 hour lecture, 1 hour laboratory.
Prerequisite(s): None.

HPE 104B - Sculpt and Stretch - Extended Duration (2)

An introduction to exercises and activities focusing on the development of muscular strength, muscular endurance and overall flexibility. Also includes the discussion and practice of breathing and relaxation techniques that promote wellness. HPE 104B is an extended duration version of HPE 104A and as such is devoted to optimizing physical fitness and wellness.
1 hour lecture, 2 hours laboratory.
Prerequisite(s): None.

HPE 106A - Cross Training Aerobic Exercise (1)

A practical introduction to cross training aerobic exercise with emphasis upon the acquisition of basic skills and movements as well as the improvement and maintenance of individual fitness.
1 hour lecture, 1 hour laboratory.
Prerequisite(s): None.

HPE 109 - Latin Dance I (1)

Introduction to the theory and practice of modern Latin dance, with a focus on development of movement and basic Latin dance steps. This course introduces students to five fundamental dance elements, including rhythm, timing, syncopation, form, and interpretation.
1 hour lecture, 1 hour laboratory.
Prerequisite(s): None.

HPE 109A - Modern Dance (1)

This course will introduce students to the fundamentals of modern dance and will develop an aesthetic understanding of shape, level and space, muscular strength and coordination, and terminology associated with modern dance. It will also provide an introduction into the historical development of

modern dance, an opportunity to create choreography, and the experience of dance as an expressive art form.
1 hour lecture, 1 hour laboratory.
Prerequisite(s): None.

HPE 110A - Body Conditioning (1)

A practical application of the accepted fitness principles and concepts conducive to the development and maintenance of an adequate level of overall fitness. The course introduces the student to aerobic and anaerobic activities that promote cardiovascular endurance, flexibility, and muscular endurance.
1 hour lecture, 1 hour laboratory.
Prerequisite(s): None.

HPE 110B - Body Conditioning - Extended Duration (2)

A practical application of the accepted fitness principles and concepts conducive to the development and maintenance of an adequate level of overall fitness. The course introduces the student to aerobic and anaerobic activities that promote cardiovascular endurance, flexibility, and muscular endurance.
1 hour lecture, 2 hours laboratory.
Prerequisite(s): None.

HPE 111B - Body Dynamics - Extended Duration (2)

A practical introduction to the principles and concepts of physical fitness through the use of various exercise equipment and activities.
1 hour lecture, 2 hours laboratory.
Prerequisite(s): None.

HPE 112A - Weight Training (1)

An activity course introducing basic skills and knowledge necessary to develop a proper weight training program and cardiovascular development.
1 hour lecture, 1 hour laboratory.
Prerequisite(s): None.

HPE 112B - Weight Training - Extended Duration (2)

An activity course introducing basic skills and knowledge necessary to develop a proper weight training program for cardiovascular development.
1 hour lecture, 2 hours laboratory.
Prerequisite(s): None.

HPE 113A - Athletic Conditioning I (2)

A practical introduction to fitness activities conducive to the development of strength, flexibility, endurance, and cardiovascular health. Designed to enhance the performance of the first-semester student-athlete.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): None.

HPE 113B - Athletic Conditioning II (2)

A continuation of fitness activities conducive to the development of strength, flexibility, endurance, and cardiovascular health in the second-semester student-athlete.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 113A and acceptance on a college sports team.

HPE 113C - Athletic Conditioning III (2)

Advanced fitness activities conducive to the continued development of intermediate strength, flexibility, endurance, and cardiovascular health in the third-semester student-athlete.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 113B.

HPE 113D - Athletic Conditioning IV (2)

Advanced fitness activities conducive to the continued development of advanced strength, flexibility, endurance, and cardiovascular health in the fourth-semester student-athlete.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 113C.

HPE 115 - Personal Fitness (2)

A practical introduction to the theory and skills of lifetime fitness with emphasis upon aerobic activities to maintain and/or improve the student's cardio-respiratory system and overall fitness level. Student fitness profiles are developed and utilized to determine an individualized exercise program in the exercise physiology lab.
1 hour lecture, 2 hours laboratory.
Prerequisite(s): None.

HPE 116 - Personal Fitness II (1-2)

A continuation of the theory and skills of lifetime fitness introduced in HPE 115 Personal Fitness I. Student fitness profiles are developed and utilized to determine an individualized exercise program in the exercise physiology lab.
Prerequisite(s): HPE 115 or permission of instructor.

HPE 117A - Individualized Fitness (1)

An introduction to the fundamentals of physical fitness with emphasis upon the theoretical principles of wellness and upon those physical activities and behavioral changes necessary to develop and sustain a high level of fitness. Includes the development of an individualized fitness program, involving a variety of physical activities.
1 hour lecture.
Prerequisite(s): None. Recommended Preparation: Recent physical examination which identifies any physical activity limitations.

HPE 117B - Individualized Fitness (2)

An introduction to the fundamentals of physical fitness with emphasis upon the theoretical principles of wellness and upon those physical activities and behavioral changes necessary to

develop and sustain a high level of fitness. Includes the development of an individualized fitness program, involving a variety of physical activities.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): None. Recommended Preparation: Recent physical examination which identifies any physical activity limitations.

HPE 118B - Indoor Court Sports and Physical Fitness (3)

An introduction to indoor court sports including squash, handball, wallyball, and racquetball. Also presents the information and skills necessary for proper weight training and jogging as they relate to indoor court sports.
3 hours lecture.
Prerequisite(s): None.

HPE 135 - Open Water SCUBA Diver (3)

The Open Water SCUBA Diver course adheres to the guidelines and requirements of PADI's Open Water Diver courses. This course provides the student with the training, knowledge and skills needed to safely experience the underwater environment.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): Intermediate swimming ability.

HPE 145 - Beginning Golf (1)

A practical introduction to the basic skills, rules, and etiquette of golf to prepare the student for participation in a lifelong leisure activity.
1 hour lecture, 1 hour laboratory.
Prerequisite(s): None.

HPE 146 - Intermediate Golf (1)

A practical introduction to the advanced skills and strategies of golf with emphasis on the acquisition of a lifelong leisure activity.
1 hour lecture, 1 hour laboratory.
Prerequisite(s): HPE 145.

HPE 153 - Volleyball (1)

A practical introduction to the basic skills, rules, and strategies of recreational volleyball to prepare the student for participation in a lifelong leisure activity.
1 hour lecture, 1 hour laboratory.
Prerequisite(s): None.

HPE 170A - Baseball I (1)

Designed to allow the first-semester student-athlete to develop and demonstrate the minimum skills and strategies to compete in baseball at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): Students must try out for the team.

HPE 170B - Baseball II (1)

Designed to allow the student-athlete to develop and demonstrate the basic skills and strategies to compete in baseball at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 170A and acceptance on the team.

HPE 170C - Baseball III (1)

Designed to allow the more advanced student-athlete to develop and demonstrate the intermediate skills and strategies to compete in baseball at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 170B.

HPE 170D - Baseball IV (1)

Designed to allow the fourth-semester student-athlete to develop and demonstrate the advanced skills and strategies to compete in baseball at the intercollegiate level. Also provides the opportunity to demonstrate leadership and sportsmanship on and off the field.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 170C.

HPE 171A - Men's Basketball I (1)

Designed to allow the first-semester student-athlete to develop and demonstrate the minimum skills and strategies to compete in men's basketball at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): Students must try out for the team.

HPE 171B - Men's Basketball II (1)

Designed to allow the student-athlete to develop and demonstrate the basic skills and strategies to compete in men's basketball at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 171A and acceptance on the team.

HPE 171C - Men's Basketball III (1)

Designed to allow the more advanced student-athlete to develop and demonstrate the intermediate skills and strategies to compete in men's basketball at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 171B.

HPE 171D - Men's Basketball IV (1)

Designed to allow the fourth-semester student-athlete to develop and demonstrate the advanced skills and strategies to compete in men's basketball at the intercollegiate level. Also provides the opportunity to demonstrate leadership and sportsmanship on and off the court.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 171C.

HPE 172A - Women's Basketball I (1)

Designed to allow the first-semester student-athlete to develop and demonstrate the minimum skills and strategies to compete in women's basketball at the intercollegiate level.

All prerequisite coursework must be completed with a grade of C or better.

1 hour lecture, 3 hours laboratory.
Prerequisite(s): Students must try out for the team.

HPE 172B - Women's Basketball II (1)

Designed to allow the student-athlete to develop and demonstrate the basic skills and strategies to compete in women's basketball at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 172A and acceptance on the team.

HPE 172C - Women's Basketball III (1)

Designed to allow the more advanced student-athlete to develop and demonstrate the intermediate skills and strategies to compete in women's basketball at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 172B.

HPE 172D - Women's Basketball IV (1)

Designed to allow the fourth-semester student-athlete to develop and demonstrate the advanced skills and strategies to compete in women's basketball at the intercollegiate level. Also provides the opportunity to demonstrate leadership and sportsmanship on and off the court.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 172C.

HPE 174A - Women's Soccer I (1)

Designed to allow the first-semester student-athlete to develop and demonstrate the minimum skills and strategies to compete in women's soccer at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): Students must try out for the team.

HPE 174B - Women's Soccer II (1)

Designed to allow the student-athlete to develop and demonstrate the basic skills and strategies to compete in women's soccer at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 174A and acceptance on the team.

HPE 174C - Women's Soccer III (1)

Designed to allow the more advanced student-athlete to develop and demonstrate the intermediate skills and strategies to compete in women's soccer at the intercollegiate level.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 174B.

HPE 174D - Women's Soccer IV (1)

Designed to allow the fourth-semester student-athlete to develop and demonstrate the advanced skills and strategies to compete in women's soccer at the intercollegiate level. Also provides the opportunity to demonstrate leadership and sportsmanship on and off the field.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): HPE 174C.

HPE 179 - Lifelong Wellness (3)

An introduction to nutrition, stress management, fitness regimens, and other practices as they relate to wellness and optimum health. Under faculty supervision, students develop an individualized program of diet and exercise.
3 hours lecture.
Prerequisite(s): None.

HPE 193 - Theory of Coaching Baseball (3)

An overview of coaching skills and theory with emphasis upon coaching baseball at the youth and secondary levels. Introduces the student to the aspects of coaching baseball at the collegiate level.
3 hours lecture.
Prerequisite(s): None.

HPE 194 - Theory of Coaching Basketball (3)

A theoretical and practical study of coaching with emphasis upon coaching basketball at the youth and secondary levels. Introduces the student to the aspects of coaching basketball at the collegiate level.
3 hours lecture.
Prerequisite(s): None.

HPE 197 - Care and Prevention of Athletic Injuries (3)

A theoretical and practical study of common athletic injuries including appraisal, treatment, prevention, psychological implications, and legal issues.
3 hours lecture.
Prerequisite(s): None.

HUM - HUMANITIES

HUM 101 - Humanities in Contemporary Life (3)

A study of contemporary thought, literature, art, and music as they occur in the mass media: print, motion pictures, television, and the Internet.
3 hours lecture.
Prerequisite(s): ENG 100 or placement in ENG 101.

HUM 110 - Introduction to Film (3)

A study of film as an art form and medium for the expression of ideas, and an introduction to the principles of film criticism.
3 hours lecture.
Prerequisite(s): None.

HUM 115 - Cultural Heritage of the Southwest (3)

A general survey of the cultural heritage of the Southwest. A cultural look at the significant events, historical figures, customs, ways and institutions that have contributed to the unique cultural heritage in the Southwest.
3 hours lecture.
Prerequisite(s): ENG 101 or permission of instructor.

HUM 116 - Middle Eastern Humanities (3)

All prerequisite coursework must be completed with a grade of C or better.

A study of the art, religion, literature, music, philosophy, and cultural traditions of the Middle Eastern world.
3 hours lecture.
Prerequisite(s): ENG 101 or permission of instructor.

HUM 200 - Film History (3)

Survey of film history focusing on the development of important themes, movements, and techniques in international narrative films.
3 hours lecture.
Prerequisite(s): ENG 101 and ENG 102. Recommended Preparation: HUM 110.

HUM 205 - Cultural Studies through the Humanities I (3)

Art, architecture, and ideas from ancient times through the Renaissance.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

HUM 206 - Cultural Studies through the Humanities II (3)

Art, architecture, and ideas from the Reformation to the present.
3 hours lecture.
Prerequisite(s): ENG 102 or permission of instructor.

HUM 210 - Foreign Film Classics (3)

A survey of major foreign films from 1893 through the present, emphasizing film criticism and theory.
3 hours lecture.
Prerequisite(s): ENG 101 or permission of instructor.

IOS - INTELLIGENCE OPERATIONS STUDIES

IOS 100 - Introduction to Intelligence Operations Studies (3)

Introduces students to the basic elements of intelligence: collection, analysis, dissemination, counterintelligence, and covert action. Examines the difference between intelligence and information. Details the structure, functions, capabilities, and contributions of the national intelligence community, including Congress, the military, joint and unified commands, and law enforcement agencies. Students will study the various steps of the intelligence cycle and learn their purposes.
3 hours lecture.
Prerequisite(s): None.

IOS 101 - Counterintelligence Investigations (3)

Introduces students to the principles, objectives, procedures, and reports used to conduct counterintelligence investigations within various investigational contexts. This process includes the planning, communicating, operating, credentialing, and investigating processes associated with counterintelligence investigations.
3 hours lecture.
Prerequisite(s): None.

IOS 102 - Security Programs (3)

Introduces students to the principles, objectives, and basic procedures used to develop, account for, control, protect, and arrange for the eventual destruction of sensitive information and material. Helps equip students for the investigation of security crimes and the protection of classified information and material in the custody of counterintelligence agents.
3 hours lecture.
Prerequisite(s): None.

IOS 103 - Intelligence Law and Administration of Justice (1)

Introduces students to the legal principles of intelligence law as those principles apply to counterintelligence investigations and operations. Prepares students to use the principles of intelligence law and the administration of justice in the performance of their duties as counterintelligence agents.
1 hour lecture.
Prerequisite(s): None.

IOS 104 - Analytical Process and Product (3)

Introduces students to the three analytical processes in the intelligence cycle: intelligence preparation of the battlefield, intelligence surveillance and reconnaissance, and targeting. Students learn to leverage analytical products associated with these processes such as PMESII, ASCOPE, Link-Pattern-Nodal analysis, threat characteristics, threat objectives, threat templates, the oil spot, and the situation template.
3 hours lecture.
Prerequisite(s): None.

IOS 105 - Interrogation Operations (3)

Introduces students to the basic skills and knowledge to support the collection, dissemination, and protection of intelligence information during human intelligence operations. Using conventional and unconventional sources, students perform as members of an interrogation team during simulated operations at both tactical and strategic levels.
3 hours lecture.
Prerequisite(s): None.

IOS 106 - Map Reading and Analysis (3)

A study of map reading and analysis including marginal data, identification of terrain features, and calculation of azimuths. Provides students with analytical skills essential to information gathering, collection capabilities, and interpretation of assets.
3 hours lecture.
Prerequisite(s): None.

IOS 108 - Signal Theory (3)

A study of the basic skills to intercept, analyze, and report non-communication signals. Includes the handling of classified material. Focus is on signal and wavelength theory, radar theory, electronic intelligence parameters, and basic collection operations. Students learn about worldwide non-

communications threats to include weapons systems operations, message information extraction, opposing forces operations, and situation analysis.
3 hours lecture.
Prerequisite(s): None.

IOS 109 - Signal Analysis and Security (3)

Trains students to operate the All Source Analysis System-Single Source Enclave (ASAS-SSE) software, to display automated situation map updates, and to operate electronic messaging as analysis control element team members.
3 hours lecture.
Prerequisite(s): None.

IOS 110 - Remote Sensing (3)

Trains students to analyze hardcopy and softcopy imagery collected from the electronic magnetic spectrum. Students use intelligence databases as well as automated processing and dissemination systems to provide valid, accurate, and timely intelligence to appropriate agencies.
3 hours lecture.
Prerequisite(s): None.

IOS 111 - Information Security for Intelligence Operations (1)

A brief overview of information security as it applies to intelligence operations in the military (INFOSEC). Topics include safekeeping and storage of classified materials, application of classification markings to appropriate documents, and proper destruction of classified materials.
1 hour lecture.
Prerequisite(s): None.

IOS 112 - Imagery Analysis Techniques (3)

Develops the basic skills to successfully employ and analyze imagery in an operational environment. Introduces students to basic analytical techniques, sensor capabilities and limitations, characteristics of observed operational activity, spectral and stereoscopic imagery, and full motion video.
3 hours lecture.
Prerequisite(s): None.

IOS 113 - Terrorism and Counterterrorism (3)

An examination of the history of terrorism and the tactics and technologies used by terrorist groups. Examines the nature of the terrorist threat and countermeasures to combat terrorism.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: ENG 101.
Cross-Listed as: AJS 113.

IOS 114 - Reporting of Intelligence Data (3)

Identification of the essential elements of information, selection of reporting vehicle, and production of concise and timely technical summaries.
3 hours lecture.
Prerequisite(s): None.

IOS 115 - Briefing Skills (1-4)

Training in the skills required to perform the duties and operations necessary to conduct briefings in the intelligence operations field. May be taken four times for a total of four credits.
Prerequisite(s): None.

IOS 116 - Imagery Identification (6)

Students will be trained in the identification from aerial images of threat and operational equipment including naval vessels; fixed, swing, and rotary wing aircraft; engineer and decontamination equipment; truck models and functions; armored personnel carriers (APCs); missiles, rockets, and launch sites; communication and radar sites; artillery and artillery related equipment; and tanks and armored recovery vehicles (ARVs). In addition, students will learn to identify from aerial imagery organizations and activity in relation to the Ground Order of Battle (GOB).
6 hours lecture.
Prerequisite(s): None.

IOS 117 - Symbology (3)

Trains students in the skills necessary to translate incoming message traffic into military symbols.
3 hours lecture.
Prerequisite(s): None.

IOS 118 - Intelligence Preparation of the Battlefield (3)

Teaches students to identify characteristics of the modern battlefield and to analyze how the operational environment of the battlefield can affect friendly and threat operations. Students define the operational environment, consider the effects of weather and terrain, evaluate threat, and determine potential threat courses of action.
3 hours lecture.
Prerequisite(s): None.

IOS 119 - Introduction to Communications for Intelligence Operations (3)

Study and practice in basic oral communication in English for non-native speakers. Includes the fundamentals of oral communications in interpersonal, small-group, and large-group situations in the field of intelligence operations.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): None.

IOS 120 - Records Management (3)

Introduces students to the procedures, regulations, and forms used to accurately account for and manage an organization's records and funds. Students will learn these skills as custodians in a simulated large agency operating environment.
3 hours lecture.
Prerequisite(s): CIS 116.

IOS 121 - Counterintelligence Investigations II (3)

All prerequisite coursework must be completed with a grade of C or better.

A course in the collection, evaluation, and use of information to produce justifiable conclusions in support of the counterintelligence mission.
3 hours lecture.
Prerequisite(s): None.

IOS 122 - Intelligence, Surveillance, and Reconnaissance (ISR) (3)

Teaches students the Intelligence, Surveillance, and Reconnaissance (ISR) process across the scope of military operations from Joint Task Force level to Battalion level. Students learn the functions of the ISR process and its relationship to decision making. Students are taught how to develop an ISR plan, disseminate the information, evaluate the reporting, and update the plan.
3 hours lecture.
Prerequisite(s): None.

IOS 123 - Targeting (3)

Teaches students the targeting process across the scope of intelligence operations. Students are introduced to the decide, detect, deliver, and assess (D3A) methodology of targeting. Students learn the functions associated with the D3A methodology and how these functions interact with the decision-making process.
3 hours lecture.
Prerequisite(s): None.

IOS 124 - Cellular Communication Fundamentals (3)

Trains students in cellular technologies used around the world to deploy enhanced wireless capabilities. Covers the evolution of cellular capabilities to current protocols and standards. Provides a comprehensive overview of the options available in handling voice and data transmitted through wireless technologies. Explores variations among Frequency Division Multiple Access (FDMA), Time Division Multiple Access (TDMA), Code Division Multiple Access (CDMA), and Global System for Mobile communications (GSM).
3 hours lecture.
Prerequisite(s): None.

IOS 131 - Personal Identification Methods in Battlefield Forensics (2)

An introduction to the methods used to identify individuals based on evidence collected at an incident scene in a battlefield environment. Emphasis is on the identification, collection, and preservation of biological evidence for criminal investigations and legal procedures. Topics include fingerprints, facial recognition, bloodstain analysis, and biometrics.
1 hour lecture, 3 hours laboratory.
Prerequisite(s): None.

IOS 141 - Battlefield Forensic Investigations I (4)

A study in battlefield forensic investigation procedures and techniques. Emphasis is on incident scene management; and

on the identification, collection, and preservation of material evidence related to the manufacture and use of improvised explosive devices (IEDs).
3 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

IOS 142 - Battlefield Forensic Investigations II (4)

An in-depth study of the technical aspects of the collection and preservation of physical evidence from a battlefield environment. Emphasis is on the processes involved in identifying persons assembling improvised explosive devices (IEDs), and on the tactics and techniques used in the employment of those devices.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): IOS 141.

IOS 201 - Collection Operations (3)

Trains students in source collection operations in the operational cycle. Includes collection planning, identifying, assessing, recruiting, training, tasking, interviewing, and providing source operations support.
3 hours lecture.
Prerequisite(s): IOS 101 or permission of instructor.

IOS 202 - Force Protection Operations and Support (3)

Teaches students how to assimilate, analyze, and distribute multidiscipline counterintelligence products in support of tactical force protection. Areas covered include counterintelligence operations in a deployed environment and current threat assessment technology.
3 hours lecture.
Prerequisite(s): IOS 101, IOS 102, IOS 103, or permission of instructor.

IOS 203 - Combating Terrorism (3)

Familiarizes students with the history and development of terrorism. Trains students to recognize the phases of a terrorist incident and to understand a terrorist group's structure, degree of support, and scope of operations. Teaches students to use the basic analytical tools available to combat terrorism.
3 hours lecture.
Prerequisite(s): IOS 101, IOS 102, IOS 103, or permission of instructor.

IOS 204 - Interrogation and Interviewing Techniques (3)

Teaches students how to prepare for and question a source, collect all information of intelligence value, and report this information in the proper format. Training includes appropriate approach and questioning techniques, effective listening and note-taking methods, source screening procedures, and proper exploitation phases to collect intelligence information.
3 hours lecture.
Prerequisite(s): IOS 104, IOS 105, or permission of instructor.

IOS 209 - Automated Intelligence Systems (4)

All prerequisite coursework must be completed with a grade of C or better.

Covers the use of automated intelligence systems in the field of intelligence operations. Students learn basic system operations and conventions.
4 hours lecture.
Prerequisite(s): CIS 116.

IOS 210 - Intermediate Remote Sensing (3)

An intermediate course which builds on the topics presented in IOS 110. Students apply their knowledge of intelligence operations, and they use observed activity in the analysis of hardcopy and softcopy imagery. They query imagery databases to provide organizations with accurate and timely reports, intelligence briefs, and assessments based on given scenarios and Priority Intelligence Requirements (PIRs).
3 hours lecture.
Prerequisite(s): IOS 110.

IOS 211 - Military Decision Making (1-3)

A practical study of mission analysis and the military decision-making process. Includes a review of situation analysis, problem analysis, and decision analysis; and a review of the relationship between the decision maker and the decision environment. May be taken three times for a total of three credits.
Prerequisite(s): None.

IOS 212 - Intermediate Imagery Analysis Techniques (3)

This course builds on the fundamentals taught in IOS 112. Students develop their ability to apply photogrammetry techniques, equipment identification techniques, and softcopy and hardcopy imagery manipulation techniques to produce accurate imagery analyses and activity assessments.
3 hours lecture.
Prerequisite(s): IOS 112.

IOS 214 - Reporting of Intelligence Data II (3)

A course in the preparation of intelligence reports using pertinent information to satisfy the appropriate requirements.
3 hours lecture.
Prerequisite(s): ENG 102.

IOS 215 - Briefing Skills II (1-3)

An advanced course in the preparation and delivery of briefings in the intelligence operations field. May be taken three times for a total of three credits.
Prerequisite(s): None. Recommended Preparation: IOS 115.

IOS 220 - Reporting of Intelligence Data III (3)

A tactical human intelligence (HUMINT) course designed for the advanced intelligence operations practitioner maintaining a HUMINT-specific occupational specialty. It enhances the student's ability to plan and prepare timely and effective intelligence reports in both urban and rural environments.
3 hours lecture.
Prerequisite(s): ENG 102. Recommended Preparation: IOS 114.

IOS 221 - Counterintelligence Investigations III (3)

An advanced course that trains students to understand the objectives, apply the procedures, and produce the reports used in advanced counterintelligence investigations. Students will expand their knowledge and abilities in the planning, communicating, operating, credentialing, and investigating processes related to advanced counterintelligence investigations. This course is designed for the tactical human intelligence (HUMINT) practitioner.
3 hours lecture.
Prerequisite(s): ENG 101. Recommended Preparation: IOS 101.

IOS 223 - Intelligence Law and Administration of Justice II (1)

An advanced course in the legal principles and regulations of intelligence law as they apply to counterintelligence investigations and operations. Prepares students to apply the principles of intelligence law and of the administration of justice in the performance of their duties as tactical human intelligence (HUMINT) practitioners.
1 hour lecture.
Prerequisite(s): None. Recommended Preparation: IOS 103.

IOS 224 - Force Protection Operations and Support II (3)

A tactical course designed to improve the human intelligence (HUMINT) practitioner's ability to assimilate, analyze, and distribute multidiscipline human products in support of tactical force protection operations. Focus is on human intelligence operations in a tactically deployed environment.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: IOS 202.

IOS 225 - Analytical Process and Product II (3)

A tactical human intelligence (HUMINT) course designed to improve students' ability to prepare analytical tools to assess a combat environment. Students must have a good understanding of conventional and unconventional threat forces, various types of organizations, and associated weapons and equipment, as well as a working knowledge of the tactics, techniques, and procedures of groups or forces identified as posing a threat to U.S. interests.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: IOS 104.

IOS 226 - Interrogation and Interviewing Techniques II (3)

An advanced tactical human intelligence (HUMINT) course that further trains students to prepare for questioning and to question a human intelligence source, and to collect and report information that is of intelligence value.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: IOS 204.

IOS 241 - Management of Intelligence and Counterintelligence Operations I (4)

All prerequisite coursework must be completed with a grade of C or better.

A study of the organizational management of intelligence and counterintelligence operations. Topics include the theoretical and practical perspectives of managing increasing levels of responsibility, with emphasis on problem-solving and decision-making processes and on the role of the leader.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): IOS 211.

IOS 242 - Management of Intelligence and Counterintelligence Operations II (4)

An in-depth study of the managerial challenges related to the multidiscipline roles in intelligence and counterintelligence operations. Emphasis is on the assessment of external and internal environments, strategic initiatives, and communication techniques, and on the allocation and coordination of personnel and resources.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): IOS 241.

JRN - JOURNALISM

JRN 101 - Introduction to Mass Communications (3)

An introduction to mass communications media with emphasis on understanding basic concepts of gathering, writing, and evaluating news and other kinds of communication in newspapers, television, radio, magazines, wire services, books, movies, computer/digital and other media.
3 hours lecture.
Prerequisite(s): ENG 101 or permission of instructor.

JRN 102 - Essentials of News Writing (3)

Entry-level course in media arts/communications or journalism. Students will be introduced to news values, interviewing techniques, basic newspaper writing formats, and legal and ethical concerns of media professionals.
3 hours lecture.
Prerequisite(s): ENG 101 or concurrent enrollment, and CIS 116 or concurrent enrollment.

JRN 201 - Essentials of Newspaper Publishing (3)

Introduces students to the publication of a college newspaper, with focus on newsworthiness and appropriateness, news gathering, news and editorial writing, headline writing, editing, page design, photography, and other publishing activities. Newsroom management and ethical and legal considerations are also covered.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): JRN 102 and CIS 116, or permission of instructor.

JRN 224 - Field Experience in Communication and/or Media Technology (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in communication or media technology and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in communication or media technology and permission of the cooperative education program coordinator. Recommended Preparation: Sophomore standing and faculty recommendation.

JRN 257 - Literary Magazine Production (3)

Production of the college literary and arts magazine. Includes application of promotion, editing, design, layout, and production techniques.
3 hours lecture.
Prerequisite(s): ENG 101 or permission of instructor. Cross-Listed as: ENG 257.

LGS - LOGISTICS

LGS 101 - Principles of Logistics (3)

An introduction to the field of logistics including the development of logistics systems, careers in logistics, distribution planning, supply chain security, and customer service. Also deals with the roles and functions of purchasing, inventory control, physical distribution, warehousing, transportation methods, packaging, and customs.
3 hours lecture.
Prerequisite(s): None.

LGS 102 - Inventory Control (3)

A study of inventory-control concepts and techniques. Includes examining cost concepts, determining nature and size of inventory, forecasting, and planning and controlling inventory. Also includes ordering methods, pilferage control, and customer satisfaction strategies.
3 hours lecture.
Prerequisite(s): None.

LGS 103 - Freight Claims and Contracts (3)

A study of the mitigation of losses in transit and of the various aspects of negotiating and drafting freight and logistics contracts. Includes claim preparation, filing procedures, and claim dispute resolution. Also includes legal and regulatory requirements applicable to product transportation contracts, and considerations for drafting and negotiating contracts with freight carriers, warehousemen, and other logistics-service providers.
3 hours lecture.
Prerequisite(s): None.

LGS 104 - Computerized Logistics (2)

An analysis of the use of computers in the logistics industry, and an introduction to available logistics software. Discusses why computers are needed, their history and possible future uses in the logistics industry, and their impact on customer service. Also includes logistics software availability,

selection, and implementation; and computer security measures.
2 hours lecture.
Prerequisite(s): None.

LGS 105 - Warehouse Management (3)

A study of the managing of warehouses. Includes analysis of warehouse location and operations, controls and procedures, finances, security, cargo and materials handling, and productivity.
3 hours lecture.
Prerequisite(s): None.

LGS 106 - Transportation and Traffic Management (3)

A study of the domestic freight transportation system. Addresses patterns of freight movement, and laws, regulations, pricing, and policies of freight transportation. Examines issues related to traffic management, security, and international transportation.
3 hours lecture.
Prerequisite(s): None.

LGS 107 - Introduction to Purchasing (3)

A study of the basic purchasing functions: establishing inventory requirements and quantities, developing policies and procedures for purchasing, making purchasing decisions, receiving goods, arranging packaging and shipping, and managing inventory levels.
3 hours lecture.
Prerequisite(s): None.

LGS 108 - International Logistics (3)

An introduction to the role of logistics in global business. Examines international logistics as they apply to processes, terms, and transportation networks. Addresses the role of governments and intermediaries in the preparation of international transportation documents. Also reviews the fundamentals of effective import and export management.
3 hours lecture.
Prerequisite(s): None.

LGS 109 - Readiness Skills for Logistics Careers (1)

Facilitates the development of learning objectives and career goals in the field of logistics. Explores skills required in logistics careers. Reviews common job requirements, strategies for employment success, and the role of lifelong learning in career advancement.
1 hour lecture.
Prerequisite(s): None.

LGS 224 - Field Experience in Logistics (1-6)

Supervised cooperative education work experience in logistics and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.

Prerequisite(s): A declared major in logistics and permission and approval of the cooperative education program coordinator. Recommended Preparation: Appropriate faculty member recommendation.

LGS 224 - Field Experience in Logistics (1-3)

Supervised cooperative education work experience in logistics and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in logistics and permission and approval of the cooperative education program coordinator. Recommended Preparation: Appropriate faculty member recommendation.

LGS 224 - Field Experience in Logistics (3)

Supervised cooperative education work experience in logistics and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in logistics and permission and approval of the cooperative education program coordinator. Recommended Preparation: Appropriate faculty member recommendation.

MAT - MATHEMATICS

MAT 071 - Developmental Mathematics Level I (4)

A study of basic arithmetic skills and techniques of computation. Includes fundamental operations with whole numbers, integer exponents, fractions, mixed numbers, decimals, prime numbers, square roots, percent and percent applications, systems of measurement, and geometry. Requires completion of modules 1 through 5.
4 hours lecture.
Prerequisite(s): None.

MAT 081 - Beginning Algebra (4)

Prepares students for MAT 123, MAT 132, or MAT 142. Topics include fundamental properties and operations of real numbers, algebraic expressions, properties of exponents, linear equations and inequalities, literal equations, dimensional analysis, and graphing of linear functions.
4 hours lecture.
Prerequisite(s): Appropriate placement test score. (Students taking MAT 081 in 2016-17 must concurrently take CPD 150, Academic Excellence Seminar.).

MAT 092 - Special Topics and Applications in Developmental Mathematics (0.25-4)

A rotating forum/seminar/course or supplement to an existing mathematics course emphasizing mathematics or related topics. The title and credit hours for this course will vary each term depending on the topic.

Prerequisite(s): For MAT 092 in conjunction with an existing course, concurrent enrollment in the existing course is required.

MAT 095 - Supplement to College Mathematics (1)

Provides supplemental instruction in basic algebraic operations to students who place into developmental mathematics but who enroll in a college-level mathematics course. Students review the foundational and study skills needed for success in college algebra and/or precalculus.
1 hour lecture.
Prerequisite(s): Appropriate placement test score and concurrent enrollment in MAT 151 or MAT 187.

MAT 123 - Intermediate Algebra (4)

Prepares students for MAT 151 or MAT 182. A review of algebra to get students ready for college algebra and precalculus courses. Topics include linear equations and inequalities, rational expressions, polynomials, exponents, radicals, graphing linear equations, and quadratic equations.
4 hours lecture.
Prerequisite(s): Appropriate placement test score.

MAT 132 - Applied Mathematics (3)

A survey of mathematical concepts including numeric and fundamental algebraic operations, measurement, geometric figures, right-triangle trigonometry, and statistical measures of center. Focus is on solving technology-related problems.
3 hours lecture.
Prerequisite(s): Appropriate placement test score or MAT 081.

MAT 142 - College Mathematics (3)

The practical application of mathematical concepts to real-life situations. Topics include problem solving, mathematical modeling, exponential growth, probability, statistics, and finance mathematics.
3 hours lecture.
Prerequisite(s): Appropriate placement test score or MAT 081.

MAT 151 - Precalculus Algebra (4)

College-level algebra that prepares students for statistics and calculus courses. Topics include function notation, analysis of graphs, asymptotic behavior, symmetry, inequalities, analysis of polynomials, the rational root theorem, and logarithmic and exponential functions.
4 hours lecture.
Prerequisite(s): Appropriate placement test score or MAT 123.

MAT 154 - Mathematics for Elementary Education Majors I (3)

Designed to deepen understanding of some of the mathematical concepts taught in elementary and middle schools. Topics include numeration systems, sets and

functions, reasoning, number theory, and operations on whole numbers, integers, and rational numbers.
3 hours lecture.
Prerequisite(s): MAT 142 or MAT 151.

MAT 156 - Mathematics for Elementary Education Majors II (3)

Designed to deepen understanding of some of the mathematical concepts that are taught in elementary and middle schools. Topics include probability, statistics, geometry, graphing, and problem solving.
3 hours lecture.
Prerequisite(s): MAT 142 or MAT 151.

MAT 167 - Elements of Statistics (3)

Basic concepts of descriptive and inferential statistics with applications in business, economics, the natural sciences, and the social and behavioral sciences. Topics include methods of data collection, sampling techniques, probability distributions, confidence intervals, hypothesis testing, regression and correlation, and various parametric and non-parametric statistical tests.
3 hours lecture.
Prerequisite(s): MAT 142, MAT 151, or MAT 187.

MAT 182 - Precalculus Trigonometry (3)

An analytical study of trigonometry which--along with MAT 151--prepares students for calculus courses. Topics include trigonometric functions, graphs, identities, conditional equations, right and oblique triangles, inverse trigonometric functions, and trigonometric forms of complex numbers.
3 hours lecture.
Prerequisite(s): MAT 123, and MAT 151 or concurrent enrollment.

MAT 187 - Precalculus (5)

A combination of college-level algebra and trigonometry. Algebra topics include analysis of graphs, asymptotic behavior, symmetry, inequalities, analysis of polynomials, the rational root theorem, and logarithmic and exponential functions with applications. Trigonometry topics include the trigonometric functions, inverse functions, identities, formulas, and angle measures.
5 hours lecture.
Prerequisite(s): Appropriate placement test score or MAT 123. Recommended Preparation: Some knowledge of college algebra and/or trigonometry.

MAT 192 - Special Topics and Applications in College Mathematics (0.25-6)

A rotating forum/seminar/course or supplement to an existing mathematics course emphasizing mathematics or related topics. The title and credit hours for this course will differ each term, depending on the topic being covered when the course is offered.

All prerequisite coursework must be completed with a grade of C or better.

Prerequisite(s): For MAT 192 in conjunction with an existing course, concurrent enrollment in the existing course is required. Recommended Preparation: For MAT 192 offered as a special topic seminar or course, permission of the instructor is strongly recommended.

MAT 212 - Calculus for Business (3)

A brief introduction to calculus with emphasis on business applications. Topics include analytic geometry, limits, derivatives, and definite and indefinite integrals.
3 hours lecture.
Prerequisite(s): Appropriate placement test score, MAT 151, or MAT 187. Recommended Preparation: One of the prerequisite courses taken within the last twelve months.

MAT 220 - Calculus I (5)

An integrated study using analytic geometry to develop and apply calculus concepts, including techniques and applications of differentiation and integration of elementary functions. Additional topics are absolute value and inequality, relations and functions, graphs, limits and continuity, and definition and application of the derivative, anti-derivative, and definite integral.
5 hours lecture.
Prerequisite(s): Appropriate placement test score, MAT 187, or both MAT 151 and MAT 182.

MAT 227 - Discrete Mathematics (3)

An introduction to the study of non-continuous mathematics. Topics include formal proof techniques, propositional logic, set theory, combinatorics, elementary number theory, graph theory, and partially ordered sets.
3 hours lecture.
Prerequisite(s): MAT 151 or MAT 187. Recommended Preparation: MAT 220.

MAT 231 - Calculus II (4)

A continuation of MAT 220 expanding to include transcendental, inverse trigonometric, and hyperbolic functions. Additional topics are indeterminate forms, improper integrals, sequences and infinite series, conic sections, parametric equations, and polar coordinates.
4 hours lecture.
Prerequisite(s): MAT 220.

MAT 241 - Calculus III (4)

A continuation of MAT 231 focusing on the calculus of multivariate functions including limits, derivatives, and integrals. Also introduces vector analysis, including Green's and Stokes' theorems.
4 hours lecture.
Prerequisite(s): MAT 231.

MAT 252 - Introduction to Linear Algebra (3)

A study of the properties of vector spaces. Topics are introduced in the context of real valued matrices and then generalized to more abstract spaces. Basic arithmetic of matrices is reviewed and then extended to cover linear transformations, eigenvalues, eigenvectors, and applications.
3 hours lecture.
Prerequisite(s): MAT 231.

MAT 262 - Differential Equations (3)

An introduction to the study of ordinary differential equations. Topics include the theory, methods of solution, and applications of the following: first-order differential equations, nth-order linear differential equations, systems of linear differential equations, and series solutions.
3 hours lecture.
Prerequisite(s): MAT 231.

MUS - MUSIC

MUS 100 - Fundamentals of Music Notation (3)

An introduction to the fundamentals of music notation including pitch, rhythm, meter, scales, and intervals. Also introduces basic harmonic structures and the elements of composition. Students use music software to create original musical pieces.
3 hours lecture.
Prerequisite(s): None.

MUS 101 - Introduction to Music (3)

An introduction to the elements of music, illustrated with important musical literature from various periods of music history. Covers music from the Middle Ages and the Renaissance, as well as the Baroque, Classical, Romantic, and Twentieth-Century periods.
3 hours lecture.
Prerequisite(s): None.

MUS 103 - Voice Class Instruction (1)

The study of basic foundations of vocal techniques, i.e., breath control, tonal support, tone production, vocal projection, and diction.
1 hour lecture.
Prerequisite(s): None.

MUS 109 - Orchestra (1)

Study and performance of orchestral musical literature from various periods of musical composition.
2 hours rehearsal/performance.
Prerequisite(s): Permission of instructor.

MUS 110 - Chorus (1)

The study and performance of choral literature from various musical periods. Emphasis is on vocal and choral techniques, which are applied through the rehearsal of repertoire. Includes public performances at college and community events.
3 hours rehearsal/performance.
Prerequisite(s): Audition. Recommended Preparation: Previous choral experience.

MUS 111 - Band (1)

Study and performance of instrumental music from various periods of musical composition.
2 hours rehearsal/performance.
Prerequisite(s): Audition.

MUS 112 - Instrumental Class Instruction (1)

An introduction to and development of basic instrumental skills, note reading, coordination, rhythm, and sight reading.
1 hour lecture.
MUS 112A Piano Class Instruction
MUS 112E String Class Instruction
Prerequisite(s): None.

MUS 113 - Instrument - Individual Instruction (1-2)

A systematic study of technique and repertoire on an instrument of the student's choice. May be taken twice for a total of two credits.
MUS 113A Individual Instruction - Piano
MUS 113B Individual Instruction - Brass
MUS 113C Individual Instruction - Woodwind
MUS 113D Individual Instruction - Percussion
MUS 113E Individual Instruction - Strings
MUS 113F Individual Instruction - Guitar
Prerequisite(s): Audition or permission of instructor.

MUS 113 - Instrument - Individual Instruction (2)

A systematic study of technique and repertoire on an instrument of the student's choice. May be taken twice for a total of two credits.
MUS 113A Individual Instruction - Piano
MUS 113B Individual Instruction - Brass
MUS 113C Individual Instruction - Woodwind
MUS 113D Individual Instruction - Percussion
MUS 113E Individual Instruction - Strings
MUS 113F Individual Instruction - Guitar
Prerequisite(s): Audition or permission of instructor.

MUS 115 - Voice - Individual Instruction (1-2)

A study of the basics of vocal technique and a preparation for the performance of pieces in the vocal literature. May be taken twice for a total of two credits.
Prerequisite(s): Audition or permission of instructor.

MUS 115 - Voice - Individual Instruction (2)

A study of the basics of vocal technique and a preparation for the performance of pieces in the vocal literature. May be taken twice for a total of two credits.
Prerequisite(s): Audition or permission of instructor.

MUS 123 - American Popular Music (3)

This course is an introduction to elements, forms, and uses of popular music beginning with the early 20th Century in America. Course content is illustrated by recordings and videos of influential performers and composers, with an emphasis on the music industry within the context of popular culture.
3 hours lecture.
Prerequisite(s): None.

MUS 132 - Music Theory I (3)

This first course in music theory is a study of the construction and of the analysis of music including scales, intervals, transposition, figured bass symbols, cadences, non-harmonic tones, and melodic organization.
3 hours lecture.
Prerequisite(s): MUS 100 or permission of instructor, and concurrent enrollment in MUS 134. Recommended Preparation: In addition, music majors should enroll in either MUS 113 or MUS 115.

MUS 133 - Music Theory II (3)

This second course in music theory includes voice-leading, seventh chords, modulation types, secondary dominants, secondary leading-tone chords, and binary and ternary forms.
3 hours lecture.
Prerequisite(s): MUS 132 and MUS 134, or permission of instructor; and concurrent enrollment in MUS 135. Recommended Preparation: In addition, music majors should enroll in either MUS 113 or MUS 115.

MUS 134 - Aural Skills I (1)

A progressive series of exercises in sight singing, rhythmic dictation, and melodic dictation.
1 hour lecture.
Prerequisite(s): Concurrent enrollment in MUS 132.

MUS 135 - Aural Skills II (1)

A continuation of the progressive series of exercises in sight singing, rhythmic dictation, and melodic dictation introduced in MUS 134.
1 hour lecture.
Prerequisite(s): MUS 134 and concurrent enrollment in MUS 133.

MUS 201 - Ensemble (1)

Trios, quartets, quintets, etc., will be formed to perform and study music written or arranged for the small ensemble. In addition to rehearsal, groups will occasionally perform in public, either on campus or in surrounding communities.
2 hours rehearsal/performance.
MUS 201A Voice Ensemble (laboratory fee)
MUS 201D Percussion Ensemble (laboratory fee)
MUS 201F Guitar Ensemble (laboratory fee)
MUS 201G Jazz Ensemble
Prerequisite(s): Audition.

MUS 210 - Music Theatre Workshop (2)

A practical study of vocal and performance strategies for projection and communication. Students will participate in a college-sponsored operatic or musical production.

All prerequisite coursework must be completed with a grade of C or better.

1 hour lecture, 3 hours rehearsal/performance.
Prerequisite(s): Audition or permission of instructor.

MUS 232 - Music Theory III (3)

This third music theory course focuses in chronological order on art music from the late Renaissance period through the early 20th century. Major forms are analyzed through melody, harmony, and various musical motives.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): MUS 133 and MUS 135.

MUS 233 - Music Theory IV (3)

This fourth music theory course focuses in chronological order on art music from the late 19th century through the middle of the 20th century. Major forms are analyzed through melody, harmony, and various musical motives.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): MUS 232.

MUS 236 - Repertoire Strategy (1)

Exploration of choral and instrumental chamber repertoire from the Middle Ages through the mid-18th century. Emphasis is on technique and interpretation. Performing groups include duets, trios, and small chamber groups.
3 hours rehearsal/performance.
Prerequisite(s): Permission of instructor.

MUS 260 - Music Fundamentals through Experience (3)

An introduction to musical skills, the mechanics of music, and musical experiences as a background for teaching music to children. Introduction to playing keyboard, autoharp, and recorder, as well as singing. Previous musical experience is not required. Fulfills the music education requirement for teacher certification.
3 hours lecture.
Prerequisite(s): None.

NET - NETWORKING

The networking courses are offered only at the Arizona Department of Corrections in Douglas.

NET 112 - Fundamentals of Voice and Data Cabling I (3)

An introduction to the handling and installation of voice and data transmission media. This course provides students with a general industry and networking overview, as well as building a solid foundation in media types, transmission practices, and installation theory. Emphasis will be on industry cabling standards for the handling, installation, and proper termination of the various media involved in voice and data communications.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): CIS 150.

NET 212 - Fundamentals of Voice and Data Cabling II (3)

This course builds on the knowledge gained in NET 112. Emphasis is on practical installation, including the rough-in, trim-out, finish, and customer-support phases. The future of cabling is also covered as it relates to such issues as demand for bandwidth and localization.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): NET 112.

NUR - NURSING

NUR 120 - Transition to Practical Nurse (1)

For first-year re-entering nursing students who have been out of nursing studies at Cochise College for less than one year. Provides an update of the philosophy, policies, and procedures of the Cochise College nursing program. Emphasis is on the nursing process, patient care planning, therapeutic use of self, clinical expectations, and basic nursing skills.
1 hour lecture, 0.5 hour laboratory.
Prerequisite(s): NUR 122 with a grade of B or better at Cochise College within the last twelve months and approval of Nursing Department.

NUR 121A - Medication Math I (2)

This course gives students the math skills necessary to convert and calculate drug dosages for oral, injectable, and intravenous drugs. Experience is provided in techniques for the calculation of oral and parenteral drug dosages for adults and children, and for the calculation of intravenous flow rates.
2 hours lecture, 1 hour laboratory.
Prerequisite(s): Appropriate placement test score or MAT 081, and acceptance into the nursing program.

NUR 121B - Medication Math II (2)

This course reinforces the skills necessary to convert and calculate drug dosages for oral, injectable, and intravenous drugs; it reviews techniques for the calculation of oral and parenteral drug dosages for adults and children, and for the calculation of intravenous flow rates. Focus is on these skills and techniques as they apply to pediatrics, critical care, pediatric critical care, labor and delivery, and the general community.
2 hours lecture, 1 hour laboratory.
Prerequisite(s): NUR 121A with a grade of B or better, and concurrent enrollment in NUR 232.

NUR 122 - Nursing I (8)

In this first-semester course in the nursing program, students learn concepts and skills necessary to provide basic nursing care to healthy adults in a variety of settings. Focus is on basic physiological and psychological needs of clients throughout the adult lifespan across all cultures.
4 hours lecture, 12 hours laboratory.

All prerequisite coursework must be completed with a grade of C or better.

Prerequisite(s): BIO 201, BIO 202, and NUR 203, all with a grade of B or better; ENG 101 and ENG 102; and admission into the nursing program.

NUR 123 - Nursing II-A (5)

In this second-semester course in the nursing program, students continue to build on the basic concepts and skills needed to provide nursing care throughout the adult lifespan. Focus is on the application across all cultures of skills necessary in the care of adults with diseases and disorders. Upon successful completion of Nursing II-A and Nursing II-B, students are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).
3 hours lecture, 6 hours laboratory.
Prerequisite(s): NUR 121A and NUR 122, both with a grade of B or better, and PSY 101.

NUR 124 - Nursing II-B (5)

In this additional second-semester course in the nursing program, students build on the basic concepts and skills necessary to provide nursing care to obstetrical and pediatric clients. Focus is on family care and the application across all cultures of nursing skills, on biopsychosocialcultural concepts relating to growth and development, on disorders and diseases of pediatric clients, and on normal and high-risk obstetrical clients. Upon successful completion of Nursing II-A and Nursing II-B, students are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).
3 hours lecture, 6 hours laboratory.
Prerequisite(s): NUR 121A and NUR 122, both with a grade of B or better, and PSY 101.

NUR 125 - Bridge to Practical Nurse (3)

For first-year re-entering nursing students who have been out of nursing studies at Cochise College for more than one year, and for first-year nursing students who are challenging into the program from other nursing programs. Provides a detailed update of the philosophy, policies, and procedures of the Cochise College nursing program and a review of the concepts and skills necessary to provide basic nursing care to patients in a variety of settings. Emphasis is on the scope of practice for the practical nurse, which includes communication, the nursing process, ethical and legal issues, and leadership skills.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): BIO 201, BIO 202, and NUR 203, all with a grade of B or better; ENG 101, ENG 102, and PSY 101; and admission into the nursing program.

NUR 201 - Infusion Therapy/Venipuncture by Licensed Practical Nurses (3)

Teaches the theory and technical skills necessary to provide intravenous (IV) therapy and venipuncture, including the administering of premixed intravenous medications and solutions through an IV line. Adheres to the competencies for infusion therapy/venipuncture outlined in the Arizona State Board of Nursing Advisory Opinion. Upon successful completion, students receive a departmental Certificate of Competency indicating they have met state guidelines.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): Current unencumbered LPN license or two semesters of nursing.

NUR 203 - Update on Pharmacology (3)

This course applies information about current medications to patient care. Students learn to assess, evaluate and analyze information and situations, think critically, and make decisions necessary for the safe administering of medications.
3 hours lecture.
Prerequisite(s): ENG 101, RDG 122, or exemption.

NUR 220 - Transition: Practical Nurse to Registered Nurse (1)

For second-year re-entering nursing students who have been out of nursing studies at Cochise College for less than one year. Provides a review and an update of the philosophy, policies, and procedures of the Cochise College nursing program. Emphasis is on the nursing process, patient care planning, therapeutic use of self, clinical expectations, and more advanced nursing skills.
1 hour lecture, 0.5 hour laboratory.
Prerequisite(s): NUR 123 or NUR 232 with a grade of B or better at Cochise College within the last twelve months and approval of Nursing Department.

NUR 225 - Bridge: Practical Nurse to Registered Nurse (3)

For second-year re-entering nursing students who have been out of nursing studies at Cochise College for more than one year, and for second-year nursing students who are challenging into the program from other nursing programs. Provides a detailed update of the philosophy, policies, and procedures of the Cochise College nursing program and a comprehensive review of concepts and skills necessary to provide basic nursing care to patients in variety of settings. Emphasis is on the care of obstetric clients, pediatric clients, and adult clients with selected health alterations.
2 hours lecture, 2 hours laboratory.
Prerequisite(s): BIO 201, BIO 202, NUR 121A, and NUR 203, all with a grade of B or better; ENG 101, ENG 102, PSY 101, and PSY 240; and admission into the nursing program.

NUR 232 - Nursing III (10)

In this third-semester course in the nursing program, the focus is on the problems and the physical and psychosocial health needs of acutely-ill adult clients. Topics include the framework for effective communication and the nursing process with emphasis on intervention and evaluation. A clinical setting helps students develop competence in discharge planning, community nursing, and leadership. Students utilize knowledge of new developments in health

care to adapt to changes in the field and to be proactive in the nursing profession.
6 hours lecture, 12 hours laboratory.
Prerequisite(s): NUR 123 and NUR 124, both with a grade of B or better, and PSY 240.

NUR 233 - Nursing IV (10)

In this fourth-semester course in the nursing program, the focus is on the complex problems and the physical and psychosocial health needs of critically-ill adult clients. During their nursing preceptorship, students work intensively with a registered nurse in their transition from student to nurse. Upon successful completion of this course, students are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).
6 hours lecture, 12 hours laboratory.
Prerequisite(s): NUR 121B and NUR 232, both with a grade of B better.

PFT - PROFESSIONAL FLIGHT TECHNOLOGY

PFT 100 - Introduction to Aviation (1)

Instruction in the program-specific requirements, polices, and aircraft procedures which are not covered in Federal Aviation Administration training course outlines. Designed to prepare students who have been accepted into the aviation program for flight training.
1 hour lecture.
Prerequisite(s): Acceptance into the aviation program.

PFT 101 - Private Pilot Ground School (5)

A comprehensive course that prepares students for the Federal Aviation Administration Private Pilot Airplane knowledge exam. Prepares students to acquire the knowledge and skills necessary to operate as a private pilot and to pursue a career in aviation.
5 hours lecture.
Prerequisite(s): Acceptance into the aviation program.

PFT 103 - Private Pilot Review (1)

A review of the course materials and of the flight proficiency requirements for the Federal Aviation Administration Private Pilot Certification. Also prepares those seeking to satisfy FAA currency requirements.
1 hour lecture.
Prerequisite(s): Acceptance into the aviation program.
Recommended Preparation: Successful completion of the FAA Private Pilot knowledge test.

PFT 105 - Crew Resource Management - Flight (2)

A study of resources available to flight crews to assure safe and efficient flight operations and reduce cockpit errors. Focus is on the development of cognitive and interpersonal skills such as situational awareness, communication,

teamwork, task allocation, and decision making, which are needed to manage flights.
2 hours lecture.
Prerequisite(s): Acceptance into the aviation program.

PFT 111 - Solo Flight Preparation (3.5)

Designed to prepare the student for solo flight in accordance with FAA requirements.
3.5 hours lecture.
Prerequisite(s): Concurrent enrollment in PFT 101 or permission of the Aviation Department.

PFT 112 - Cross-Country Navigation (1.5)

Designed to prepare the student for cross-country navigation in accordance with FAA requirements.
1.5 hours lecture.
Prerequisite(s): PFT 101 and concurrent enrollment in PFT 111, or permission of the Aviation Department.

PFT 113 - Private Pilot Certification (1)

Designed to prepare the student for private pilot certification in accordance with FAA requirements.
1 hour lecture.
Prerequisite(s): PFT 111 and concurrent enrollment in PFT 112, or permission of the Aviation Department.

PFT 121 - Commercial Flight I (3)

The first in a series of three courses designed to prepare students for a Commercial Pilot Airplane Single Engine Land Certificate. Topics include preflight preparations and procedures, flight maneuvers, and postflight operations, with emphasis on the airmanship skills and aeronautical knowledge stipulated by the Federal Aviation Administration for commercial pilots. Provides a foundation for the development of a professional pilot career.
3 hours lecture.
Prerequisite(s): Possession of a Private Pilot Airplane Single Engine Land Certificate.

PFT 122 - Aviation Weather (3)

A continuation of the study of aviation weather theory, one of the topics introduced in PFT 101. Includes an in-depth study of weather elements and hazards, and of aviation weather reports and forecasts. Covers weather conditions as they relate to aircraft and flight performance.
3 hours lecture.
Prerequisite(s): PFT 101 or permission of instructor.

PFT 130 - Commercial Pilot Ground School (5)

A comprehensive course that prepares students for the Federal Aviation Administration Commercial Pilot Airplane knowledge exam. Focuses on improving students' aeronautical knowledge as well as their decision-making, aviation-safety, and risk-management skills in preparation for a career as a commercial pilot.
5 hours lecture.

All prerequisite coursework must be completed with a grade of C or better.

Prerequisite(s): PFT 101 or possession of a Private Pilot Certificate, and acceptance into the aviation program.

PFT 131 - Commercial Flight II (3)

The second in a series of three courses designed to prepare students for a Commercial Pilot Airplane Single Engine Land Certificate. Focus is on commercial pilot-level airmanship skills and aeronautical knowledge. Continues developing the foundation for a professional pilot career.
3 hours lecture.
Prerequisite(s): PFT 121, concurrent enrollment, or permission of the director of aviation; and possession of a Private Pilot Certificate with Airplane Single Engine Land.

PFT 204 - Instrument Rating Ground School (5)

A comprehensive course that prepares students for the Federal Aviation Administration Instrument Rating Airplane exam. Focuses on air traffic control procedures, the national airspace system, aviation weather, risk management, aeronautical decision making, and aviation safety as they all relate to instrument flight operations in preparation for a career as a professional pilot.
5 hours lecture.
Prerequisite(s): PFT 101 or possession of a Private Pilot Certificate, and acceptance into the aviation program.

PFT 206 - Aircraft Systems (3)

A study of the fundamentals of physics, and of various aircraft systems-mechanical, electrical, and hydraulic-used to manage complex aircraft operations.
3 hours lecture.
Prerequisite(s): PFT 101 or permission of the director of aviation.

PFT 208 - Jet Transition Training (3)

A CRJ 700 passenger jet simulation-based flight-training experience that teaches principles common to many modern jet and turbo propeller airliners. The training utilizes an integrated flight and navigation management system with displays, aircraft and flight control systems, realistic views of the environment, and simulated malfunctions that mimic emergency situations.
3 hours lecture.
Prerequisite(s): Concurrent enrollment in PFT 218 or possession of a Commercial Pilot Airplane Certificate.

PFT 210 - Multi-Engine Rating Ground School (1)

A comprehensive course covering the aeronautical knowledge required for a Multi-Engine Land Airplane Class Rating.
1 hour lecture.
Prerequisite(s): Possession of a Private Pilot Certificate with Airplane Single Engine Land.

PFT 211 - Multi-Engine Rating Flight (1)

A comprehensive course that develops the required airmanship skills, knowledge, and proficiency for a Multi-

Engine Land Airplane Class Rating per the Federal Aviation Administration Practical Test Standards.
1 hour lecture.
Prerequisite(s): PFT 210 or concurrent enrollment; and possession of a Private Pilot Certificate with Airplane Single Engine Land.

PFT 214 - Instrument Rating Flight I (3.5)

The first of two courses designed to prepare the student for instrument flight navigation and air traffic control rating in accordance with FAA requirements.
3.5 hours lecture.
Prerequisite(s): PFT 204.

PFT 215 - Instrument Rating Flight II (1.5)

The second of two courses designed to prepare the student for instrument flight navigation and air traffic control rating in accordance with FAA requirements.
1.5 hours lecture.
Prerequisite(s): PFT 214.

PFT 217 - Instrument Pilot Review (1)

A review of the course materials and of the flight proficiency requirements for the Federal Aviation Administration Instrument Rating Certification. Also prepares those seeking to satisfy FAA currency requirements.
1 hour lecture.
Prerequisite(s): Acceptance into the aviation program.
Recommended Preparation: Successful completion of the FAA Instrument Rating knowledge test.

PFT 218 - Commercial Flight III (1)

The third in a series of three courses designed to prepare the student for a Commercial Pilot Airplane Single Engine Land Certificate. Emphasis is on correlating the aeronautical knowledge and airmanship skills developed in PFT 121 and PFT 131 with the Federal Aviation Administration Commercial Pilot Practical Test Standards.
1 hour lecture.
Prerequisite(s): PFT 121 or concurrent enrollment and PFT 131 or concurrent enrollment, or permission of the director of aviation; and possession of a Private Pilot Certificate with Airplane Single Engine Land.

PFT 220 - Commercial Pilot Review (1)

A review of the course materials and of the flight proficiency requirements for the Federal Aviation Administration Commercial Pilot Certification. Also prepares those seeking to satisfy FAA currency requirements.
1 hour lecture.
Prerequisite(s): Acceptance into the aviation program.
Recommended Preparation: Successful completion of the FAA Commercial Pilot knowledge test.

PFT 222 - Aircraft Dispatcher (7)

A comprehensive course that prepares students for the Federal Aviation Administration Aircraft Dispatcher Certificate required for a career as a licensed dispatcher. Topics include FAA regulations, weather protocol, flight planning and decision making, and navigation and dispatch procedures.
7 hours lecture.
Prerequisite(s): PFT 101, PFT 122, PFT 204, and PFT 206.

PFT 230 - Flight Instructor - Fundamentals Ground School (3)

A study of the principles of teaching and performance assessment, and an analysis of student behavior and learning as they all relate to aviation students. Offered in preparation for the Federal Aviation Administration Fundamentals of Instructing knowledge exam.
3 hours lecture.
Prerequisite(s): PFT 130 and PFT 204, or permission of the director of aviation.

PFT 231 - Flight Instructor - Airplane Ground School (5)

An application of the fundamentals of instruction as they relate to aviation students. Emphasis is on the development and demonstration of the instructional knowledge and skills required for the Federal Aviation Administration Flight Instructor Airplane Single Engine practical test.
5 hours lecture.
Prerequisite(s): PFT 130, PFT 204, and PFT 230 or concurrent enrollment.

PFT 233 - Flight Instructor - Airplane Review (1)

A review of the course materials and of the flight proficiency requirements for the Federal Aviation Administration Flight Instructor Airplane Certification. Also prepares those seeking to satisfy FAA currency requirements.
1 hour lecture.
Prerequisite(s): Acceptance into the aviation program.
Recommended Preparation: Successful completion of the FAA Fundamentals of Instruction and Flight Instructor Airplane knowledge tests.

PFT 235 - Flight Instructor - Airplane Stage I (1.5)

The first of two courses that apply the fundamentals of instruction, with a demonstration of the aeronautical knowledge and airmanship skills required for students seeking the Flight Instructor Airplane Single Engine Certification. Flight training occurs in a non-complex aircraft.
1.5 hours lecture.
Prerequisite(s): Possession of a Commercial Airplane Single Engine Land Certificate with an Instrument Airplane Rating.
Recommended Preparation: PFT 230 and PFT 231, or successful completion of the FAA Flight Instructor Airplane and FAA Fundamentals of Instruction knowledge tests.

PFT 236 - Flight Instructor - Airplane Stage II (1.5)

The second of two courses that apply the fundamentals of instruction, with a demonstration of the aeronautical knowledge and airmanship skills required for students seeking the Flight Instructor Airplane Single Engine Certification. Flight training occurs in a complex aircraft.
1.5 hours lecture.
Prerequisite(s): PFT 235 and possession of a Commercial Airplane Single Engine Land Certificate with an Instrument Airplane Rating.

PFT 240 - Flight Instructor - Multi-Engine Ground School (2)

An application of the fundamentals of instruction as they relate to aviation students. Emphasis is on the development and demonstration of the instructional knowledge and skills required for the Federal Aviation Administration Flight Instructor Airplane Multi-Engine practical test.
2 hours lecture.
Prerequisite(s): PFT 230 or concurrent enrollment and PFT 231 or concurrent enrollment, or possession of a Flight Instructor Airplane Single Engine Certificate and a Commercial Airplane Multi-Engine Land Certificate.

PFT 241 - Flight Instructor - Multi-Engine Flight (2)

An application of the fundamentals of instruction, and a demonstration of the aeronautical knowledge and airmanship skills required for students seeking the Flight Instructor Airplane Multi-Engine Certification.
2 hours lecture.
Prerequisite(s): PFT 230, PFT 231, and possession of a Flight Instructor Airplane Single Engine Certificate and a Commercial Airplane Multi-Engine Land Certificate with Instrument Rating.

PFT 250 - Flight Instructor - Instrument Ground School (3)

An application of the fundamentals of instruction as they relate to aviation students. Emphasis is on the development and demonstration of the instructional knowledge and skills required for the Federal Aviation Administration Flight Instructor Instrument Ground practical test.
3 hours lecture.
Prerequisite(s): PFT 230 or concurrent enrollment, PFT 231 or concurrent enrollment, PFT 235 or concurrent enrollment, and PFT 236 or concurrent enrollment; or possession of a Flight Instructor Airplane Single Engine Certificate.

PFT 251 - Flight Instructor - Instrument Flight (3)

An application of the fundamentals of instruction, and a demonstration of the aeronautical knowledge and airmanship skills required for students seeking the Flight Instructor Instrument Airplane Certification.
3 hours lecture.
Prerequisite(s): PFT 230 or concurrent enrollment, PFT 231 or concurrent enrollment, PFT 235 or concurrent enrollment, and PFT 236 or concurrent enrollment; and possession of a Flight Instructor Airplane Single Engine Certificate and a Commercial Airplane Single Engine Land Certificate with Instrument Rating.

All prerequisite coursework must be completed with a grade of C or better.

PFT 260 - Airline Transport Pilot - Ground School (3)

A comprehensive review of the aeronautical knowledge required for the Federal Aviation Administration Airline Transport Pilot certification.
3 hours lecture.
Prerequisite(s): Possession of a Commercial Pilot Airplane Certificate with Instrument Rating.

PFT 261 - Airline Transport Pilot - Flight (1)

Comprehensive flight training in order to complete the Federal Aviation Administration requirements for Airline Transport Pilot certification.
1 hour lecture.
Prerequisite(s): Possession of a Commercial Pilot Airplane Certificate with Instrument Rating.

PFT 271 - Unmanned Aerial Vehicle (UAV) Operator (29)

Teaches the theory of UAV systems, with emphasis on aerial vehicles, mission payload, and flight line operations. Students gain the knowledge and practical skills required to safely employ UAV systems in any theater of operation.
20 hours lecture, 27 hours laboratory.
Prerequisite(s): PFT 101 or completion of an FAA approved Stage One Ground School, and a sponsored employee of the Department of Defense or of a DOD UAV contractor.

PHI - PHILOSOPHY

PHI 111 - Introduction to Western Philosophy (3)

A study of the most influential philosophers and philosophies in the Western tradition. Topics include the possibility of knowledge, free will, and morality and their natures; and the distinction between appearance and reality.
3 hours lecture.
Prerequisite(s): ENG 101.

PHI 113 - Introduction to Logic (3)

A study of various topics in logic, including the evaluation of arguments, the detection of formal and informal fallacies, the construction of truth tables, and the process of natural deduction in propositional logic.
3 hours lecture.
Prerequisite(s): ENG 101 and placement in MAT 123 or higher.

PHI 130 - Introduction to Ethics (3)

A study of the most influential philosophers and philosophies in the moral tradition. Topics include the nature of values, right conduct, and character; and the application of theory to real-world actions and situations.
3 hours lecture.
Prerequisite(s): ENG 101.

PHI 201 - Introduction to Eastern Philosophy (3)

A study of the most influential philosophers and philosophies in the Eastern tradition. Topics include the possibility of knowledge, free will, and morality and their natures; and the distinction between appearance and reality.
3 hours lecture.
Prerequisite(s): ENG 101.

PHI 202 - Philosophy of Religion (3)

A study of the most influential philosophers and philosophies in the religious tradition. Topics include the nature and existence of God, the value of faith versus knowledge, the possibility of religious pluralism, and the problem of evil.
3 hours lecture.
Prerequisite(s): ENG 101.

PHT - PHARMACY TECHNOLOGY

PHT 224 - Field Experience in Pharmacy Technology (1-6)

A supervised cooperative education work experience involving the combined efforts of educators and employers to accomplish career skills objectives related to the pre-pharmacy field. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): Prior approval of the cooperative education program coordinator and a recommendation from a faculty member in an appropriate discipline.

PHY - PHYSICS

PHY 111 - General Physics I (4)

An introduction to the general principles of physics in the area of classical mechanics. Special emphasis is placed on algebra in solving word problems. Topics include kinematics, dynamics, energy, momentum, motion, fluids, elasticity and oscillations, and waves and sounds. For students whose degree programs do not require physics with calculus.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 123.

PHY 112 - General Physics II (4)

Introductory physics without calculus. Topics include electrostatics, electric potential, resistance, circuits, electromagnetism, and Faraday's law; light, lenses, optical instruments, and interference; and quantum physics, atoms, and nuclei. For students whose degree programs do not require physics with calculus.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): PHY 111.

PHY 230 - Physics with Calculus I (4)

A fundamental calculus-based study of classical mechanics. Topics include kinematics, dynamics, energy, linear and angular momentum, and oscillations. For engineering students and others who require physics with calculus.

3 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 220 and either PHY 111 or one year of high school physics.

PHY 231 - Physics with Calculus II (4)

A study, using calculus concepts, of electromagnetic fields and their various applications. Topics include electrical and magnetic properties of matter, and circuit devices used in DC and simple AC circuits. For engineering students and others who require physics with calculus.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): PHY 230.

PMD - PARAMEDICINE

PMD 101 - Paramedicine I (6)

An introductory course that includes an EMT refresher, an overview of hazardous materials first responder operations, and a review of human anatomy and physiology.
6 hours lecture, 1 hour laboratory.
Prerequisite(s): Appropriate mathematics placement test score, MAT 081, or higher; and RDG 122 or exemption. Prior to enrollment, students must meet the following requirements: 1) current certification as an EMT (Arizona or National Registry), 2) score of 75% or higher on computer-based entrance exam, 3) proof of vaccinations, to include negative tuberculin (TB) skin test, measles, mumps, rubella (MMR), varicella, and hepatitis B series, and 4) acceptance into the paramedicine program. Once enrolled, the following are required: 5) drug screen and 6) background check.

PMD 201 - Paramedicine II (7)

An introduction to the roles and responsibilities of the paramedic and to advanced pre-hospital care. Topics include the medical and legal aspects of pre-hospital care, and the general principles of pathophysiology, pharmacology, and medication administration.
6 hours lecture, 2 hours laboratory.
Prerequisite(s): PMD 101.

PMD 202 - Paramedicine III (7)

A continued study of pre-hospital care to include advanced airway management, therapeutic communication, physical examination techniques, and patient assessment in the field, with an overview of trauma and burns.
6 hours lecture, 2 hours laboratory.
Prerequisite(s): PMD 201.

PMD 203 - Paramedicine IV (10)

An in-depth study of pulmonary- and cardiac-related medical emergencies. Focuses on cardiac anatomy and physiology, electrocardiogram interpretations and interventions, and preparation for certification in Advanced Cardiac Life Support (ACLS). Students begin clinical rotations during this course.
6 hours lecture, 8 hours laboratory.
Prerequisite(s): PMD 202.

PMD 204 - Paramedicine V (10)

A continued study of medical emergencies with focus on neurology, endocrinology, allergic reactions, anaphylaxis, gastroenterology, urology, nephrology, toxicology, and gynecology and obstetrics. Students continue clinical rotations.
6 hours lecture, 8 hours laboratory.
Prerequisite(s): PMD 203.

PMD 205 - Paramedicine VI (9)

An overview of the various responses to and treatments for infectious diseases, psychological emergencies, and conditions requiring attention in the areas of neonatology, pediatrics, geriatrics, and challenged patients. Additional topics include the incident command system (ICS) and special operations such as rescue situations, hazardous materials, and terrorism as they relate to medical emergencies. Includes certification in Pediatric Advanced Life Support (PALS). Students increase their number of clinical rotations.
2 hours lecture, 14 hours laboratory.
Prerequisite(s): PMD 204.

PMD 206 - Paramedicine VII (6)

The capstone course of the paramedicine program, offered primarily as a field internship. Students are assigned to a paramedic preceptor on an advanced life support (ALS) ambulance where they operate as the lead paramedic in the field. Students, preceptors, and instructors meet weekly to discuss student progress.
1 hour lecture, 10 hours laboratory.
Prerequisite(s): PMD 205.

PMD 210 - Paramedic Refresher (3)

A refresher course that equips students with the knowledge and skills required of paramedics seeking recertification. Topics include preparatory information--roles and responsibilities of the paramedic, medical and ethical issues, and basic anatomy and physiology--as well as airway management and ventilation, patient assessment, trauma, and medical conditions as they relate to emergency medical systems. May be repeated as required for recertification.
3 hours lecture, 1 hour laboratory.
Prerequisite(s): Certification as an Arizona or nationally-registered paramedic in good standing.

POS - POLITICAL SCIENCE

POS 110 - American National Government (3)

A study of the political system of the United States with emphasis on constitutional development, political culture, voting, political parties, campaigns and elections, interest groups, public opinion, and the three branches of the national government. Designed to increase the student's awareness and understanding of the political process of the impact of race, gender and ethnicity upon the political process and of the

citizen's role within that process. Fulfills the federal Constitution requirement for Arizona Teaching Certification.
3 hours lecture.
Prerequisite(s): RDG 122, concurrent enrollment, or exemption; and ENG 100 or placement in, or completion of, ENG 101.

POS 220 - Federal and Arizona Constitution (3)

A study of the governments of the United States and Arizona through the interpretation of the constitution of each political entity. Approved for teacher certification. Teachers needing only Arizona Constitution should enroll in POS 221.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and ENG 101. Recommended Preparation: ENG 102.

POS 221 - Arizona Constitution (1)

A study of the government of Arizona through the interpretation of its constitution. Approved for teacher certification. Taught concurrently with POS 220.
1 hour lecture.
Prerequisite(s): RDG 122 or exemption, and either ENG 101 or ENG 102. Recommended Preparation: ENG 102 and POS 110.

POS 230 - World Politics (3)

A study of the international political system and nation-state relations, including the development of international systems, the Cold War and its aftermath, the pursuit of national objectives, current and future international alignments, and the analysis of current international problems.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and either ENG 101 or ENG 102. Recommended Preparation: ENG 102 and either POS 110, POS 220, HIS 242, or concurrent enrollment.

POS 240 - Comparative Politics (3)

Introduction to the study of comparative politics with emphasis on the comparison of political systems, movements, ideologies and economic development.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption, and either ENG 101 or ENG 102. Recommended Preparation: ENG 102 and either POS 110, POS 220, HIS 242, or concurrent enrollment.

PSY - PSYCHOLOGY

PSY 101 - Introduction to Psychology (3)

A survey of major topics in psychology to include: history of psychology, research methods, biopsychology, sensation and perception, consciousness, learning, memory, motivation and emotion, human development, personality, abnormal behavior and therapy.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption. Recommended Preparation: ENG 100 or concurrent enrollment, or ENG 101.

PSY 103 - Personality and Adjustment (3)

A study of basic theoretical principles of psychology and their application to human behavior and growth. Emphasis on scientific psychology's contributions to more effective professional and personal relationships. Group activities and self-evaluation included.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption. Recommended Preparation: ENG 100 or ENG 101.

PSY 210 - Social Psychology (3)

A study of basic concepts, theories and research pertaining to human interaction. Topics include attribution, attitude formation and change, interpersonal interaction, altruism and aggression, environmental psychology, and group structure and processes.
3 hours lecture.
Prerequisite(s): PSY 101. Recommended Preparation: ENG 101 or ENG 102.

PSY 218 - Loss, Grief, and Dying (3)

An exploration of grief, dying and the loss of loved persons as individuals as well as global human experiences. The primary focus will be upon the coping skills of the affected persons and helping skills of others. Values, behaviors and intervention strategies will be studied in international, medical, diverse, social and legal contexts.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption.

PSY 230 - Personality Theories and Research (3)

A survey of major psychological theories of personality including psychoanalytic, neo-Freudian, dispositional/trait, learning and humanities/existential theories. Personality assessment based upon theory and research, normal and abnormal personality types, and exploration of one's own personality are also addressed.
3 hours lecture.
Prerequisite(s): PSY 101, and ENG 101 or ENG 102.

PSY 240 - Developmental Psychology (3)

A sequential study of the human lifespan, from prenatal development through late adulthood, emphasizing research and theories in the biological, cognitive, and psychosocial domains.
3 hours lecture.
Prerequisite(s): ENG 101 and PSY 101.

PSY 250 - Introduction to Psychological Research, Measurements and Statistics (3)

Basic concepts of experimental design, measurement, and descriptive and inferential statistics as applied to psychological variables.
3 hours lecture.

All prerequisite coursework must be completed with a grade of C or better.

Prerequisite(s): PSY 101, ENG 101 or ENG 102, and MAT 123.

PSY 270 - Abnormal Psychology (3)

An examination of various psychological disorders as well as theoretical, clinical, and experimental perspectives on the study of psychopathology. Emphasis is on terminology, classification, etiology, assessment of symptoms, and therapeutic techniques for the treatment of the major disorders.
3 hours lecture.
Prerequisite(s): PSY 101, ENG 101, and RDG 122 or exemption.

PSY 290 - Experimental Psychology (4)

A review and analysis of scientific literature, with specific attention to experimental research designs. Students design psychological studies, collect and analyze data, and interpret and report research results.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): ENG 102, PSY 101, and PSY 250.

RDG - READING

RDG 019 - Transitional Reading (3-4)

A course designed for students beginning regular college classes and for basic readers of English. Emphasis is on literal comprehension, vocabulary building and reading rate improvement.
Prerequisite(s): Placement test score. Recommended Preparation: Keyboarding skills.

RDG 020A - Reading Fundamentals I (3-4)

A review of basic reading, spelling and study skills. This class emphasizes literal and inferential comprehension, vocabulary development, review of spelling rules, dictionary skills and library use.
Prerequisite(s): Placement test score or RDG 019.
Recommended Preparation: Keyboarding skills.

RDG 110 - College Study Skills (3)

A course emphasizing literal and critical reading strategies applied to content area textbooks and essays, general study skills application, and content area vocabulary acquisition.
3 hours lecture.
Prerequisite(s): Placement test score, RDG 020A, or permission of instructor. Recommended Preparation: Keyboarding skills.

RDG 122 - Reading Critically (3)

An advanced course in reading for critical thinking using college level study strategies, vocabulary, and logical analysis of texts involving research across the disciplines.
3 hours lecture.
Prerequisite(s): Placement test score, RDG 110, or permission of instructor. Recommended Preparation: Keyboarding skills.

RTH - RESPIRATORY THERAPY

RTH 110 - Introduction to Respiratory Care (4)

An introduction to the respiratory care profession. Topics include respiratory care and the healthcare system; computer applications; patient safety, communication, and record keeping; principles of infection control; and ethical and legal implications of practice.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): BIO 156, BIO 160, BIO 205, ENG 101, ENG 102, MAT 123 or higher, and two of the following--PSY 101, PSY 103, PSY 218, PSY 230, PSY 240, PSY 270, SOC 101, SOC 160, SOC 202, SOC 207, SOC 230; concurrent enrollment in RTH 112, RTH 121, and RTH 123; and acceptance into the respiratory therapy program.

RTH 112 - Respiratory Physiology (4)

A study of the cardiopulmonary system and associated structures. Topics include the anatomy of the respiratory system, ventilation and diffusion of pulmonary gases, the circulatory system, oxygen and carbon dioxide transport, control of ventilation, and renal failure and its effects on the cardiopulmonary system.
4 hours lecture.
Prerequisite(s): BIO 156, BIO 160, BIO 205, ENG 101, ENG 102, MAT 123 or higher, and two of the following--PSY 101, PSY 103, PSY 218, PSY 230, PSY 240, PSY 270, SOC 101, SOC 160, SOC 202, SOC 207, SOC 230; concurrent enrollment in RTH 110, RTH 121, and RTH 123; and acceptance into the respiratory therapy program.

RTH 121 - Basic Therapeutics (4)

An introduction to basic respiratory care therapeutics, equipment functions, and clinical indications and contraindications. Topics include medical gas therapy, oxygen delivery devices, humidity and aerosol therapy, hyperinflation therapy, chest physiotherapy, and basic airway management.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): BIO 156, BIO 160, BIO 205, ENG 101, ENG 102, MAT 123 or higher, and two of the following--PSY 101, PSY 103, PSY 218, PSY 230, PSY 240, PSY 270, SOC 101, SOC 160, SOC 202, SOC 207, SOC 230; concurrent enrollment in RTH 110, RTH 112, and RTH 123; and acceptance into the respiratory therapy program.

RTH 123 - Basic Assessment and Monitoring (4)

A study of the basic assessment and monitoring of cardiopulmonary-impaired patients. Topics include bedside respiratory assessment, clinical laboratory studies assessment, oxygenation and ventilation, pulmonary function measurements, clinical application of chest radiography, and basic interpretation of electrocardiogram tracing.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): BIO 156, BIO 160, BIO 205, ENG 101, ENG 102, MAT 123 or higher, and two of the following--PSY 101,

All prerequisite coursework must be completed with a grade of C or better.

PSY 103, PSY 218, PSY 230, PSY 240, PSY 270, SOC 101, SOC 160, SOC 202, SOC 207, SOC 230; concurrent enrollment in RTH 110, RTH 112, and RTH 121; and acceptance into the respiratory therapy program.

RTH 124 - Pharmacology for Respiratory Care (3)

A study of the principles of pharmacology and of drug receptor theory as they relate to patients with cardiopulmonary disease. Topics include general principles of pharmacology, drug dose calculations, effects of pharmacological agents on the central and peripheral nervous systems, bronchodilators, drugs used to control airway mucus and edema, and drugs used in the management of ventilator patients and patients with cardiorespiratory disorders.
3 hours lecture.
Prerequisite(s): RTH 110, RTH 112, RTH 121, and RTH 123; and concurrent enrollment in RTH 162, RTH 235, and RTH 246.

RTH 162 - Principles of Mechanical Ventilation (3)

An introduction to the concepts of mechanical ventilation for adult patients. Topics include reasons for mechanical ventilation, principles of non-invasive and invasive mechanical ventilation, physiological basis for ventilatory support, physical principles of positive pressure ventilation, physical assessment of critically-ill patients, and respiratory monitoring in the intensive care unit.
3 hours lecture.
Prerequisite(s): RTH 110, RTH 112, RTH 121, and RTH 123; and concurrent enrollment in RTH 124, RTH 235, and RTH 246.

RTH 235 - Clinical Procedures I (4)

A clinical application of respiratory care coursework. Topics include a site orientation; a review of hospital respiratory department administration and departmental policies, procedures, and reporting systems; an introduction to medical records; and patient assessment and monitoring. Also included are various respiratory therapies, infection control procedures, techniques for medical asepsis, equipment disinfection and processing, patient care plans, and case studies.
2 hours lecture, 6 hours laboratory.
Prerequisite(s): RTH 110, RTH 112, RTH 121, and RTH 123; and concurrent enrollment in RTH 124, RTH 162, and RTH 246.

RTH 241 - Critical Care Therapeutics (4)

A study of critical care principles and procedures in adult patients. Topics include airway management, mechanical ventilation waveform graphics, selected mechanical ventilators and their troubleshooting, care of mechanically-ventilated patients, alternative modes of mechanical ventilation, and home mechanical ventilation.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): RTH 124, RTH 162, RTH 235, and RTH 246; and concurrent enrollment in RTH 243 and RTH 245.

RTH 243 - Advanced Assessment and Monitoring (4)

A study of the assessment of critical respiratory patients. Topics include cardiac output, invasive hemodynamics, sleep-related breathing disorders, nutritional assessment, advanced cardiac arrhythmia interpretation, and bronchoscopy.
3 hours lecture, 3 hours laboratory.
Prerequisite(s): RTH 124, RTH 162, RTH 235, and RTH 246; and concurrent enrollment in RTH 241 and RTH 245.

RTH 245 - Clinical Procedures II (5)

A continuation of RTH 235. Topics include basic and advanced airway management and care, basic cardiopulmonary resuscitation, arterial blood gases, advanced respiratory monitoring, mechanical ventilation, and care decisions for adult patients. Additional topics include hemodynamic assessment of the critically-ill patient, respiratory care delivery environments, and case study presentations.
3 hours lecture, 6 hours laboratory.
Prerequisite(s): RTH 124, RTH 162, RTH 235, and RTH 246; and concurrent enrollment in RTH 241 and RTH 243.

RTH 246 - Cardiorespiratory Disorders I (3)

A study of commonly encountered respiratory disorders in adult patients. Topics include infectious pulmonary diseases, obstructive pulmonary diseases, traumatic lung and chest injuries, pulmonary vascular diseases, disorders of the pleura and chest wall, and important issues related to cardiopulmonary disorders.
3 hours lecture.
Prerequisite(s): RTH 110, RTH 112, RTH 121, and RTH 123; and concurrent enrollment in RTH 124, RTH 162, and RTH 235.

RTH 251 - Advanced and Specialty Therapeutics (5)

A study of respiratory therapies used in specialized environments. Topics include development and care of the fetus, care of the neonatal and pediatric patient, management of ventilation and oxygenation in the neonatal and pediatric patient, transport, home care, and care of the neonatal and pediatric patient, advanced cardiac life support (ACLS), pulmonary rehabilitation, and advanced cardiorespiratory care therapies.
4 hours lecture, 3 hours laboratory.
Prerequisite(s): RTH 241, RTH 243, and RTH 245; and concurrent enrollment in RTH 255, RTH 256, and RTH 257.

RTH 255 - Clinical Procedures III (5)

A continuation of RTH 245. Topics include clinical assessment, advanced airway management, and advanced respiratory monitoring of neonatal and pediatric patients, mechanical ventilation and care decisions for adult, neonatal, and pediatric patients. Additional topics include various respiratory care delivery environments and case study presentations.

All prerequisite coursework must be completed with a grade of C or better.

3 hours lecture, 6 hours laboratory.
Prerequisite(s): RTH 241, RTH 243, and RTH 245; and concurrent enrollment in RTH 251, RTH 256, and RTH 257.

RTH 256 - Cardiorespiratory Disorders II (3)

A continuation of RTH 246. Topics include neuromuscular disorders affecting ventilation, neoplastic diseases of the lung, and environmental lung diseases. Additional topics include assessment of the fetus and the neonate, cardiovascular disorders and congenital anomalies of the newborn, cardiopulmonary disorders of the newborn, and pediatric cardiopulmonary disorders.
3 hours lecture.
Prerequisite(s): RTH 241, RTH 243, and RTH 245; and concurrent enrollment in RTH 251, RTH 255, and RTH 257.

RTH 257 - Clinical Applications and Professional Development (1)

Clinical application projects that include writing resumes, completing computerized self-assessment exams for credentialing, and interacting with licensure and national credentialing organizations. Additional topics include participation in a respiratory-related service learning project and professional development through shared reporting.
3 hours laboratory.
Prerequisite(s): RTH 241, RTH 243, and RTH 245; and concurrent enrollment in RTH 251, RTH 255, and RTH 256.

SLE - SERVICE LEARNING

SLE 192 - Special Topics in Service Learning (1-3)

Students engage in a formal, community-based service learning experience and reflect on how it applies to the content of the course they are concurrently enrolled in, thereby deepening their understanding of the relationship between community and classroom learning.
Prerequisite(s): Concurrent enrollment in a course approved by the instructor.

SLE 292 - Special Topicsin Service Learning II (1-3)

An advanced, community-focused service-learning experience that provides an opportunity for students to hone service and engagement skills acquired in SLE 192, to participate actively in an organized service experience and, through reflection activities, to relate those experiences to academic or occupational course content. A minimum of 25 direct service hours per credit is required in addition to periodic instructor or mentor meetings and training sessions.
Prerequisite(s): SLE 192. Recommended Preparation: Sophomore standing.

SOC - SOCIOLOGY

SOC 101 - Introduction to Sociology (3)

An overview of sociology focusing on its main perspectives, theories and research methods. Areas of emphasis include culture, socialization and social institutions, social interaction, groups and organizations, social class and social stratification, deviance and crime, race and ethnicity, and gender and sexuality.
3 hours lecture.
Prerequisite(s): RDG 122 or exemption.

SOC 160 - Sociology of Race and Ethnicity (3)

An exploration of the social construction of race and ethnicity and how it shapes social interactions and institutions. Includes the history of race relations leading to an exploration of contemporary relations among racial groups, with emphasis on the consequences of power, privilege, and oppression.
3 hours lecture.
Prerequisite(s): ENG 101, and RDG 122 or exemption.
Recommended Preparation: SOC 101.

SOC 202 - Social Problems (3)

Topics to be covered include issues, questions and problems affecting women, racial and ethnic minorities, families and the aged. In addition, inequalities dealing with social, educational and financial institutions will be covered. Also to be considered are problems of drug and alcohol use, physical and mental health care, crime and sexual differences. The course is designed to prepare students to assess social problems and propose resolutions in a logical and scientific manner.
3 hours lecture.
Prerequisite(s): ENG 101, concurrent enrollment, or permission of instructor; and RDG 122 or exemption.
Recommended Preparation: SOC 101, PSY 101, or ANT 102.

SOC 207 - Introduction to Social Welfare (3)

An introduction to traditional social work institutions and contemporary human services organizations, locally and globally. Designed to acquaint the student with various programs, such as the social insurance system, available to the general public through legislation and/or private means.
3 hours lecture.
Prerequisite(s): ENG 101, concurrent enrollment, or permission of instructor; and RDG 122 or exemption.
Recommended Preparation: SOC 101, PSY 101, or ANT 102.

SOC 210 - Marriage and the Family (3)

Courtship, mate selection, marital adjustment, parenthood and family living from sociological and psychological points of view.
3 hours lecture.
Prerequisite(s): ENG 101, concurrent enrollment, or permission of instructor; and RDG 122 or exemption.
Recommended Preparation: SOC 101, PSY 101, or ANT 102.

SOC 212 - Sociology of Gender (3)

An exploration of the social construction of gender throughout history and how it has shaped current social interactions and

All prerequisite coursework must be completed with a grade of C or better.

institutions. Focus is on the sociological concepts and theories used to explore cultural explanations of gender, as well as on the biological theories of sex, gender, and sexuality. Includes an examination of gender as it intersects with race, ethnicity, social class, age, and sexual orientation; and a study of the consequences of sex and gender in the lives of men, women, and gender non-conforming individuals.
3 hours lecture.
Prerequisite(s): ENG 101, and RDG 122 or exemption.
Recommended Preparation: SOC 101.

SOC 230 - Human Sexuality and Gender Awareness (3)

Study of human sexuality and gender awareness from biological, psychological, sociological, cultural, and ethical perspectives.
3 hours lecture.
Prerequisite(s): ENG 101, concurrent enrollment, or permission of instructor; and RDG 122 or exemption.
Recommended Preparation: SOC 101, PSY 101, or ANT 102.

SPA - SPANISH

SPA 101 - Elementary Spanish I (4)

An introduction to the Spanish language, its pronunciation, and its basic grammar structures. Develops the student's ability to speak, read, and write simple sentences based on personal and classroom experience, and explores a variety of topics related to Hispanic culture, history, geography, and arts.
4 hours lecture, 1 hour laboratory.
Prerequisite(s): None. Recommended Preparation: SPA 115 or previous experience in a second language.

SPA 102 - Elementary Spanish II (4)

A continued study of the Spanish language, its pronunciation, and its basic grammar structures, with emphasis on more complex verb tenses and sentence structure. Further develops the student's ability to speak, read, and write simple sentences based on personal and classroom experience, and explores additional topics related to Hispanic culture, history, geography, and arts.
4 hours lecture, 1 hour laboratory.
Prerequisite(s): SPA 101, one year of high school Spanish, or permission of instructor.

SPA 115 - Conversational Spanish I (3)

A beginning conversational experience in Spanish through which students build oral proficiency while increasing their awareness of Hispanic culture.
3 hours lecture.
Prerequisite(s): None.

SPA 116 - Conversational Spanish II (3)

A beginning conversational experience in Spanish through which students continue to build oral proficiency while further increasing their awareness of Hispanic culture.

3 hours lecture.
Prerequisite(s): SPA 101, SPA 115, or permission of instructor.

SPA 201 - Intermediate Spanish I (4)

A continued study of the Spanish language, its pronunciation, and its grammar structures, with emphasis on intermediate-level verb tenses and sentence structure. Further develops the student's ability to speak, read, and write even more complex sentences based on personal and interpersonal experiences, and explores additional topics related to Hispanic culture, history, geography, and arts.
4 hours lecture, 1 hour laboratory.
Prerequisite(s): SPA 102, two years of high school Spanish, or permission of instructor.

SPA 202 - Intermediate Spanish II (4)

An exploration of Hispanic cultures presented through authentic literary works and audio-visual media with integrated practice in reading, writing, speaking, and understanding the Spanish language.
4 hours lecture, 1 hour laboratory.
Prerequisite(s): SPA 201, three years of high school Spanish, or permission of instructor.

SPA 215 - Conversational Spanish III (3)

An intermediate conversational experience in Spanish through which students build oral proficiency while increasing their awareness of Hispanic culture.
3 hours lecture.
Prerequisite(s): SPA 102, SPA 116, or permission of instructor.

SPA 216 - Conversational Spanish IV (3)

An intermediate conversational experience in Spanish through which students continue to build their oral proficiency while further increasing their awareness of Hispanic culture.
3 hours lecture.
Prerequisite(s): SPA 201, SPA 215, or permission of instructor.

SSV - SOCIAL SERVICES

SSV 120 - Introduction to Community Health Worker (3)

An introduction to public health with a focus on outreach, including health promotion, disease prevention, advocacy, health education, service referral, public health - social services integration, and development of effective communication/advocacy skills.
3 hours lecture.
Prerequisite(s): None.

SSV 224 - Field Experience in Social Services (1-6)

A supervised cooperative education field experience involving the combined efforts of educators and employers. Students accomplish various academic and career-related objectives in

social work or social sciences and related fields. Semester-long regular workplace participation and weekly contact with assigned faculty advisor are required.
Prerequisite(s): A declared major in social work or social sciences and permission of the cooperative education program coordinator. Recommended Preparation: Sophomore standing and faculty recommendation.

THE - THEATRE ARTS

THE 101 - Acting I (3)

Introduction to theories of dramatic art and practice in acting situations. This course includes basic acting techniques, theatrical vocabulary and comportment, and character and script analysis.
3 hours lecture.
Prerequisite(s): None.

THE 103 - Introduction to Theatre (3)

History and tradition of western theatre with analysis and discussion of representative drama, classical to contemporary.
3 hours lecture.
Prerequisite(s): None.

THE 110 - Theatre Workshop (3)

A study of the components of the theatrical process, to include acting, directing, production design, and management. Students participate in a drama in an acting or production capacity.
2 hours lecture, 4 hours rehearsal/performance.
Prerequisite(s): Audition or permission of instructor.

THE 201 - Acting II (3)

Exploration and application of advanced techniques of acting through physical and vocal expression, improvisation, and scene work. Emphasis on the actor's approach to characterization. Opportunity for experience in production.
3 hours lecture.
Prerequisite(s): THE 101.

THE 220 - Dramatic Structure (3)

Examination of the structural elements of major dramatic forms and styles. Includes reading and viewing of representative plays and analysis of their structures in relationship to modes of presentation and the resulting effects.
3 hours lecture.
Prerequisite(s): THE 101 or permission of instructor.

UAS - UNMANNED AIRCRAFT SYSTEMS

UAS 101 - Introduction to Unmanned Aircraft Systems (3)

An introduction to the fundamentals of unmanned aircraft systems (UAS), including their history and their developing role in the modern aviation industry. Topics include structural elements, avionics, flight control and guidance systems, navigation, remote sensing, and human factors. Also covers UAS integration into commercial and military airspace as well as FAA regulations and sanctions. Emphasis is on future employment in the field with a focus on commercial airspace.
3 hours lecture.
Prerequisite(s): PFT 101.

UAS 103 - Simulations for Unmanned Systems (4)

An application of the principles of unmanned systems and of the knowledge and skills required to operate them in air, ground, and marine environments. Emphasis is on decision-making skills and on safe operating techniques during simulations.
4 hours lecture.
Prerequisite(s): None.

UAS 121 - Remote Sensing and Imagery (3)

A study of the theory and operation of common sensors-visual spectrum, infrared, and synthetic aperture radar (SAR)-used by operators of unmanned aircraft systems. Topics include equipment acquisition and characteristics, sensor limitations and restrictions, and data analysis and image interpretation.
3 hours lecture.
Prerequisite(s): UAS 101.

UAS 132 - Multi-Rotor Flight (4)

A practical application of the principles of unmanned multi-rotor systems and of the knowledge and skills required to operate them. Emphasis is on decision-making and on consistent, safe flying techniques during takeoffs and landings.
4 hours lecture.
Prerequisite(s): UAS 103.

UAS 200 - Unmanned Aircraft Systems Ground School (3)

A survey of the history and development of unmanned aircraft systems, and of the legal issues related to them. Students develop and demonstrate the knowledge and skills necessary to pass the Federal Aviation Administration small unmanned aircraft systems (sUAS) exam.
3 hours lecture.
Prerequisite(s): None.

UAS 201 - Unmanned Aircraft Systems Pilot and Payload Operator (8)

A practical application of the principles of unmanned aircraft systems, with an emphasis on simulated flight missions. Includes analysis of the imagery acquired during flight simulations. Focus is on future civilian applications such as search and rescue, and on aerial inspections, mapping, and photography.
4 hours lecture, 12 hours laboratory.
Prerequisite(s): UAS 101 and UAS 121, or concurrent enrollment; and possession of a Private Pilot Certificate with Airplane Single Engine Land.

All prerequisite coursework must be completed with a grade of C or better.

UAS 210 - Crew Resource Management - UAS (3)

Fundamentals of crew coordination for unmanned aircraft systems. Topics include the human-machine interface, ergonomics, and human and other factors affecting control and operation.
3 hours lecture.
Prerequisite(s): None.

UAS 212 - Maintenance and Repair for Operators (3)

A practical application of the principles of unmanned system maintenance and repair. Focus is on operator calibrations, inspections, and maintenance procedures; and on proper record keeping of repairs performed on unmanned air, ground, and marine systems.
3 hours lecture.
Prerequisite(s): None.

UAS 220 - Unmanned Systems Safety (3)

A study of the fundamentals of risk mitigation and accident prevention relating to unmanned systems. Topics include sense and avoid systems, airspace considerations, and public safety.
3 hours lecture.
Prerequisite(s): None.

UAS 221 - Mapping Software (4)

A practical application of knowledge and skills required to utilize mapping software on fixed-wing systems. Emphasis is on decision-making skills, data processing techniques, and data interpretation. Topics include data collection, photogrammetry, flight planning, photomapping, and mapping software. Also included are the interpretation and manipulation of visual imagery, multispectral imagery, and digital surface models.
4 hours lecture.
Prerequisite(s): UAS 103 and concurrent enrollment in UAS 232.

UAS 230 - Fundamentals of UAS Instruction (3)

An application of the fundamentals of instruction as they relate to unmanned systems. Emphasis is on instructional strategies and plans, communication skills, student evaluation, the learning process, and instructor responsibilities.
3 hours lecture.
Prerequisite(s): None.

UAS 232 - Fixed-Wing Flight (4)

A practical application of the principles of small unmanned aircraft systems (sUAS) and of the knowledge and skills required to operate fixed-wing systems. Emphasis is on decision making and on consistent, safe flying techniques during takeoffs and landings.
4 hours lecture.
Prerequisite(s): UAS 103 and concurrent enrollment in UAS 221.

WLD - WELDING TECHNOLOGY

WLD 105 - Oxyacetylene Welding (3)

A study of the safety practices associated with oxyacetylene cutting and welding, and a practical application of equipment setup and operation. Students perform welds on standard alloys of steel in flat, horizontal, vertical, and overhead positions. Also covers the brazing and soldering of ferrous metals.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

WLD 106 - Basic Shield Metal Arc Welding (3)

A study of the safety practices associated with shield metal arc welding (SMAW), and a practical application of equipment setup and operation. Students use SMAW to apply various techniques of joining gauge thickness carbon steel.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

WLD 114 - Welding for Metal Sculpture (3)

Focuses on basic welding processes and techniques used in the design and fabrication of metal sculptures. Team taught by welding and art faculty.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

WLD 128 - Gas Metal Arc Welding (3)

This is a basic course in the Gas Metal Arc Welding (GMAW) process covering safety, set-up, and operation of gas metal arc welding equipment, using solid wire on various thicknesses of ferrous metal.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): None.

WLD 202 - Welding Survey (4)

A practical application of major welding practices to include shield metal arc, gas metal arc, gas tungsten, oxyacetylene, brazing, and soldering processes. Also covers welding metallurgy, weldment design and inspection, and safety.
4 hours lecture, 1 hour laboratory.
Prerequisite(s): None.

WLD 203 - Blueprint Interpretation (3)

An introduction to the principles and procedures used to interpret structural blueprints and engineering drawings. Covers the essential concepts of blueprint formatting for structural applications and for aircraft applications. Also covers welding symbols and their specific meanings.
3 hours lecture.
Prerequisite(s): None. Recommended Preparation: Basic mathematics skills.

WLD 209 - Gas Tungsten Arc Welding (3)

A study of the safety practices associated with gas tungsten arc welding (GTAW), and a practical application of equipment setup and operation. Students use GTAW on non-ferrous metals.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): WLD 105 or permission of instructor.

WLD 210 - Advanced Shield Metal Arc Welding (3)

A continued study of the shield metal arc welding process. Topics include safety, equipment care and operation, and rod and current selection. Students perform out-of-position welding of heavy steel plate in open root configuration in preparation for welding pipe to API 1104 standards.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): WLD 105 and WLD 106, or permission of instructor.

WLD 211 - Pipe Fitting and Welding (3)

An overview of the fitting and welding of various sizes of pipe according to the standards of the American Welding Society (AWS) and the American Petroleum Institute (API). Students weld pipe using the shield metal arc welding process.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): WLD 210.

WLD 212 - Advanced Shield Metal Arc Welding II (3)

An advanced study of the shielded metal arc welding (SMAW) process, this course is designed to prepare students for the American Welding Society (AWS) D 1.1 Structural Steel certification test.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): WLD 210.

WLD 215 - Welding Design and Fabrication (3)

A study of the proper methods of welding design, layout, and fabrication. Students with demonstrated welding skills work on specific projects, using appropriate cutting and welding equipment.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 132, WLD 105, WLD 106, WLD 128, and WLD 203.

WLD 217 - Pipe Layout and Fitting (3)

A continuation of pipe fitting and welding. Topics include layout methods, and the fitting and welding of various sizes and types of pipe.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): MAT 132 and WLD 211.

WLD 218 - Advanced GTAW - Soft Metals (3)

A continuation of WLD 209 designed to develop the skills necessary to meet aerospace certification standards for aircraft. Emphasis is on advanced welding of aluminum alloys.
2 hours lecture, 3 hours laboratory.

Prerequisite(s): WLD 209.

WLD 219 - Advanced GTAW - Hard Metals (3)

A continuation of WLD 209 designed to develop the skills necessary to meet aerospace certification standards for aircraft. Emphasis is on advanced welding of stainless steel and 4130 chromoly steel.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): WLD 209.

WLD 220 - Advanced GTAW - Exotic Metals (3)

A continuation of WLD 219 designed to develop skills necessary to meet aerospace certification standards for aircraft. Emphasis is on advanced welding application of titanium and Inconel alloys.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): WLD 219.

WLD 228 - Advanced Gas Metal Arc Welding (3)

This advanced course in the Gas Metal Arc Welding process is designed to train students to prepare for the American Welding Society (AWS) D1.1 Structural Steel Certification test.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): WLD 128.

WLD 229 - Advanced Flux-Cored Arc Welding (3)

This is an advanced course in the flux-cored arc welding process which prepares the student for American Welding Society (AWS) D1.1 Structural Steel Certification.
2 hours lecture, 3 hours laboratory.
Prerequisite(s): WLD 128 and WLD 228.

All prerequisite coursework must be completed with a grade of C or better.

Administration

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University of Wyoming, B.A., M.A.
University of Utah, Ph.D.

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Iowa State University, Ph.D.

Vice President for Administrative Affairs
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Brigham Young University, B.F.A.
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Central Arizona College, A.G.S.
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University of Punjab, Pakistan, B.S.
Quaid-I-Azam University, M.S.
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Knox College, B.A.
Northern Arizona University, M.A.
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University of Idaho, B.S.
Naval Postgraduate School, M.S.

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Northern Arizona University, B.S., M.Ed.

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Cochise College, A.A.

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Bavarian State Exam, B.A.
American Public University System, M.A.

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University of Nebraska, B.S.

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University of Arizona, B.S.
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University of Northern Arizona, B.S., M.Ed.

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Tarleton State University, B.S.
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Cochise College, A.A.S.
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University of Arizona, B.S.
Western International University, M.B.A.

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Chemeketa Community College, A.S.

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Cochise College, A.A.S.
Ashford University, B.A.

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Instituto Technologico de Sonora, B.A.

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University of Florida, B.A.
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Northwood University, B.A.
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University of Phoenix, B.S.
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University of Arizona South, B.S.
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State University of New York, B.A.
University of Arizona, M.A.

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Manager and Recruiter (2014)
Georgetown University, B.S.

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Olivet College, B.A.

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Northern Arizona University, B.S.

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Cochise College, A.A.S.

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West Texas State University, B.S.

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Weber State University, B.S.
Colorado State University, M.Ed.

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University of South Carolina, B.A.
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Wichita State University, B.F.A., M.F.A.

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University of Phoenix, B.S.
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St. Edward's University, B.A.
Texas State University, M.P.A.

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Art Institute of Pittsburgh, A.S.

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University of Phoenix, B.S.N., M.S.N.

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Peru State College, B.S.
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Cochise College does not discriminate in admission or access to, or treatment or employment in, its services, programs, or activities on the basis of race, color, national origin, sex, religion, age (40+) or disability, in compliance with the laws of the United States and the state of Arizona.
The college seeks to provide disabled or handicapped students with any reasonable accommodation in order to facilitate access to college classes and activities. Students seeking such an accommodation should make an official request through Student Services.
A lack of English language skills will not be a barrier to admission and participation in the career and technical (vocational) education programs of the college.
Any questions regarding the applicability of state and federal anti-discrimination laws to Cochise College and its services, programs or activities, and any grievances or claims of violation of such laws, should be directed to the Title IX and Section 504 compliance officer:
Wendy Davis, VPHR
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La habilidad limitada del idioma inglés no es una barrera para la admisión o la participación de las carreras técnicas y vocacionales disponibles en la institución.
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