COCHISE COLLEGE
2000-2001 Catalog

Welcome to Cochise College

COCHISE COLLEGE

District Offices
and Douglas Campus
4190 West State Highway 80
Douglas, Arizona 85607-6190
(520) 364-7943

Sierra Vista Campus
901 North Colombo Avenue
Sierra Vista, Arizona 85635-2317
(520) 515-0500

Willcox Center
1110 West Fremont Street
Willcox, Arizona 85643-1500
(520) 384-4502

Benson Office
579 West Fourth Street
Benson, Arizona 85602-6501
(520) 586-4495

Benson Center
(August 2000)
1025 State Route 90
Benson, Arizona 85602-6501

Fort Huachuca Office
Commander, USAIC
Ft. Huachuca, AZ
Attn: ATZS-CPH-E (8)
Building 52104
Ft. Huachuca, AZ 85613-6000
(520) 533-2391

Toll Free 1-800-966-7943
(Hours: 8:00 a.m.- 4:30 p.m. weekdays)

http://www.cochise.org

GOVERNING BOARD
Mrs. Jan Guy, Chair
Dr. Randall H. Groth, Secretary
Mr. Juan P. Flores, Member
Mr. Bob Nelson, Member
Mrs. Jane Carol Strain, Member

ARIZONA STATE COMMUNITY COLLEGE BOARD
Mr. Ted Fichtl, Cochise County Representative

PRESIDENT
Dr. Karen Nicodemus

All information–including statements on tuition, fees, course offerings, admission and graduation requirements–is subject to change without notice, obligation or liability.

Published: April 2000.

Cochise College is an equal opportunity, affirmative action employer and educational institution committed to excellence through diversity. Please turn to page 295 for further information.

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Telephone Directory

Admissions, Registration and Records	364-0336/515-5412
Advising Center	364-0545/515-5483
Adult Basic Education	515-5456
Airframe and Powerplant	364-0321
Army Ed Center	533-3010
Athletics	364-0295
Aviation	364-0314
Benson Center	586-4495
Bookstore	364-9294/458-0262
Business Office	364-0200/515-5416
Campus Dean	364-0260/515-5491
Career Action Center	364-0253/515-5458
Cashier's Office	364-0276/515-5416
Center for Economic Research	515-5486
Center for Professional Development	515-5446
Chiricahua Hall	364-0263
Community Affairs Office	364-0322
Computer Lab	364-0237/515-5487
Conference Center	364-0556
Dean of Student Services	364-0244/515-5468
Development Office	364-0398
Extended Campus	364-0343/515-5496
Family Housing	364-0262
Financial Aid	364-0346
Fort Huachuca Office	533-2391
Foundation Office	364-0224
Housing	364-0262
Huachuca Hall	364-0256
Human Resources	364-0583
Instructional Media	364-0283/515-5465
Learning Support Center	364-0291/515-5447
Library	364-0344/515-5465
Mail Room	364-0226/515-5428
Nurse	364-0257
Nursing	364-0216/515-5466
Post Office	364-0226
President's Office	364-0350/515-5401
Records and Registration	364-0239/515-5415
Registrar	364-0241/515-5411
Security	364-0222/515-5470
Single Parent Program	364-0223/515-5410
Small Business Development	515-5478
Special Interest Classes	364-0343
Special Needs/ Disability Office	515-5237/364-0545
Student Development Center	364-0238/515-5483
Student Government	364-0558/515-5484
Student Life	364-0295
Student Services	364-0244/515-5491
Student Union	364-0288/515-5484
Tech Prep/Compact	515-5247
Transcripts	364-0205/515-5415
Testing Center	364-0291/515-5447
Vocational Interest Program	364-0545/515-5493
Veterans' Affairs	364-0235/515-5462
Willcox Center	384-4502

Academic Calendar 2000-2001

SUMMER SEMESTER 2000

AMT Phase 1, 3 and 5; Avionics classes begin ..... July 3
Fourth of July Holiday (Observed) ..... July 4
Summer Eight-week classes end ..... July 24

Second Five-Week Summer Session

Classes begin ..... July 5
Last day to add classes ..... July 6
Last day to change subject level ..... July 13
Last day to drop w/o academic penalty .. July 19
Second Five-week classes end ..... August 8

FALL SEMESTER 2000

Full 16-Week Classes

Professional Pilot classes begin ..... July 24
Faculty return ..... August 9
Convocation ..... August 9
Fall Registration continues ..... August 10-18
Residence Halls open ..... August 19
Classes begin ..... August 21
Last day to add classes ..... August 28
Labor Day Holiday ..... September 4
Last day to change subject level ... September 18
AMT Phases 1, 3, 5 and Avionics classes end ..... September 21
AMT Phases 2, 4 and Avionics classes begin ..... September 25
Columbus Day Holiday ..... October 9
Mid-Semester exams ..... October 10-16
Last day to drop w/o academic penalty or change to audit status ..... October 20
Faculty and Staff Development Day .. October 24
Graduation Filing Deadline for diplomas and certificates (Dec. grads) ..... October 30
Veterans' Day Holiday ..... November 10
Spring Registration begins ..... November 13
Thanksgiving Recess ..... November 23-25
Last day of classes ..... December 4
Evening Finals (for once a week only classes for Tuesday and Wednesday) ..... December 5 & 6
Final Exams (Including Saturday) ..... December 5-11
Spring Registration ends ..... December 12
AMT Phases 2, 4 and Avionics classes end ..... December 14
Professional Pilot classes end ..... December 15
Holiday Recess (All Staff) ..... December 18-January 1

First Eight-Week Session

Classes begin ..... August 21
Last day to add classes ..... August 23
Last day to change subject level . September 5
Last day to drop w/o academic penalty or to change to audit status ..... September 20
Classes end ..... October 14

Second Eight-Week Session

Registration begins ..... October 2
Classes begin ..... October 16
Last day to add classes ..... October 18
Last day to change subject level ..... October 30
Last day to drop w/o academic penalty or change to audit status ..... November 15
Second Eight-week classes end ..... December 11

SPRING SEMESTER 2001

Faculty and Staff return ..... January 2
AMT Phases 1, 3, 5 and Avionics classes begin ..... January 3
Spring Registration ..... January 3-5
Residence Halls open ..... January 7
Professional Pilot begins ..... January 8
Classes begin ..... January 8
Martin Luther King Holiday ..... January 15
Last day to add classes ..... January 16
Last day to change subject level ..... February 1
Presidents' Day Holiday ..... February 19
Mid-Semester exams ..... Feb. 26-March 2
Last day to drop without academic penalty ..... March 9
Graduation Filing Deadline for diplomas and certificates (May grads) ..... March 16
Spring Break ..... March 19-24
AMT Phases 1, 3, 5 and Avionics classes end ..... March 22
AMT Phases 2, 4 and Avionics classes begin ..... March 26
Fall Registration begins ..... April 20
Last day of classes ..... April 30
Final Exams ..... May 1-7
Summer/Fall Registration ends ..... May 8
Commencement ..... May 11
Summer/Fall Registration (continued) ..... May 14-24
Memorial Day Holiday ..... May 28
Professional Pilot ends ..... June 8
AMT Phases 2, 4 and Avionics classes end ..... June 14

First Eight-Week Session

Classes begin ..... January 8
Last day to add classes ..... January 10
Last day to change subject level ..... January 23
Last day to drop w/o academic penalty or change to audit status ..... February 7
Classes end ..... March 5

Second Eight-Week Session

Registration begins ..... February 21
Classes begin ..... March 7
Last day to add ..... March 9
Last day to change subject level ..... March 28
Last day to drop w/o academic penalty or change to audit status ..... April 13
Classes end ..... May 7

SUMMER SESSION 2001

Registration ..... April 6-May 8
Summer Session Registration (continued) ..... May 14-24
Summer Sesion Classes begin ..... May 29
Professional Pilot classes end ..... June 8
AMT Phases 2, 4 and Avionics classes end ..... June 14
AMT Phases 1, 3, 5 and Avionics classes begin ..... July 2
Fourth of July Holiday ..... July 4
Professional Pilot classes begin ..... July 23

First Five-Week Summer Session

Classes begin ..... May 29
Last day to add classes ..... May 30
Last day to change subject level ..... June 7
Last day to drop w/o academic penalty or change to audit status ..... June 13
Classes end ..... June 28

Summer Eight-Week Session

Classes begin ..... May 29
Last day to add ..... May 31
Last day to change subject level ..... June 13
Last day to drop w/o academic penalty or change to audit status ..... June 28
Classes end ..... July 23

Second Five-Week Summer Session

Registration ..... June 25-28
Classes begin ..... July 2
Last day to add ..... July 3
Last day to change subject level ..... July 12
Last day to drop w/o academic penalty or change to audit status ..... July 18
Classes end ..... August 2

General Information

COCHISE COLLEGE

Cochise College was established in 1961 as the second community college in Arizona. The College is located in an area rich in history and cultural diversity. The original 540-acre Douglas Campus is unique in its architecture and provides panoramic views of the Mule and Chiricahua Mountains as well as neighboring Sonora, Mexico.

Cochise College has come a long way from its humble beginnings when the administration offices were first housed in the Gadsden Hotel. The opening of the College doors in September 1964 can be attributed to the efforts of the dedicated citizens of Cochise County. From the first semester, the College has been committed to serving citizens throughout the county offering classes in Benson, Bisbee, Douglas, Fort Huachuca, Sierra Vista, Willcox and outlying areas. During the first decade the College's enrollments increased steadily as the faculty and administration worked to develop new and innovative programs.

The growth of population at 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 1970's to the full-fledged separate campus which opened its doors to classes in 1978 at its present location on North Colombo northwest of the city. This facility now comprises sixteen buildings.

The Willcox Center, located in a historic ranching and farming area in northern Cochise County, offers classes to the residents of the area under the supervision of the Community Campus, which provides a variety of programs and services throughout the county and region.

A fourth location, in northwest Cochise County, is planned for June 2000. The Benson Center will serve the learning needs of this rapidly growing and vital area.

The development of community-directed college programs and services has included the Center for Professional Development, the Small Business Development Center, the Career Action Center, various conferences, the Prison Education Program, the Single Parent Program, Adult Education, the Center for Economic Research and the Vocational Interest Program.

Cochise College continues to provide quality educational opportunities to the people of Cochise County, Arizona and specific populations in the southwestern United States. President Karen Nicodemus is leading the College in a new direction emphasizing the learning community. This direction focuses on teaching and learning, access and diversity and the use of technology and innovative instruction.

MISSION

The primary mission of Cochise College is to provide education to the citizens of Cochise County. Central to this mission are teaching and learning. The College also offers educational services outside the County when these services provide benefits to the College's primary community and are compatible with the philosophy of Cochise College.

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 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.

GUIDELINES

In following its philosophy, the College must:

- have a qualified faculty and staff with the ability and skills to develop and implement educational programs which meet the needs of the community.
- provide the faculty and staff with the means for development and growth.
- provide opportunities for all students to improve their skills in written and oral communication, critical thinking, and reading information processing.
- provide curriculum for transfer degree programs, career preparation, job training, and life-long learning.
- encourage student success in an environment that promotes intellectual growth in college and beyond.
- cooperate with business, government, other educational institutions and participate in the economic life of the community.
- work with students and other members of the community in a candid, impartial and ethical manner.
- strive to provide current and accurate information and resources to students and the community.
- provide equal access to instruction and student support services.
- maintain a program of developmental education as necessary.

GENERAL EDUCATION MISSION STATEMENT

General Education at Cochise College provides students with knowledge, information and technical skills essential for a successful life. To help students acquire these, Cochise College stresses the importance of self-esteem, self-confidence, independent learning and the ability to adapt to a changing environment. In its desire for excellence, the College emphasizes the importance of students establishing realistic goals.

General Education provides students with the knowledge of how to write clearly, how to read and think critically and how to make sound ethical decisions. It provides students with knowledge of mathematics, the physical and life sciences and the varieties of human societies and cultures. It provides students with an understanding of human history and the global community. It provides students with the ability to understand and appreciate the arts.

Inherent in the idea of General Education is the love of learning and the idea of civility, which the College defines here as respect for all persons.

ACCREDITATION AND AFFILIATION

Cochise College is accredited by the Arizona State Board of Directors for Community Colleges and the North Central Association of Colleges and Schools. The College also holds memberships in the Arizona Community College Association, the Council of North Central Junior Colleges, the North Central Association of Colleges and Schools, the American Association of Community Junior Colleges and the American Association of Community College

Trustees. The College also holds Federal Aviation Administration certification for its professional pilot and aviation maintenance programs and full accreditation of the nursing program by the Arizona State Board of Nursing and the National League for Nursing.

The National League of Nursing
Accrediting Commission
61 Broadway
New York, New York 10006
(212) 363-555, ext. 153

The State Board of Nursing
Arizona State of Nursing
1651 East Morten Avenue, Suite 150
Phoenix, Arizona 85020
(602) 331-8111

GOVERNANCE

The College district is governed by the seventeen-member Arizona State Board of Directors for Community Colleges and by a five-member Governing Board elected from precincts in Cochise County. The College is financed by legislative appropriation, a countywide tax levy and student tuition.

COMMUNITY SERVICES

Cochise College extends its educational services to meet the needs of the entire county. Community Services is that phase of the educational program which provides educational, cultural and recreational services beyond formalized classroom instruction. Among these services are free faculty lectures; a program of public events and cultural activities including lectures and forums, art exhibits, film series and noncredit courses; and community use of the College libraries and other facilities.

Other community services include workshops to meet special needs of business, industry and the professions; economic research, community recreation; campus tours; public information; and a variety of local, state and national conferences.

THE COCHISE COLLEGE FOUNDATION

The Cochise College Foundation, incorporated March 20, 1967, supports the educational objectives of Cochise College. It has a countywide membership of fifteen men and women interested in promoting the goals of the College. The Foundation, having received Internal Revenue Service qualification, is a recognized avenue for the receipt of money, property or other items of value bequeathed or donated for the benefit of the College.

The Foundation provides over $100,000 in scholarships to Cochise College students each year and has assisted the College with several capital projects over the past thirty years.

College Locations

DOUGLAS CAMPUS

The seventeen-building Douglas Campus serves approximately 1,300 students each semester with a diverse curriculum of general education, liberal arts, and direct employment programs including Administration of Justice, Agriculture, Aviation Maintenance, Pro-pilot, Avionics, Pre-professional, Business, Computer Science, Motor Transport Technology, Nursing and Office Education. The campus includes a student union, residence halls for men and women, apartments for married students, a rodeo arena, and a physical education facility including an Olympic-sized swimming pool, wellness center and weight room. In addition, there is an on-campus airport, a multi-media support lab to complement the four instructional computer labs, a theater, classrooms and laboratories.

The campus also includes a Student Development Center, athletic facilities and the College Administration building. The Charles Di Peso Library provides resources and facilities for students, staff and the community.

SIERRA VISTA CAMPUS

The Sierra Vista Campus is located just off Charleston Road 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 approximately 3,000 students each semester in the greater Sierra Vista/Fort Huachuca area, with a diverse curriculum of general education, transfer and direct employment programs including Administration of Justice, Computer Science, Drafting and Design, Office Education, Business, Nursing, Welding and Manufacturing Engineering. Students who cannot attend classes Monday through Thursday may take classes offered only on Fridays and Saturdays.

The Sierra Vista Campus has sixteen buildings including the 22,000 square-foot Andrea Cracchiolo library.

FORT HUACHUCA

The Cochise College office on Fort Huachuca is located in the Army Education Center, Building 52104. This office provides full advising services to military students and their families. Military students may have their military education evaluated for college credit in accordance with American Council of Education recommendations. The Cochise College office provides assistance in sending for transcripts from other colleges and universities, CLEP and USAFI/DANTES exams. The Cochise College math/English reading placement tests are administered at the Army Education Center.

The College offers classes on post each semester, usually in eight-week sessions, to meet the needs of military students.

EXTENDED CAMPUS

Extended Campus provides credit, noncredit and adult education classes throughout Cochise County. Courses and services are also provided through the Center for Professional Development, the Small Business Development Center and the Center for Economic Research. Extended Campus also maintains centers in Willcox and Benson and utilizes facilities in public schools, businesses and public-sector agencies.

WILLCOX CENTER

The Cochise College Willcox Center is located at 1110 West Fremont, adjacent to the Willcox Unified School District Offices.

The Center, serving approximately 200 students with day and night classes, has five classrooms, a computer lab and a library. Full-time staff is available to assist students with admissions, registration, placement testing and financial aid.

BENSON CENTER

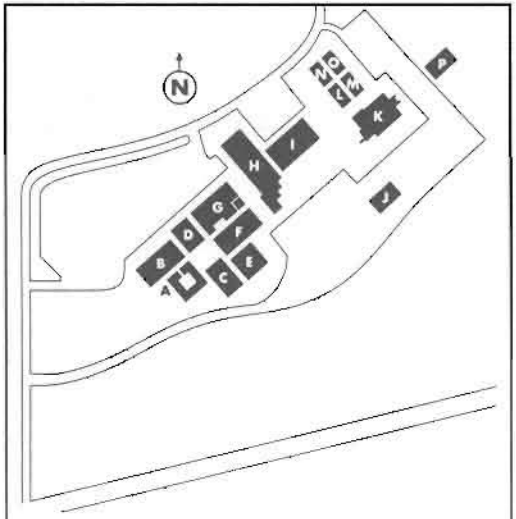
The Cochise College Benson Center located at 1025 State Route 90 opens for students this year. The new 13,000 square foot facility includes five classrooms, two computer labs, a learning center and interactive television capabilities. Traditional, developmental, GED and ESOL and personal interest classes are offered in the day and evening to meet student needs and schedules. Full time staff offers placement and GED testing, advising, admissions, registration and financial aid.

ONLINE CAMPUS

Cochise College has a growing educational presence on the World Wide Web. The institution offers an expanding array of courses and certificates on the Web. These courses meet the same criteria as traditional classes. They use the resources of the Internet to enrich the educational experience.

Students can design their own class schedule to meet personal needs. For more information visit the Online Campus at: http://xwing.cochise.cc.az.us/online-campus

Those interested can find information about courses, tuition and financial aid. Prospective students can also take an online assessment to see if online classes meet their needs.



SIERRA VISTA CAMPUS

LEGEND

A Art (800)
B English/Social Sciences (700)
C Student Services (500)
D Administration/Student Union (600)
E Student Development Center (P-5)
F Computer Labs (400)
G Languages/Music (300)
H Andrea Cracchiolo Library (900)
I Technology (100)
J Adult Education (1000)
K Science (200)
L Math (P-1)
M Tutoring Services (P-2)
N Community Services (P-3)
O Career Action Center (P-4)
P Maintenance

DOUGLAS CAMPUS

LEGEND

A Administrative/Business Office (100)
B Business Education/Computer Labs (200)
C Charles Di Peso Library (300)
D Faculty Offices (400)
E Student Union (500)
F Student Development Center (600)
G Music/Bookstore (700)
H Little Theatre (800)
I Apache Stronghold Gymnasium (900)
J Student Services (1000)
K Science/Math (1100)
L Huachuca Hall (1200-1400)
Community Campus
M Chiricahua Hall (1500-1700)
N Technology Center (1800)
O Art/Welding/Agriculture (1900)
P Maintenance
Q Rollerblade area
R Rodeo Arena

Getting Started

CAMPUS VISITS

Many students like to visit Cochise College prior to deciding which college to attend. Please call the Admissions office at 364-0246 or 515-5412 to set up an individual or group tour of the campus.

The Admissions staff will be happy to arrange class visits and introduce you to faculty from your area of interest. A Student Leader will give you a campus tour and share a student's perspective on Cochise.

ADMISSION, REGULAR STUDENT

Admission as a regular student is a simple process. Any person 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. hold a high school certificate of equivalency, such as a GED.
3. 18 years of age or older on or before the first day of classes for which application is being made.
4. a regular transfer student in good standing from another college or university.

STUDENTS UNDER 18 YEARS OF AGE

If you are under 18 years of age, you are asked to contact the Admissions Office at the Sierra Vista or Douglas Campus for admissions information.

RE-ADMISSION

If you have been absent from Cochise College four semesters or longer, you can apply for readmission prior to the opening of the semester for which you desire to enroll.

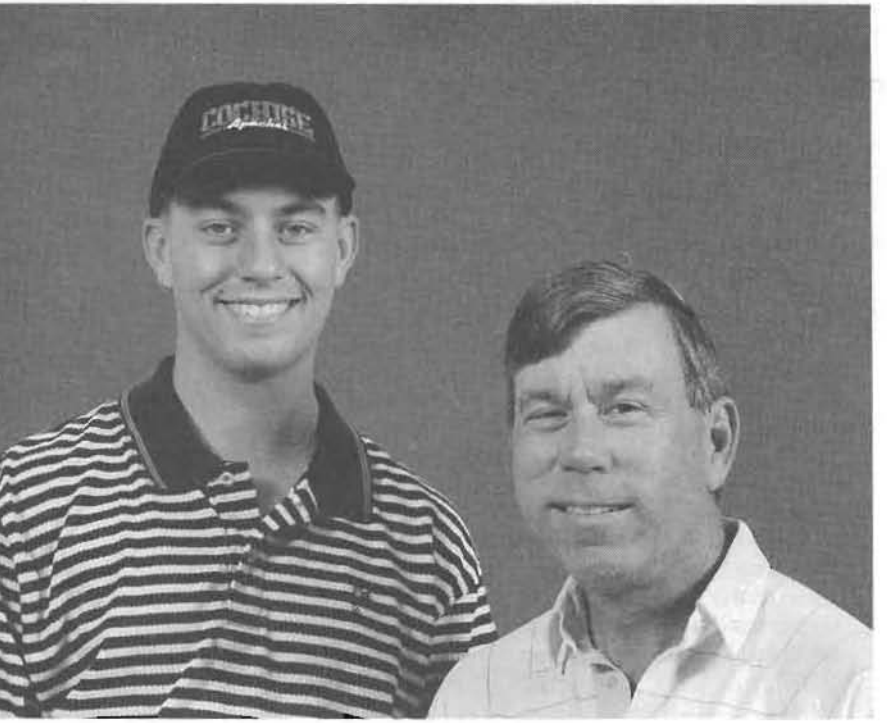
GENERAL ADMISSION PROCEDURES

You will be admitted to Cochise College after the Admissions Office has received and approved:

1. Application for Admission.
2. A $10 application fee for those classified as out-of-state for tuition purposes.
3. High School Transcripts — All applicants under the age of 18 are requested to submit either an official high school transcript or GED certificate with test scores before registration will be permitted. Final high school transcripts or GED certificate are requested of all students who apply for any financial aid program offered through Cochise College. High school transcripts should be sent directly by the sending institution to the Transcript Office. Official transcripts carried by the applicant cannot be accepted if previously opened.

4. Student Health Record: Part II — This self-appraisal form needs to be completed by 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. The College reserves the right to require a physical examination or immunizations when deemed necessary by the College Nurse or by a particular college instructional program.

5. Out-of-County Affidavits — If you reside in Apache, Gila, Greenlee and Santa Cruz counties, you are asked to submit affidavits of residency before registration each semester. Your county of residence will pay out-of-county tuition. The in-state tuition is your responsibility. Forms are available at the Admissions Office.



TRANSFER TO COCHISE COLLEGE

The College asks prospective students who have attended other regionally accredited colleges and universities to have official copies of their academic records sent to the Transcript Office.

Accredited higher-education institutions are those that are fully 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.

If you are requesting an evaluation of transcripts for the purpose of seeking a Cochise College degree, you should be currently enrolled.

The following regulations govern your admission if you have attended another college:

1. Courses for which you have earned a grade of D or F cannot be accepted for credit.

2. You may be admitted on academic probation if you have earned a GPA below 2.0.

3. If you have been academically dismissed from another college, you may not attend Cochise College for one full semester after dismissal.

4. A Professional Pilot candidate who transfers to Cochise College may receive credit for up to 18 hours of aviation course credit for previously earned certificates and ratings if she/he completes at least one flight course resulting in a certificate or rating.

5. Grade point averages earned at other institutions are not calculated with GPAs earned at Cochise College.

6. College transcripts must be mailed directly by the sending institution to the Transcript Office. Official sealed transcripts carried by the applicant are acceptable.

DISCLOSURE OF SOCIAL SECURITY ACCOUNT NUMBER

Social Security account numbers will be used solely to identify your records. Disclosure and use of Social Security account numbers aid in matching current and future records with any past records insuring that full credit is received for all academic work completed at Cochise College.

Disclosure of Social Security account numbers to Cochise College is voluntary and not required by either statute or regulation.

Students, faculty and staff have the option to obtain an individual identification number for no additional fee that is not identical to an individual's social security number in admission and telecommunication applications.

ADMISSION TO THE AVIATION PROGRAM

If you are seeking admission to any of the Aviation programs— Pro-Pilot, Avionics, or Aviation Maintenance Technology— contact the Aviation Division well in advance of your planned entry date. The Division will arrange a pre-entry conference and placement test.

ADMISSION TO THE NURSING PROGRAM

While admission to Cochise College is the initial step for entrance into the Nursing program, it does not guarantee acceptance. Nursing is a limited-enrollment curriculum that frequently has more applicants than can be accepted.

You must apply for admission to the nursing program and take the Nursing Entrance Test (NET). The NET is usually given in February and should be taken prior to the fall semester of expected admission.

Please contact the Nursing Division (520-364-0216) for additional information regarding criteria for regular admission, or for special admission to enter second semester freshman courses, or for admission by LPNs (Licensed Practical Nurses) and LVNs (Licensed Vocational Nurses).

ADMISSION OF INTERNATIONAL STUDENTS

All international students must have a high school equivalency or be at least 18 years of age at the time of registration. All full-time international students need to attend on an F-1 Visa. Part-time enrollment can only be allowed for students who cross daily on a Border Crossing Card and who are not in a degree seeking a program.

The Admissions Office will issue a letter of admission and an Immigration Form I-20 after receiving and approving the following documents:

1. Application for Admission.
2. A $10 Application Fee.
3. Student Health Record - Part I including TB and MMR vaccination as required by INS.
4. Official High School Transcripts.
5. Official College Transcripts (if applicable).
6. Statement of Financial Guarantee to reflect the actual annual cost of the program in which the student is enrolled as published by the College.
7. The College recommends that all full-time international students carry a health insurance policy. Please contact the Student Development Center for additional information if a policy is not owned.
8. A Housing Application and deposit is necessary only if College housing is desired.

As an international student, you are requested to report to the Admissions Office and the Student Development Center upon arrival. The International Advisor will endorse the back of your I-20 to permit you to travel outside the United States. If you are a transfer student, you must see the International Student Advisor to complete your transfer.

You must maintain full-time status for both the fall and spring semesters. This requires

completion of a minimum of twelve credits for each semester.

English proficiency testing will be required of all international students whose first language is not English. You may be required to enroll in intensive English courses. Those who have placed in an advanced level may take classes outside of the English as a Second Language (ESL) program in addition to their required English classes.

As an international student, you need to maintain up-to-date records with the International Advisor and the Registration Office, which indicate a current living address and admission number. International students may not work off campus. On-campus employment may be authorized under certain conditions.

DISABILITY SERVICES

If you have a disability and require any auxiliary aids, services or other accommodations as a student at Cochise College please contact the ADA Coordinator at (520) 515-5237 or 364-0545.

RESIDENCY REQUIREMENTS/ REGULATIONS

Each applicant shall have legal residency determined prior to the time of registration and payment of fees. It is your 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.

Published below are the Arizona Revised Statutes (ARS 15-1801 et seq.) and Cochise College Policy definitions which determine classification for tuition purposes.

DEFINITIONS

Adult means a person who is eighteen (18) years of age.

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 (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 fifty (50) days prior to the first day of classes of the semester. (R7-1-23)

A dependent is any person (son, daughter, or legal ward) who receives over 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.

An alien is entitled to classification as an in-state refugee student if such person has been granted refugee status in accordance with all

applicable laws of the United States and has met all other requirements for domicile.

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 not 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)

IN-STATE STUDENT STATUS

Except as otherwise provided in this article, 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, except that a person whose domicile is in this state is entitled to classification as an in-state student if 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 attendance.

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 is entitled to classification as an in-state student. 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 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, is entitled to classification as an in-state student.

STUDENT STATUS REGULATIONS

The Arizona Board of Regents and the State Board of Directors for Community Colleges shall adopt guidelines applicable to all institutions under their respective jurisdictions that will ensure uniform criteria to aid the institutions in determining the tuition status procedures for review of that status.

CONCURRENT ENROLLMENT: NONRESIDENT TUITION

A. It is unlawful for any nonresident 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 nonresident tuition at one of such institutions.

B. Any nonresident 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 nonresident tuition at any of such institutions shall pay the nonresident tuition at the institution of his/her choice. The amount will be equivalent to nonresident tuition at such institution for the combined total of semester hours for which the nonresident student is concurrently enrolled. (ARS 15-1807)

PROOF OF RESIDENCY: IN-STATE

A domicile affidavit needs to be filed with the Admissions Office verifying continuous residency in the state for a twelve (12) month period. At least three (3) 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.
9. Notarized statements of landlord and/or employer.

REGISTRATION INFORMATION

New and returning students in good academic standing can register for classes during early registration as well as regular registration periods. Late registration is allowed through the first week of classes.

DISCLOSURE OF EDUCATION RECORDS

Cochise College shall not permit the disclosure of information from educational records or personally identifiable information contained therein other than Directory Information of students without the written consent of the student 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 Records 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.

Cochise College has designated the following items as Directory Information: student name, address, telephone number, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received and most recent previous school attended.

Money Matters

TUITION AND FEES

Cochise College reserves the right to make changes without notice in fees, faculty assignments, time schedules, courses and curricula policies; to cancel classes when necessary; to set maximum and minimum limits for enrollment in classes; and to make changes to other matters contained in this catalog. All fees may change as approved by the Arizona State Community College Board. Please consult the Office of Admissions and Records or the Business Office for up-to-date information.

PAYMENT OF FEES SCHEDULE

All students need to assure they have sufficient funds to defray their immediate expenses at the time of registration. All fees are payable as the final step in the registration process. Cochise College accepts checks for the total amount due for tuition and fees.

Past due accounts may be turned over to a collection agency. You, as the delinquent student, will be liable for collection/attorney fees incurred.

Please consult the class schedule for specific registration and payment dates. In the event a check is returned unpaid by your bank, you may be assessed a $20 service fee and dropped from all classes. You may also be dropped from all classes if fees are not paid in full on or before dates indicated. All remaining charges must be paid in full prior to any future registration.

All book purchases will be on a cash-only basis with the exception of Vocational Rehabilitation students, Veterans' Vocational Education and qualified veterans.

MISCELLANEOUS FEES

Credit by Examination (nonrefundable) per credit (may require additional special lab fee)	$31
Senior "Golden Apache" Tuition Fee (60 years or older, resident of Cochise County or adjacent unorganized counties)	
One-time application fee	$5
Regular credit courses only (per credit)	$15
CLEP General and Subject Examination per test (plus a $10 administration fee)	$53
Transcript fee - Official/Unofficial	$3
Returned check fee (for each returned)	$20
EMT/Paramedicine insurance	$35
Nursing insurance	$12
Nursing/Health Technology Testing	$60
Replacement of ID card or meal card	$5
Graduation fee	$20
General Education Diploma	$35
Co-op Education Courses (per credit hour)	$15

DEPOSITS

Residence Hall Housing $100*
Family Housing Apartments $150*
*Required with housing application and does not apply toward room and board fees.
Professional Pilot ..... $ 90+
Airframe and Powerplant ..... $ 90+
Avionics Technology ..... $ 90+
+A non-refundable deposit which will be applied to aviation tuition and/or fees.

STUDENT FEE INFORMATION FOR 2000/2001 FISCAL YEAR

I. Tuition-Regular/Summer and Professional Pilot

Registration Fee (per each Fall, Spring, or Summer semester)
(Nonrefundable) ..... $ 15 per student
No registration fee for recipients of military Tuition Assistance.
Regular/Summer
In-State ..... $ 31 per credit
Out-of-State-1-6 credit ..... $ 45 per credit
over 6 credits ..... $177 per credit
(retroactive to 1 credit)
Online Campus ..... $ 62 per credit

100% of fees are due at time of registration if financial aid is pending. All registration, tuition and lab fees are 100% payable at time of registration.

One-half of room and board is due at registration. The balance is due in five weeks. All other fees for the semester must be paid in full at time of registration.

II. Residence Hall Fees (Douglas Campus)

A. Regular Students - 17 weeks

Private Room Add'l $250 per semester
** Room ..... $ 545
Board (19 meal plan) ..... $ 858
Board (14 meal plan) ..... $ 780

B. Professional Pilot - 21 weeks

Private Room Add'l $309 semester
** Room ..... $ 673
Board (19 meal plan) $1,060
Board (14 meal plan) ..... $ 964

C. Aviation Maintenance Technology and Avionics Technology

Private Room Add'l $177 semester
** Room ..... $ 385
Board (19 meal plan) ..... $ 606
Board (14 meal plan) ..... $ 551

Apartments are $285 per month, payable monthly in advance.

** Room and Board are combined. A student who lives in a residence hall must participate in the board program. There are no exceptions.

Note to Financial Aid Students: When financial aid has been approved and applied to your account, any credit balance will be refunded to you. Any amount unpaid after the financial aid has been applied will be due and payable by the student.

NEW MEXICO TUITION WAIVER PROGRAM

A special tuition agreement exists between Cochise College and Western New Mexico University. If you are interested, you may contact the Admissions Office for more information.

SENIOR CITIZEN TUITION WAIVER

If you are 60 years or older, you may apply for a "Golden Apache" Tuition Waiver as an Arizona resident who lives in Cochise County or an adjacent unorganized county. This waiver allows a 50% tuition discount for regular credit courses. Coursework cannot be taken as an audit. You have to meet in-state residency requirements for tuition purposes.

Applicants will be asked to pay a onetime, nonrefundable $5 application fee as well as any registration fee, lab fees, AMT tuition, pilot tuition, flight fees, books, co-op and noncredit course fees. Waivers cannot be accepted retroactively. Applications for the waiver may be picked up at the Admissions Office.

GRADUATION FEES

Every candidate applying for an associate degree is required to pay a graduation fee at the Cashier's Office. Those completing certificate programs are not required to pay the fee.

FLIGHT TRAINING FEES

Please consult the Aviation Division for current flight fees. All flight fees are subject to change without notice. Please see the refund section for refunds of unused flight fees.

LABORATORY FEES

Lab fees are charged for those classes requiring special equipment, facilities, etc. Lab fees range from $5 to $400 per course. Please consult the current Lab Fee Schedule for courses charging lab fees and the amount. All student lab fees are due at registration.

REFUNDS

All refunds and deposits that may be due to a student will be first applied to any encumbrances owed to the College. Please consult the appropriate semester class schedule for specific dates and percentage of refund.

The refund schedule begins with the first day of classes and applies to Monday through Friday. Sufficient time must be allowed for final clearance of fee payment checks before refunds will be made.

If a class or classes are canceled by the College, you will receive a full refund of all fees for cancellations. Checks will be issued for canceled classes within three weeks after the end of registration. These fees may be applied to other courses.

BOARD

You may choose between a 19-meal or a 14-meal ticket plan when classes are in session. If you leave the residence halls, you will be charged for meals through Saturday of the week in which you formally withdraw. If you depart during the last two weeks of the semester, you will be charged the full semester rate for meals.

ROOM

If you are a full-time student, you have the option of living on campus. The College has two residence halls and 11 family housing apartments. The residence halls are double-occupancy, suite-style rooms. The family housing apartments are one bedroom and are partially furnished. Internet access to computers is available 24-hours a day for residents. Laundry facilities, free cable and local telephone services are also available for all residents.

Room and board are combined. If you live in a residence hall, you must participate in the board program. Family housing residents have the option of not participating in the meal plan. Please contact the Housing Office for residence hall and apartment availability.

If you withdraw from college or the residence halls after having officially registered into a hall, you are not entitled to a refund of room rent. Should you withdraw because of a legitimate medical emergency or other unusual circumstance, the unused portion of room rent through the end of the semester may be refunded with the approval of the Vice President for Instruction/Student Services or designee.

APARTMENT AND ROOM DEPOSITS

Deposits are required to reserve your room or apartment. The deposit will be refunded according to the conditions of the residence hall and family housing contracts less any amounts due to the college for damages or other charges.

PLEASE NOTE: You must request your deposit upon formal withdrawal from the residence hall.

Financial Aid, Scholarships & Grants

To receive Financial Aid, a student must be admitted into a program leading to a degree or certificate.

Cochise College provides you access to a full range of federal, state and privately donated financial aid funds through the Financial Aid Office. Assistance is available to you based on financial need, academic merit and program of study. The application process for financial aid begins with the completion of a Free Application for Federal Student Aid (FAFSA).

You should apply as soon as possible after January 1 of the year in which you will begin your academic career. The application forms are widely available from high school counselors, community colleges and the Financial Aid Office. You must file a separate application for the Guaranteed Student Loan Program as described in the financial aid section. Applications received by the Financial Aid Office on or before April 15 will be funded first.

Federal Aid Programs

PELL GRANTS

The federal government as a primary financial resource funds the Pell Grant Program. The federal government establishes eligibility and students are funded at the level appropriate to their dependency status, living accommodations and enrollment level. The base of funding begins with the Pell Grant Program.

SUPPLEMENTAL EDUCATION OPPORTUNITY GRANTS

The SEOG Program gives direct grants to undergraduate students demonstrating exceptional financial need. The Financial Aid Office determines eligibility.

GUARANTEED STUDENT LOANS

The GSL Program is available to meet educational expenses. You need to be enrolled in a minimum of six credits to be eligible. Loans are made through banks, credit unions and other financial institutions. Applications are available from the Financial Aid Office

COLLEGE WORK-STUDY

College Work-Study Program jobs may be career related offering you both valuable experience and income. You may work up to sixteen hours per week in an on-campus placement. You must be enrolled in a minimum of six credits to be eligible.

Various departments on campus employ students in work-study positions to perform a variety of functions. The employing department decides on the selection of the student. Under certain circumstances, a student's financial aid package may require adjustment in order to coordinate the earnings with other offers of aid. Students are interviewed after being declared eligible and then placed in jobs through the Career Action Center.

SCHOLARSHIPS

Academic scholarships are offered on the basis of financial need, grade point average, leadership qualities and community service. Private donors provide funds to Cochise College.

Scholarship selection is dependent on your overall achievement and may be limited to specific fields of study. You will be considered for all available scholarships through submission of a single application. Contact your individual departments regarding funds that may be available through those sources.

You are encouraged to apply for financial aid regardless of financial status. The broad range of financial aid resources available provides access on a variety of levels.

Services for Students

Libraries

The Cochise College Library is a comprehensive community college library dedicated to enhancing learning opportunities and meeting the educational and informational needs of Cochise College students, faculty and staff. The Libraries combine traditional library services with the newer information technologies, providing access to both print and non-print resources to assist students in fulfilling their learning goals.

The Cochise College Library system consists of the Charles Di Peso Library on the Douglas campus, the Andrea Cracchiolo Library on the Sierra Vista campus, a small access library at the Willcox Center and will have a virtual presence at the proposed Benson Center.

The Libraries house over 60,000 books, 1,500 videotapes and 300 periodical subscriptions. The libraries provide access to four web-based periodical indexes, which make available the full-text of articles from over 500 periodicals.

The Instructional Media Services department of the libraries provides a wide range of instructional media equipment and software. The department also manages the interactive instructional television classrooms for the College. Both campus libraries are complete with teleconferencing facilities.

Student Development Center

The Student Development Centers (SDC) located at the Douglas and Sierra Vista Campuses coordinate several key services designed to support your learning: academic advising, counseling, testing, tutoring, career information and the Vocational Interest/Single Parent Program.

You may sign up for peer and professional tutoring in any subject. Students with special needs may contact the SDC for assistance or referral.

Personal counseling, career counseling and related testing are also available. The Vocational Interest/Single Parent Program offers support services to qualifying students.

ADVISING PROGRAM

A coordinated effort by selected College faculty advisors and counselors provides all full-time, part-time, vocational, transfer, international and other student's advice throughout their academic experience. You are encouraged to visit the SDC throughout the semester to ensure you receive academic support prior to having problems with class work or schedules.

Student Development Center advisors also assist in degree and transfer planning and in choosing programs of study compatible with your short- and long-term goals.

COUNSELING

The Cochise College counseling staff is available in the SDC to assist you in developing decision-making skills and personal strengths that allow you to help yourself. Problems of adjustment related to academic and personal or social areas are not unusual. Counselors are available to assist you during daytime and certain evening hours.

Career counseling and related testing are also available.

LEARNING SUPPORT CENTER

Cochise College provides free tutoring for you in most academic areas. Para-professionals, faculty and staff work with students individually and in small groups to facilitate learning. Computerized tutorials are also available. You are welcome to drop by the labs with or without an appointment.

TESTING CENTER

Placement assessments are free to students during the year on a regularly scheduled basis. Consult the schedule of classes published each semester for scheduled times or call the Testing Center.

PLACEMENT ASSESSMENT

The purpose of the Cochise College assessment process is to:

1. Help you in correctly identifying existing skills and knowledge in reading, writing and mathematics, and
2. Recommend a course(s) of study in which you may reasonably expect to achieve academic success.

The College asks students to take placement assessment in the areas of writing, reading and mathematics prior to meeting with an advisor and registering. You should test if you are:

- Planning to register for a course with an English or math prerequisite, or
- Seeking a degree and have completed seven or more credits at Cochise.

Placement assessment may be waived under the following conditions:

- If you provide a transcript or diploma showing completion of an accredited associate or higher degree.
- If you are a transfer student whose official transcripts show completed coursework in a corresponding subject with a grade of C or better.

The faculty advisor will use information (e.g., transcripts, assessment results and other evaluative data) to place you in courses consistent with your level of preparation.

If you would like to enter a course for which you do not meet the established academic skill prerequisites, you may request a waiver from the Campus Dean or Vice President for Instruction/ Student Services designee.

You may request special disability assistance through the Special Needs/ADA Coordinator who may be contacted through the Student Development Center.

VOCATIONAL INTEREST/ SINGLE PARENT PROGRAM

The Vocational Interest/Single Parent Program is for any student who has an interest in programs or certificates leading to direct employment. These programs include support for students with special needs such as single parents and displaced homemakers, students with disabilities, non-native English speakers and economically disadvantaged students. The programs are offered through a variety of services designed to help students overcome barriers to success.

The program will assist qualified students with career exploration and preparation for the workforce. Information is available on a variety of occupations including non-traditional career options. The Single Parent Program Office (VIP) is located in the Student Development Center.

Career Action Center

The College's Career Action Center consists of three separate but closely related services–Cooperative Education, Student Placement and Career Placement–which are provided by a professional staff.

COOPERATIVE EDUCATION

The Cooperative Education (CO-OP) program provides opportunities to supplement coursework with practical work experience related to your educational and occupational objectives. You can earn credit for working part-time in an area directly related to your educational program.

Cooperative Education (CO-OP) is an educational process that integrates college coursework with study-related work experience in business, industry and government and is coordinated by college staff. Using "learning objectives" established during each semester of registration, the CO-OP student earns college credit to apply toward program completion requirements.

This program is also adaptable for employed adults who are interested in gaining additional job skills for future advancement. Cooperative Education is not a course of study but a laboratory component for various programs offered at Cochise College.

As a Cochise College student enrolled for credit in any College program, you may elect to participate in the Cooperative Education Program.

STUDENT JOB PLACEMENT/ CAREER PLACEMENT

Career Action Center student placement representatives receive job orders (both part- and full-time) regularly from employers throughout the state. The CAC prepares job listings daily and posts them at convenient locations on campus.

In close cooperation with Arizona State Job Service representatives, the Placement Office also seeks out information on employment opportunities throughout Cochise County, the state, the region and the nation. It makes this information available to students and graduates.

Career planning services and a career library are available in the SDC. Workshops and video-assisted instruction in job-seeking skills for students and graduates are also available.

Conference Center

The Conference Center organizes conferences, seminars, campus and study tours held on and off campus. The Conference Center is located in the Student Services building on the Douglas Campus.

Health Services

The Health Center, directed by a registered nurse, is located on the Douglas Campus. Routine assessment, minor care and over-the-counter medications are provided at no charge. In cases of illness or injury, you are referred to a local doctor of your choice for diagnosis and treatment.

Cochise College does not offer health insurance. Student health insurance is available through private insurance companies.

Student Union, Douglas Campus

The "living room" of the campus offer students the opportunity to socialize with fellow students, faculty and administration in an informal atmosphere. Meeting rooms as well as comfortable lounges, a billiard room, game room, TV-viewing area and two dining facilities are provided for student use and enjoyment. The College Post Office, Student Activities and Student Government Offices are also located in this building.

Dining services provided by the Student Union include the Qué Pas snack bar, a private dining room and a large well-equipped cafeteria

capable of seating 250. The cafeteria offers well-balanced menus and seasonal buffets, specials and unique monotony-breakers designed to create a "second-home" atmosphere in the Student Union.

Student Activities

The College encourages your participation in extracurricular activities and campus organizations to promote leadership, student relationships and social development. Most campus activities are the responsibility of student clubs and organizations. During the year a full schedule of activities is planned for the student body by the student government and various clubs and organizations.

STUDENT GOVERNMENT

You are encouraged to take an active part in your Student Government. Their weekly meetings are open to all students. Student Government is comprised of five elected officers. The officers are: President, Vice President, Treasurer/Secretary, Publicity Coordinator and Special Events Coordinator. Elections are held each spring semester. Student Government plans, coordinates, promotes and finances a varied program of student activities and services for the entire student body.

ORGANIZATIONS

Student organizations attempt to meet special student needs and interests. Students with similar interests may form a club in which fellow students can participate in specialized activities. Organizations are available for student participation. Clubs and organizations on the Douglas or Sierra Vista Campus include:

- Alpha Delta Omega (Human Services National Honor Society)
- Alpha Eta Rho (Aviation)
- Armed Forces Communications and Electronics Association (AFCEA)
- Aviation Maintenance Specialist Club (AMS)
- Campus Activities Board (CAB)
- E.C.O. Club (Hispanic/American)
- Future Teachers' Club
- International Club
- Phi Beta Lambda PBL (Business)
- Phi Theta Kappa PTK (Academic Excellence)
- Residence Hall Association (RHA)
- Students of Diversity (SOD)
- Vocational Industrial Clubs of America (VICA)

ATHLETICS: DOUGLAS CAMPUS

Cochise College competes with other community colleges in men's and women's basketball and rodeo, women's soccer and men's baseball. The Apache Stronghold Gymnasium is the center for intercollegiate sports, concerts and a variety of intramural activities.

Residence Halls, Douglas Campus

HOUSING AND DINING

The on-campus living program is designed to encourage personal growth and development. The standards of behavior established by the Department of Housing are intended to comply with and help maintain the academic environment of the College. All full-time, unmarried students not residing with parents or other relatives, guardians or friends are encouraged to reside on campus and participate in the dining program.

Housing and dining services are combined. Therefore, all residential students are automatically on the meal plan. Unmarried students reside in Chiricahua Hall (for women) and Huachuca Hall (for men).

The dining program includes three meals each day, Monday through Friday, and two meals each on Saturday and Sunday. You have the option of taking most meals either in the cafeteria or the Qué Pas snack bar.

REGULATIONS

Each resident must sign a Residence Hall contract agreeing to all the terms and conditions of occupancy. On-campus residents are expected to comply with applicable rules and regulations as they appear in the Residence Hall and Married Housing contracts and the Student Handbook as well as local, state and federal laws.

APARTMENTS

The College offers a limited number of furnished married-housing units. Prospective occupants must provide proof of marriage before applications will be considered.

HOUSING APPLICATIONS

If you are interested in on-campus housing, you are encouraged to apply early, preferably at least 60 to 90 days before the academic term begins. Housing applications cannot be processed unless you have applied for admission to the College. Interested applicants may write to the Housing Office, Cochise College, 4190 W. State Hwy 80, Douglas, Arizona 85607-6190 or call (520) 364-0262.

Special Programs

HONORS PROGRAM

An honors program is available for academically exceptional students. It encourages students to question, research, discover and debate ideas in various curricular areas. The insights gained through individual probing will be shared with instructors and students to broaden the students' awareness in a variety of areas. The scholarly inquiry begun in this program will provide a strong base for a lifelong quest for knowledge and excellence. You may apply to the honors program if you have completed 12 credits in courses from the General Education curriculum, are enrolled in a degree program and have at least a 3.5 Grade Point Average. Please contact the Student Development Center for honors program information.

COLLEGE PREP PROGRAM: DEVELOPMENTAL EDUCATION

The College Prep Program serves students by providing courses which help them attain their full potential. All new students should take the College placement test prior to registration in order to determine their skill levels in reading, writing and math. Students will receive assistance from an advisor in selecting the courses needed to prepare them for college-level work.

If your placement scores indicate the need to enhance your skills in the areas of reading, writing and math, you will be placed in the appropriate college prep courses. Students with gaps in their academic backgrounds or who have grown rusty in one or more of these areas will find the college prep courses are designed to bring basic skills up to the necessary level for optimum college performance.

College prep courses are numbered 099 and below. Although these courses count to-

wards meeting full-time status for financial aid purposes, college prep courses can not be used to meet graduation requirements. The College offers a variety of services to help students including tutoring, career planning and counseling. Students can visit the Student Development Center for more information about the College Prep Program.

SPECIAL INTEREST CLASSES

Noncredit classes cover a variety of subjects and offer opportunities to individuals seeking non-traditional educational experiences. The Extended Campus provides weekend and evening seminars, workshops, films and lectures on topics ranging from local history and culture to arts and crafts such as weaving, silversmithing and gourmet cooking, for personal growth and development.

DUAL CREDIT

High school students taking honors, advanced placement and vocational classes in high school can earn college credit. These courses count for credit at both the high school and at Cochise College. Contact your high school counselor for courses that meet dual credit guidelines and for more information about this program.

ADULT EDUCATION

English for Speakers of Other Languages (ESOL), General Education Development (GED), Adult Basic Education (ABE) and Citizenship are offered as free noncredit classes throughout Cochise County. Classes are designed to enable adults wishing to obtain citizenship, a GED (high school equivalency) diploma, to improve English language skills or to improve academic skills in mathematics, reading and English in preparation for admission to College programs.

CENTER FOR PROFESSIONAL DEVELOPMENT PROGRAM

Education courses and training services intended for skill enhancement and professional development are offered to military, business, industry, organizations and individuals throughout the Southwest. Professional Development provides a non-traditional training format.

Credit or noncredit courses are offered as compressed classes in workshops and seminars. Professional Development Programs include basic and advanced skills, instruction in written communications, career skill improvement, computer software applications, aviation maintenance, certificate programs in management and personal skill development.

Class location may be on campus or at the job site. Classes are announced through semi-annually published schedules. Classes are offered in a contracted and customized format.

SMALL BUSINESS DEVELOPMENT CENTER (SBDC)

The Small Business Development Center (SBDC) is a cooperative effort of Cochise College and the U.S. Small Business Administration. Its purpose is to help entrepreneurs and small business owners in Cochise County start up, manage and grow their businesses. The SBDC provides a variety of services including one-on-one counseling on topics including marketing, financial and business planning, human resource management, government procurement, recordkeeping and more.

CENTER FOR ECONOMIC RESEARCH

The Center for Economic Research (CER) collects, analyzes and interprets local economic data for the communities served by Cochise College. The CER is available to provide data and economic forecasts to businesses, public agencies, developers, research centers and individuals interested in the local economy. Specific economic studies and surveys can be designed and conducted on a contractual basis for businesses and individuals requesting assistance.

TECH PREP

Tech Prep is a program that puts education to work for the student's future. It combines academic and technical education to give you the skills necessary for both entry-level jobs and advanced positions. Tech Prep starts in county high schools and is completed when you receive an associate degree. Please contact the Tech Prep Office for more information on this program.

COCHISE COLLEGE WORKFORCE COMPACT PROGRAM

This program allows high school students interested in a skilled occupation the opportunity to continue their education at Cochise College while still in high school. Please contact your high school counselor for more information.

SUMMER SPANISH IMMERSION PROGRAM, DOUGLAS CAMPUS

The college offers you a Summer Spanish Immersion Program that provides intensive, daylong instruction to non-native speakers. The program is designed to improve basic listening and speaking facility in the Spanish language. Students receive four to eight transferable credits (equivalent to one or two semesters of first year Spanish) upon successful completion of the program.

SUMMER ENGLISH IMMERSION PROGRAM: DOUGLAS CAMPUS

The Summer English Immersion Program offers a student, whose first language is not English, opportunities to improve his or her proficiency in English. Classes are offered six hours daily in grammar, reading, or oral communication at beginning, high beginning, intermediate and high intermediate levels. Classroom instruction is complemented by extensive use of computer-assisted instruction, audio-video materials, field trips and social activities.

SERVICEMEMBER'S OPPORTUNITY COLLEGE (SOC)

Cochise College is a member of the Servicemember's Opportunity College (SOC) program, which is designed to provide military students and their families with the opportunity to complete college programs without losing credits due to frequent changes of duty station. The Fort Huachuca office can prepare the Cochise College SOC contract for you or assist you in completing your contract requirements with other SOC school members.

The following kinds of special assistance are offered to Cochise College students who are members of the military service:

1. Advising, counseling and testing.
2. Granting of credit for appropriate education experiences in the armed forces.
3. Transfer and reverse transfer of credits.
4. Contract for degree option.
5. Repository of records.

Please contact the Sierra Vista Student Development Center or the Cochise College office at the Army Education Center on Fort Huachuca for more information.

PRISON EDUCATION PROGRAM

This program located at the Arizona State Prison in Douglas offers a wide range of vocational courses and programs to meet the diverse needs of inmate students. All credit courses are selected from the College catalog and taught by faculty certified by the Arizona Community College Board. Business skills, masonry, general electronics, building maintenance and fire science are unique to the Prison Education Program.

Academic Procedures & Information

STUDENT RESPONSIBILITIES/ CODE OF CONDUCT

Cochise College assumes that men and women of college age are able and willing to maintain standards of self-discipline appropriate to membership in a college community. You are expected to consider the rights of others and use mature and reasonable judgment concerning their actions while attending Cochise College.

Students who bring or use alcoholic beverages or illegal drugs on campus or in the residence halls are subject to dismissal from the College. In all cases of disciplinary action, proper procedural safeguards are observed to insure students of their right to fair and impartial treatment.

All students are expected to abide by federal, state and local laws and the Cochise College Code of Conduct.

The development, enforcement, interpretation and waiving of academic requirements are the responsibility of the Vice President for Instruction/Student Services. Student petitions for the waiver of academic regulations may be presented to Admissions and Records through the student's counselor/advisor.

CLASSIFICATION OF STUDENTS

Freshman: Student with fewer than 28 passing credits of college credit.

Sophomore: Student with 28 or more passing credits of college credit.

Full-time Student: Student carrying 12 or more credits during the semester.

Part-time Student: Student carrying less than 12 credits during a semester.

GRADING SYSTEM

Grades are earned in each course and recorded on the student's permanent record. Grade definitions are as follows:

A Superior 4.0
B Good 3.0
C Average 2.0
D Poor 1.0
F Failure

Withdraw Failing (WF) - Indicates withdrawal from the class after Friday of the ninth week with a grade below a C in the course. A grade of WF is computed in the student's grade point average as an F or failure.

Withdraw (W) - Indicates a student has withdrawn from the course through Friday of the ninth week or that s/he was earning a grade of C or better if the withdrawal was after the Friday defined above. A grade of W is not computed in the student's grade point average.

Incomplete (I) - Indicates that for a justifiable reason, such as a serious illness, the student failed to complete all requirements for the course. When this happens the instructor submits an Incomplete Grade Contract to the Registration Office with the final grade roster.

Failure to make up an incomplete during the succeeding semester will result in change from

the grade of I to an F on the permanent record unless there is a contract on file in the Director of Admissions and Records Office stating otherwise. The grade of I is not computed in the student's grade point average.

Audit (AU) - Registration and fee policies for students who audit a course are the same as those for students who register for college credit. However, the instructor will give priority to students registering in the course for credit. Students who audit classes will not receive grades or credit. The instructor will not require audit students to take examinations or hand in assignments.

A student registering as an auditor may not change to a credit basis later than Friday of the second week of the semester. A student registering for credit may change to audit up through the Friday of the ninth week of the semester. The drop/add procedure is used to effect such changes.

In Progress Grade (IP) –Indicates that the course has not been completed at the time the grade rosters were issued. The final grade will be placed on the transcript in a timely fashion after the completion of the course.

Pass (P) –Indicates that the student has done C or better work in a class taken for Pass-Fail.

Fail (X) –Indicates that the student has earned a D grade or failed in a class taken for Pass-Fail.

GRADE POINT AVERAGE

Semester grades are assigned grade points as follows:

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

Thus, a three-credit course with a grade of A would earn (3x4) 12 grade points. The total grade points accumulated by a student are divided by the total of credits attempted (excluding W, I and AU grades) and the result is known as the student's cumulative grade point average (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 will not include credits and grade points earned at another college.

SCHOLASTIC HONORS

Any student who completes 12 or more credits in one semester or phase at Cochise College and maintains a semester GPA of 3.900 or better will be placed on High Academic Honors standing.

Any student who completes 12 or more credits in one semester or phase at Cochise College and maintains a semester GPA of 3.500 to 3.899 will be placed on Academic Honors standing.

CREDIT LOAD LIMITATIONS

Student class load maximums have been established according to the following:

1. Beginning freshmen (first-time college student) 18 credits
2. Transfer students from another college with lower than a 2.0 GPA 16 credits
3. Continuing students accruing 15 credits and above:
   a. With a cumulative GPA of 2.5 or better 19 credits
   b. With a cumulative GPA of 2.0-2.49 16 credits
   c. With a cumulative GPA of 1.6-1.99 12 credits

Due to the nature of the Aviation Maintenance and Professional Pilot Technology Programs, students enrolled in the program shall be exempted from the 19-credit maximum. Cooperative Education credits shall be exempted from student load limitations.

COURSE OFFERING LIMITATIONS

Cochise College offers courses at a number of locations throughout the district. Through its regular offerings and alternative study programs, Cochise College attempts to provide as many courses as possible for completion of the degrees and certificates at each learning site. However, many vocational programs are limited to specific locations.

COURSES NUMBERED 099 AND BELOW

Courses numbered 099 and below are not transferable and will not fulfill associate degree requirements.

NONSATISFACTORY PROGRESS - ACADEMIC SUSPENSION

After 13 or more credits attempted, whether you are full- or part-time, you will be reviewed for academic progress. If your cumulative grade point average drops below a 2.0, you will be notified of nonsatisfactory progress and your transcript will note your academic status. After two consecutive terms of a cumulative grade point below 2.0, you may be placed on suspension. You will be notified of your nonsatisfactory progress and your transcript will note your academic status. Suspension reports will only be calculated in December and May at the end of the traditional fall and spring terms.

If you are suspended, you will be required to sit out one regular semester (the next fall or spring which includes summer and short sessions).

Academically suspended students who are re-admitted will be placed on nonsatisfactory progress for the semester in which they are re-admitted.

GRADE REPORT

You will receive a grade report at completion of the semester. Final semester grades are recorded on your permanent record.

CHANGE OF GRADE

A grade reported to the Registrar may be changed only upon authorization of the faculty member issuing the grade, the appropriate instructional administrator and the appropriate Vice President.

REPEATING COURSES

A course may be repeated according to the following guidelines:

Type of Course	Number of Repeats
University Transfer	One time only**
Vocational Skill Courses	*Two times only**
Fundamental Skills Courses	As required to gain skill level

The listing of the original course and grade remains as part of the permanent record, but only the last grade earned will be computed for graduation and cumulative grade point average. A student need not repeat a course which he/she has failed unless it is a prerequisite for another course or is a course required for graduation or transfer. *

* Excepting Emergency Medical Training

** A student may be allowed to repeat a course beyond the limit with approval of the appropriate instructional administrator.

CHANGE OF CLASSES

You may drop classes through the end of the ninth week of a full-term without academic penalty. Classes meeting less than sixteen weeks will be pro-rated. Should the withdrawal occur prior to the 45th calendar day after college classes have begun, such withdrawal will not appear on the student's record.

Withdrawals occurring between the 45th calendar day and the end of the ninth week will be assigned a W for "withdrawal" provided an official withdrawal has been made.

You may add classes through the first week of class provided the class is not closed by initiating an add transaction with the Registration Office. Add transactions during the third and fourth weeks of class may only be made for the purpose of moving to a lower- or higher-level course in the same discipline.

This policy does not apply to aviation programs operating under non-traditional calendar requirements or to special vocational courses officially established under open entry-open exit or short-term conditions or non-traditional semesters.

ADD

1. Drop/add forms are available in Registration or the Student Development Center.
2. Obtain an advisor's signature for the classes you wish to add.
3. Turn in the drop/add form to Registration and proceed to the Cashier's Office if there is a charge for the transaction.

DROP

1. Instructors may drop those students who have not been attending class by marking through the student's name on the FTSE roster and recording a drop date. There will be no refunds for a drop made by the instructor. You must turn in a drop/add form to be eligible for a refund.
2. No drop/add form will be accepted after the last day to drop a class without academic penalty. If you wish to drop after that date you must make arrangements with the instructor to receive a grade of W or WF on the final grade roster.

WITHDRAWAL FROM COLLEGE

If you wish to withdraw from the College, you must obtain a college withdrawal form from Registration or the Student Development Center.

Return the form to Registration upon obtaining the appropriate signatures. If you fail to withdraw officially, you may jeopardize the receipt of any refunds due and may be assigned a WF for all courses in which you are enrolled. You are responsible for properly processing a withdrawal.

CREDIT BY EXAM

Cochise College offers credit by exam. Credit by exam is useful when students wish to demonstrate their prior knowledge by testing out of a course. You must register for those courses in which you wish to establish credit by exam.

Students who meet the following criteria are eligible to request credit by exam:

1. Be currently enrolled at Cochise College.
2. Have successfully completed 12 credits at Cochise.
3. Have completed an application for credit by exam.
4. Have obtained the approval of the Campus Dean and appropriate faculty member of the department.
5. Have met required prerequisites, if any, established by the department.
6. Have paid a nonrefundable reduced fee per credit. If consumable materials are used in the exam, an additional fee will be charged.

Qualifying students will take the examination prior to the last day to add classes in a given semester or prior to an alternative date established by the department. To earn credit by exam students must receive a grade of C or higher.

You may not make application for credit by exam if you have:

1. Received college credit in a higher level course.
2. Previously challenged the course.
3. Previously enrolled in the course and received a failing grade.

A student may challenge only those courses numbered 100 or above.

Credits and grades earned will be computed into your grade point average but may not be used to fulfill residency requirements or to meet VA or financial aid requirements for determining benefit status. Only full-time faculty or designee may administer credit by examination.

You may apply for credit by examination by obtaining an application form from the instructional department offering the course on either campus and securing permission and signatures from the appropriate instructor and instructional administrator.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

Cochise College accepts both the General and the Subject examinations of the CLEP for college credits provided satisfactory scores are attained. Scores of 500 or above on all General examinations will entitle you to six credits in each of the five General examinations: English Composition, Humanities, Mathematics, Natural Sciences (not to include credit for laboratory science requirements) and Social Sciences.

You must complete at least one Cochise College course before credit may be granted for CLEP. Credit earned under CLEP may not be used toward the sixteen resident hours required for a degree. Three to sixteen credits, depending upon the examination, may be earned by scores of fifty or better on the subject examinations. Please contact the Testing Center for a list of tests available and corresponding number of credit hours.

For students taking CLEP examinations, duplicate credit will not be awarded in subjects at the same level. Students will not be awarded credit through CLEP for courses equivalent to, or at a lower level than, other courses they have already taken through formal course work.

You may earn up to thirty credits of college credit by taking CLEP examinations. However, credit granted by Cochise College does not obligate any other college or university to accept such credit. Interested persons may contact the Counseling Offices for testing arrangements.

USAFI/DANTES AND MILITARY SERVICE SCHOOLS

Cochise College follows the credit recommendations of the American Council on Education for Military Service Schools. Credit for USAFI/DANTES courses will be granted in accordance with the minimum standard score and credit recommendation for each separate examination.

Colleges differ on their policies related to credit allowed for USAFI/DANTES and Military Service Schools. Credit granted by Cochise College does not obligate any other college or university to accept such credit.

You must complete at least one Cochise College course before credit will be granted for USAFI/DANTES or Military Service courses. Credit earned on any of these may not be used toward the sixteen resident hours required for an associate's degree. A maximum of thirty credits will be allowed for non-traditional learning credit.

INDEPENDENT STUDY

Although outstanding independent scholarship is normally expected at upper-division and graduate levels, the College recognizes that some undergraduate students are prepared and have sufficient motivation to earn credit for self-directed study.

Independent study is defined as a project or series of assignments related to an area of study for which course offerings are not available. All divisions and departments make independent study available subject to advance agreement by the full-time instructor and appropriate dean.

Existing courses may not be taken as independent studies.

The College provides independent study opportunities for students whom:

1. Have mastered core coursework in a given program area,
2. Have achieved sophomore standing with a cumulative grade point average of 3.0 or better, and
3. Have demonstrated the need for investigation into areas of knowledge that may not be included in existing formal courses.

You and your instructor will meet to discuss the nature of the study. All requirements for successful completion of the study, including periodic meeting times, will be clearly established on an Independent Study Contract (Form VPI-7). Course credit is determined by the instructor and appropriate dean and will be compatible with published academic standards and procedures.

Credits assigned to an independent study contract may not be increased or reduced after commencement of the study. Contracts must be completed within the semester in which study begins. Independent study may take place only during the academic year excluding summer sessions.

After signing the contract, you must complete a drop/add form and submit both documents to Admissions and Records. Contracts are subject to the same grading stipulations as regular classes.

FINAL EXAMS

Final exams 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 a final examination. Such projects must necessarily begin and end before the exam period. This being the case, the class shall meet during the scheduled exam period for review, critique or other meaningful activity.

Evening classes will have final examinations during the last class meeting.

You can find a final exam schedule printed in the class schedule at the beginning of each semester. You are expected to attend all final exams as scheduled. Students who are unable to attend may receive a failing course grade at the discretion of the instructor.

TRANSCRIPTS

A transcript is a copy of your permanent academic record. Transcripts are forwarded by Admissions and Records to educational institutions or perspective employers at the written request of the student. Transcripts to educational institutions will be sent directly by mail. Transcripts given directly to students are marked "issued to student." Charges for transcripts are listed in the fee section.

ATTENDANCE POLICY

Each instructor shall establish specific attendance criteria for each class and shall communicate the policy to you in writing during the first week of each semester. An instructor may drop you from class for absences exceeding the limit stated in the class procedures sheet.

The instructor may drop you on a class roster or submit a drop/add form to Registration. If you are dropped by an instructor, you will not receive a refund. It is your responsibility to make up classroom work and assignments missed while excused for College-sponsored trips.

VETERANS' POLICIES

The Veterans' Affairs Office will provide information concerning attendance, benefits and procedures to all veterans. All veterans are advised to maintain close contact with the Veterans' Affairs Office.

Veterans' receiving VA benefits who drop a course or withdraw from College are required to report to the Veterans' Affairs Office immediately following such action. Failure to report any reduction in credits or withdrawal from College may result in the repayment of all money which the veteran received during that semester/session.

Veterans' receiving VA benefits who consecutively miss more class meetings than the credit hours of the course can be dropped by the instructor. Exceptions will be made for those who have made a written agreement with the instructor for missing class beyond the allowed time.

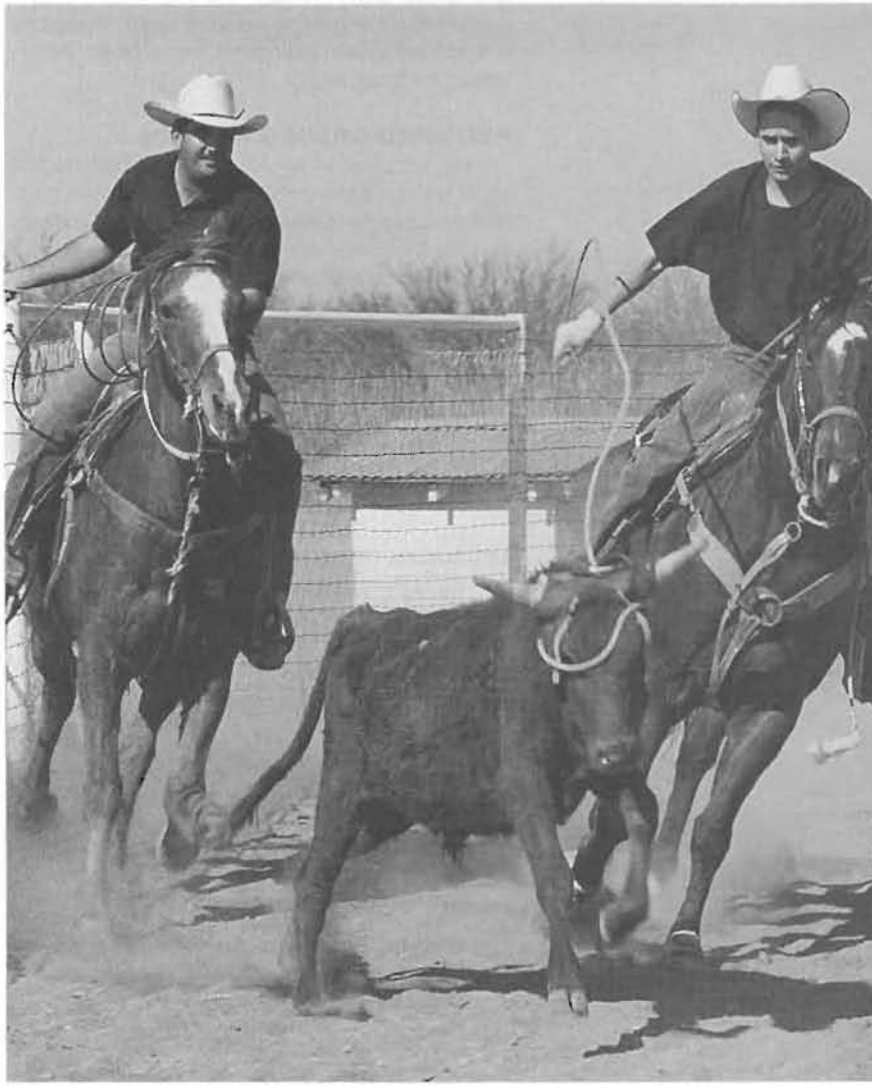
The instructor must give the Veterans' Affairs Office the student's last date of attendance when dropping a veteran from class.

CHOICE OF CATALOG

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

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

If you do not meet the above minimum enrollment standard for three consecutive semesters and the intervening summer term, you are no longer considered continuously enrolled and must meet the requirements of the catalog in effect at the time of your readmittance. Summer enrollment may be used to maintain continuous enrollment status.



Requirements for Graduation

Cochise College is committed to maintaining and encouraging the highest academic standards thereby enabling you to transfer to colleges and universities throughout the nation and to successfully enter the world of work. Therefore, the following requirements have been established for graduation.

REQUIRED GRADES AND GPA

All courses in an AA, AS, or ABus degree must be completed with a C or better and must be transferable to all Arizona public universities.

All Cochise associate degrees require a cumulative grade point average of 2.0 or better.

In the AGS degree, composition and mathematics courses used to meet general education requirements must have a grade of C or better. A grade of D is allowed for elective courses in the AGS.

Some AAS degree programs require a 2.0 cumulative GPA or better for all college credits in the area of emphasis.

MINIMUM READING REQUIREMENT

Students earning an AA, ABus, AGS, AS or AAS degree must meet one of the following criteria:

For Native Speakers:

1. Score 12.0 or higher on standardized reading test.
2. Cumulative GPA of 3.0 for courses at the 100 level or above at the time of degree check.
3. Completion of a reading course with a grade of C or better in which competency for the course is a 12.0 grade level or higher.

For Non-native speakers of English:

1. Any of the above, as stated for native speakers of English.
2. A TOEFL score of 500 level or above, including a score of 50 on Section 3.
3. Petition to a permanent standing committee comprised of an ESL representative, a reading representative and the appropriate instructional manager.

RESIDENCY REQUIREMENTS

A minimum of sixteen credits must be taken in residency at Cochise College. Residency for the Arizona General Education Curriculum (AGEC) is fifteen credits.

SECOND ASSOCIATE DEGREE

Candidates for a second associate degree at Cochise College must complete:

- All requirements for the second degree,
- Sixteen credits not used in the first degree.

ADDITIONAL DEGREES

Candidates for additional degrees at Cochise College must complete the above requirements for each additional degree.

GRADUATION AND CERTIFICATE APPLICATION

If you are planning to graduate, you must file a graduation or certificate application with the Student Development Center and pay the appropriate fee at the Cashier's Office.

Applications must be filed by the dates listed in the current schedule of classes. If an application is late, a diploma will not be ordered until the following order date. Diplomas will be mailed after final grades are received and records evaluated.

Degrees & Programs

ARIZONA TRANSFER DEGREES

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, Associate of Science and Associate of Business. These degrees transfer as a block of 64 credits to all Arizona public universities. Students can enter universities as juniors after completing an associate degree. The Arizona General Education Curriculum (AGEC) block of 35 credits fulfills the lower-division general education requirements at all Arizona public community colleges and universities.

The Associate of Arts degree is designed for students planning a transfer degree in liberal arts, social science or fine arts. If you are seeking a university business or computer information systems degree, you should complete the Associate of Business. If you are interested in natural, physical or life sciences, you should complete the Associate of Science. If you plan to transfer to another college or university, you should meet with an advisor or counselor in the Student Development Center.

ARIZONA TRANSFER AGREEMENTS

A statewide agreement between Arizona public community colleges and universities guarantees students two ways to transfer: using an associate degree or an AGEC general education block.

TRANSFERRING THE ASSOCIATE DEGREE

The AA, ABus and AS degrees will transfer as blocks of 64 credits meeting university admission requirements and granting the community college student junior status.

TRANSFERRING THE AGEC BLOCK

The Arizona General Education Curriculum (AGEC) will transfer as a 35-credit general education block that fulfills the university lower division general education requirements at any Arizona public community college or university. The AGEC block may be completed independent of the transfer degree. The block has three forms: the AGEC-A, AGEC-B and the AGEC-S.

By completing an AGEC at Cochise College, a student is guaranteed all admissions requirements are waived at all Arizona public universities. While Arizona residents need to have a minimum of a 2.0 grade point average in their AGEC, nonresidents are required to have a minimum cumulative grade point average of 2.5 for admissions.

If you do not complete an AGEC at Cochise College and wish to transfer to an Arizona public university, you will need to meet all university admissions requirements and complete university general studies requirements which may be different from Cochise College's general education requirements. The College urges students to transfer only after having completed an AGEC or associate degree to ensure a seamless process.

AGEC Transfer Blocks

The following applies to all AGEC Blocks:

- Courses included in the AGEC block must be completed with a grade of C or better.
- A course may have dual use. It may be used to fulfill both an AGEC requirement and a common course requirement in the associate degree. Total credits toward a degree are not waived.
- Courses used to fulfill Humanities and Arts requirements must be chosen from two disciplines.
- Courses used to fulfill Social and Behavioral Sciences requirements must be chosen from two disciplines.
- Six credits of Arts/Humanities, Social and Behavioral Sciences/General Education Elective must be chosen from the Intensive Writing/Critical Inquiry courses listed at: http://xwing.cochise.cc.az.us/curriculum/gen-ed.html
- A list of courses to fulfill general education requirements, including the General Education Elective, is listed at: http://xwing.cochise.cc.az.us/curriculum/gen-ed.html

AGEC-A

General Education Requirements		Credits
Composition	ENG 101, 102	6
Mathematics	MAT 151 or higher	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy	CIS 116, 120*	3
General Education Elective(s)		1-3

*Students testing out of this requirement may choose General Education Elective credit.

Total General Education Requirements **35**

AGEC-A

The AGEC-A meets the General Education requirements for the Cochise College Associate of Arts degree and fulfills the lower division general education requirements for university arts/liberal studies majors such as English, Social Science, Fine Arts and Humanities. The block will transfer without loss of credit to any Arizona public community college or university.

AGEC-B

General Education Requirements		Credits
Composition	ENG 101, 102	6
Mathematics	MAT 212	3
Laboratory Science		8
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy	CIS 116, 120*	3
General Education Elective(s)		3

*Students testing out of this requirement may choose General Education Elective credit.

Total General Education Requirements **35**

AGEC-B

The AGEC-B meets the General Education requirements for the Cochise College Associate of Business degree and fulfills the lower division general education requirements for university business/information systems majors. The block will transfer without loss of credit to any Arizona public community college or university.

AGEC-S

General Education Requirements		Credits
Composition	ENG 101, 102	6
Mathematics	MAT 220+	3-5
Laboratory Science	BIO 184/190 OR PHY 230/231 OR CHM 151/152	8
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy	CIS 116, 120*	3
General Education Elective(s)		1-3

*Students testing out of this requirement may choose General Education Elective credit.

Total General Education Requirements **35**

AGEC-S

The AGEC-S meets the General Education requirements for the Cochise College Associate of Science degree and fulfills the lower division general education requirements for university math and science majors. The block will transfer to any Arizona public community college or university.

ASSOCIATE DEGREES AND CERTIFICATES

Cochise College offers a variety of associate degree and certificate programs to prepare students for transfer to a university, for direct employment and for skills enhancement.

For Transfer:

AA: Associate of Arts
ABus: Associate of Business
AS: Associate of Science
AGS: Associate of General Studies

For Direct Employment:

AAS: Associate of Applied Science
Certificates of Completion

Note: In each of the degrees outlined in this section you will see references to areas such as "Arts" or "Laboratory Science." Only approved general education courses may be used to satisfy these area requirements within degrees. Below is the list of approved general education courses for the AA, ABus, AS and AGS degrees. See a counselor or advisor in the SDC for the general education course list for the AAS degree.

COCHISE COLLEGE GENERAL EDUCATION COURSES FOR AA, ABUS, AS AND AGS DEGREES

Composition:	ENG101, ENG102
Mathematics:	MAT122 (AGS only), MAT151, MAT172, MAT182, MAT187, MAT212, MAT220, MAT227, MAT231, MAT241, MAT252, MAT262
Laboratory Science:	AST180, BIO101, BIO105, BIO160, BIO 181, BIO 182, BIO183, BIO184, BIO190, BIO201, BIO202, BIO205, BIO226, CHM100, CHM130, CHM140, CHM151, CHM152, CHM235, CHM236, GEO101, GLG101, GLG102, GLG110, PHY111, PHY112, PHY230, PHY231
Foreign Language OR Communications (AGS degree only)	Any non-English language course at the 100 level or higher OR a Communications course at the 101 level or higher.
Social & Behavioral Sciences:	ANT102, ANT222, ANT235, ANT285, ANT286, ECN201, ECN202, GEO102, GEO104, GEO105, GEO121, HIS110, HIS111, HIS140, HIS141, HIS142, POS100, POS110,POS220, POS230, POS240, PSY101, PSY210, PSY230, PSY240, PSY250,

	PSY298, SOC101, SOC150, SOC202, SOC210, SOC212, SOC230, SSV273
Arts:	ART103, ART105, ART107, ART108, ART120, ART215, ART250, ART251, ART245, ART255, ART270, ART275, ART280, ART281, ART285, ART286, ART290, ENG119, ENG219, HUM101, HUM205, HUM206, MED255, MED285, MED286, MUS100, MUS101, MUS102, MUS109, MUS110, MUS111, MUS132, MUS133, MUS201
Humanities:	ART107, ART108, ART265, ART266, ART286, CCM102, ENG119, ENG229, ENG219, ENG219, ENG220, ENG221, ENG222, ENG224, ENG225, ENG226, ENG227, ENG228, ENG230, ENG255, ENG265, ENG273, HUM205, HUM206, HUM207, MED265, MED285, MED286, MUS102, MUS132, PHI111, PHI130, PHI201, SPA221, SPA224, SPA225, THE103
Information Literacy:	CIS116, CIS120
Intensive Writing/ Critical Inquiry:	ANT235, ANT285, ANT236, ECN201, ECN 202, ENG119, ENG209, ENG219, ENG220, ENG221, ENG222, ENG224, ENG225, ENG226, ENG227, ENG228, ENG255, ENG265, ENG273, HIS140, HIS141, HIS142, HUM205, HUM206, HUM207, PHI111, PHI193, POS220, PSY230, PSY240, PSY250, PSY290, SOC150, SOC210, EOC212

TRANSFER PROGRAMS

Associate of Arts Degree

General Requirements

The AA degree is recommended for liberal arts, social science or fine arts students who plan to transfer to a university.

- The Associate of Arts degree transfers as a block of 64 credits to all Arizona public universities.
- You will transfer to any public Arizona university with junior standing without loss of credit and complete 56 credits for a total of 120 credits for most degrees.
- If you are transferring to a private Arizona university or an out-of-state university, your transfer credits will be evaluated on a course by course basis.
- Since university requirements vary considerably, it is strongly recommended that you work closely with an academic advisor to plan your coursework.

Arizona General Education Curriculum, AGEC-A		Credits
Composition	ENG 101, 102	6
Mathematics	MAT 151 or higher	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy	CIS 116 or 120	3
General Education Elective(s)		1-3

- Arts and Humanities courses must be chosen from two disciplines and Social and Behavioral Sciences courses must be chosen from two disciplines.
- Six credits of Arts, Humanities, Social and Behavioral Sciences and General Education Electives must be chosen from the Intensive Writing and Critical Inquiry Course List.

- If you are testing out of the Information Literacy requirement, you may choose a course from the General Education Course List.
- Elective course must be chosen from the General Education Course List or HPE 179.

Total General Education Requirements (AGEC-A) 35

Language Requirement 16
- You are required to demonstrate 4th semester proficiency through coursework, credit by examination, and/or native language proficiency.
- If you test out of this requirement you may choose courses related to your area of interest or exploration.

Electives 13
- Elective courses must be transferable to all Arizona public universities.

Total Degree Requirements 64
- All courses must be completed with a C or better.
- A course may be used to fulfill both a General Education requirement and an elective in the Associates Degree. Total credits toward a degree are not waived.
- You must demonstrate a 12.0 grade reading level proficiency.
- A minimum of 16 credits must be completed at Cochise College.
- Courses in the Arts, Humanities and Social and Behavioral Sciences have content addressing ethnic/race/gender awareness and contemporary global/international or historical awareness embedded in the coursework.

Exploratory Areas

We suggest the following exploratory areas for students seeking an AA-GR:

Anthropology:	ANT 101 The Origin and Antiquity of Man ANT 102 Society and Culture
Art:	ART 107 Survey of World Art: Prehistoric-Gothic ART 108 Survey of World Art: Renaissance through the Twentieth Century
Economics:	ECN 201 Principles of Macroeconomics ECN 202 Principles of Microeconomics
English:	ENG 220 British Literature I ENG 221 British Literature II
Geography:	GEO 101 Physical Geography GEO 102 Cultural Geography GEO 121 World Regional Geography
History:	HIS 110 History of the United States 1607-1877 HIS 111 History of the United States Since 1877 POS 110 American National Government POS 230 World Politics
Humanities:	Any Humanities Elective Course/No Common Core Classes
Journalism & Media Arts:	COM 110 Public Speaking JRN 101 Introduction to Mass Communications JRN 102 Writing for Publications
Philosophy:	PHI 111 Introduction to Philosophy PHI 113 Introduction to Logic and Language
Political Science:	POS 110 American National Government POS 230 World Politics

Psychology:
- PSY 101 Introduction to Psychology
- PSY 230 Personality Theories and Research
- PSY 250 Introduction to Psychological Research, Measurements and Statistics
- PSY 290 Experimental Psychology

Sociology:
- SOC 101 Introduction to Sociology
- SOC 160 Ethnic Groups and Minorities
- SOC 210 Marriage and the Family
- SOC 202 Social Problems
- SOC 212 Women and Men in a Changing Society

ASSOCIATE OF ARTS DEGREES

Cochise College has the following Associate of Arts degrees. See the Areas of Study section of this catalog for complete degree programs:

- Administration of Justice
- Anthropology
- Art
- Communications
- Economics
- Elementary Education
- English
- Exercise Science, Health and Physical Education, Recreation and Wellness
- Family and Consumer Sciences
- General Requirements (Pre-Ed)
- General Requirements (GR)
- Geography
- History
- Journalism and Media Arts
- Language
- Mathematics
- Music
- Political Science
- Psychology
- Social Work
- Sociology

Associate of Business Degree

General Requirements

The ABus degree is designed to satisfy transfer requirements for business and computer information systems majors.

- The Associate of Business degree transfers as a block of 64 credits to all Arizona public universities.
- You will transfer with junior standing without loss of credit and complete 56 credits for a total of 120 credits for most degrees.
- If you are transferring to a private Arizona university, or an out-of-state university, your transfer credits will be evaluated on a course by course basis.
- Since university requirements vary considerably it is strongly recommended that you work closely with an academic advisor to plan your coursework.

Arizona General Education Requirements, AGEC-B		Credits
Composition	ENG 101, 102	6
Mathematics	MAT 212	3
Laboratory Science		8
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy	CIS 116 or 120	3
General Education Elective(s)		3

- Arts and Humanities courses must be chosen from two disciplines and Social and Behavioral Sciences courses must be chosen from two disciplines.
- Six credits of Arts, Humanities, Social and Behavioral Sciences and General Education Electives must be chosen from the Intensive Writing and Critical Inquiry Course List.

- Students testing out of the Information Literacy requirement may choose a course from the General Education Course List.
- Elective course must be chosen from the General Education Course List or HPE 179.

Total General Education Requirements (AGEC-B)	**35**
Common Courses	29
Total Degree Requirements	**64**

- All courses must be completed with a C or better.
- Students must demonstrate a 12.0 grade reading level equivalency.
- A minimum of 16 credits must be completed at Cochise College.
- Courses in the Arts, Humanities, and Social and Behavioral Sciences have content addressing ethnic/race/gender awareness, and contemporary global/international or historical awareness embedded in the coursework.

ASSOCIATE OF BUSINESS DEGREES

Cochise College has the following Associate of Business degrees. See the Areas of Study section of this catalog for complete degree programs:

General Requirements
Computer Information Systems

Associate of Science Degree

General Requirements

The AS degree is designed to satisfy transfer requirements for natural, physical or life sciences.

- The Associate of Science degree transfers as a block of 64 credits to all Arizona public universities.
- Students will transfer with junior standing without loss of credit and complete 56 credits for a total of 120 credits for most degrees.
- If you are transferring to a private Arizona university, or an out-of-state university, your transfer credits will be evaluated on a course by course basis.
- Since university requirements vary considerably, it is strongly recommended that you work closely with an academic advisor to plan your coursework.

Arizona General Education Requirements, AGEC-S		**Credits**
Composition	ENG 101, 102	6
Mathematics	MAT 220 or higher	3-5
Laboratory Science	PHY 230/231 or CHM 151/152	8
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy	CIS 116 or 120	3
General Education Elective(s)		1-3

- Arts and Humanities courses must be chosen from two disciplines, and Social and Behavioral Sciences courses must be chosen from two disciplines.
- Six credits of Arts, Humanities, Social and Behavioral Sciences and General Education Electives must be chosen from the Intensive Writing and Critical Inquiry Course List.

- If you test out of the Information Literacy requirement you may choose a course from the General Education Course List.
- Elective course must be chosen from the General Education Course List or HPE 179.

Total General Education Requirements (AGEC-S)	**35**
Common Courses and Electives	29
Total Degree Requirements	**64**

- All courses must be completed with a C or better.
- A course may be used to fulfill both a General Education requirement and an elective in the Associate Degree. Total credits toward a degree are not waived.
- Students must demonstrate a 12.0 grade reading level equivalency.
- A minimum of 16 credits must be completed at Cochise College.
- Courses in the Arts, Humanities, and Social and Behavioral Sciences have content addressing ethnic/race/gender awareness, and contemporary global/international or historical awareness embedded in the coursework.

ASSOCIATE OF SCIENCE DEGREES

Cochise College has the following Associate of Science degrees. See the Area of Study section of this catalog for complete degree programs.

Allied Health
Biology
Chemistry
Computer Science
General Requirements (GR)
Physics, Atmospheric Sciences, and Astronomy

Associate of General Studies Degree

General Requirements

The AGS degree is an option designed for students who do not plan to transfer or who may be planning to attend 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 attending an Arizona public university at a later time. The AGS degree is designed to be a general studies degree with no area of emphasis. Currently, two AGS degree programs contain unique general education requirements and state an area of emphasis: Professional Pilot Technology and Manufacturing Engineering.

- The AGS degree contains 64 credits.
- Students planning to attend 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 transfer-planning tool for students.

General Education Requirements		Credits
Composition	ENG 101 and one of the following: ENG 102, 109,167 or ENG/CIS 279	6
Mathematics	MAT 122 or higher	3-5
Laboratory Science		4
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy	CIS 116 or 120	3
Foreign Language (100 or above) or Communications (101 or above)		3-4
General Education Elective(s)		3-4

- Arts and Humanities courses must be chosen from two disciplines, and Social and Behavioral Sciences courses must be chosen from two disciplines.

- Six credits of Arts, Humanities, Social and Behavioral Sciences and General Education Electives must be chosen from the Intensive Writing and Critical Inquiry Course List.
- Students testing out of the Information Literacy requirement may choose a course from the General Education Course List.
- Elective course must be chosen from the General Education Course List or HPE 179.

Total General Education Requirements	**35**
Electives	29

- Elective courses may be selected from any Cochise College course above the 100 level.

Total Degree Requirements	**64**

- The AGS degree requires a cumulative GPA of 2.0 or higher.
- Composition and mathematics courses used to meet general education requirements must have a grade of C or better.
- A course may be used to fulfill both a General Education requirement and an elective in the Associate Degree. Total credits toward a degree are not waived.
- A minimum of 16 credits must be completed at Cochise College.
- Courses in the Arts, Humanities, and Social and Behavioral Sciences have content addressing ethnic/race/gender awareness, and contemporary global/international or historical awareness embedded in the coursework.

ASSOCIATE OF GENERAL STUDIES DEGREES

Cochise College has the following Associate of General Studies degrees. See the Areas of Study section of this catalog for complete degree programs:

Professional Pilot Technology
Manufacturing Engineering

DIRECT EMPLOYMENT PROGRAMS

These degree and certificate programs are recommended for students who wish to gain a depth of technical expertise in their career area. If you have a special interest in occupational programs you should seek an Applied Degree, Associate of General Studies or certificate tailored to individual careers. These programs also offer continuing skill education or retraining in a new career field.

Each course and program has been developed with the aid of business and industry advice to assure that learning is both current in content and high in quality. Upon successful completion of curriculum requirements you will receive an Associate of Applied Science degree or certificate. The Career Action Center is available to graduates to assist you in finding positions in your area of specialization.

Some direct employment courses and programs may transfer to Arizona universities and other educational institutions depending upon your selection of a specific degree. However, if you intend to transfer to obtain a four-year degree, you must carefully select your courses to ensure transferability. For more information on specific transfer options consult a Cochise College academic advisor or the university of interest.

In addition to two-year degrees and certificate programs of less than two years, the College offers a variety of short-term credit and noncredit courses on a scheduled and when-requested basis. Business, industry or other interested groups may obtain further information about these services from the Center for Professional Development Office on the Sierra Vista Campus.

Associate of Applied Science

The AAS degree is most commonly used to prepare students for employment in a specific career. 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 time.

These degree programs may require lower-division general education courses in the junior and senior year. See an academic advisor for information about the Bachelor of Applied Science degrees (BAS) at Arizona public universities.

General Education Requirements		Credits
English	ENG 100 and/or above	3 or 6
Mathematics	MAT 122 and/or above	3 or 6
Arts and Humanities or Social and Behavioral Sciences		3
General Education Electives(s)		6
Total General Education Requirements		**18**
Career Courses (See Areas of Study)		26-43
Electives		3-20
Total Degree Requirements		**64**

- The AAS degree requires a cumulative GPA of 2.0 or higher.
- The Associate of Applied Science General Education Requirements are under revision. Currently each AAS degree program has its own unique general education requirements.
- Courses used to fulfill the Associate of Applied Science General Education must be chosen from the AAS General Education Course List. This list is available in the Student Development Centers.
- Nine credits total of English and mathematics are required with a minimum of three credits in each area. Chemistry 130 and/or Physics 111 or higher may substitute for mathematics.
- You must demonstrate a 12.0 grade reading level equivalency.
- English and mathematics courses used to meet General Education Requirements must have a grade of C or better.

ASSOCIATE OF APPLIED SCIENCE DEGREES

Cochise College has the following Associate of Applied Science degrees. See the Areas of Study section of this catalog for complete degree programs:

Administration of Justice
Agriculture
Aviation Maintenance Technology
Avionics Technology
Computer Applications
Computer Information Systems
Computer Programming
Culinary Arts
Drafting and Design
Electronics Technology
Fire Science Technology
Hospitality Administration
Manufacturing Engineering
Media Communications
Network Management
Nursing
Paramedicine
Professional Administrative Assistant
Professional Pilot Technology
Social Services
Welding Technology

Certificate Programs

Cochise College offers many certificates designed for direct employment. These programs vary from 15 to 39 credits and offer students an opportunity to complete training in a shorter time frame.

CERTIFICATES

- Aerospace Thermal Fusion
- Avionics Technology
- Certified Public Manager
- Chef de Cuisine-Food Preparation
- Chef Garde-Manger
- Chef Patissier-Bakers
- Community Health Advisor
- Computer Programmer
- Computerized Office Applications
- Correctional Officer Training Academy
- Drafting and Design
- Drug and Alcohol Studies
- Entrepreneurship/Small Business Management
- Equine Science and Management
- Fire Science Technology
- General Business
- Hospitality Administration
- International Communications
- International Management
- Management
- Medical Transcriptionist
- Microcomputer Practitioner
- Motor Transport Technology
- Network Administrator
- Network Support
- Nursing Assistant
- Office Assistant
- Online International Business
- Paralegal Studies
- Paramedicine
- PC Maintenance and Repair
- Powerplant Operations
- Practical Nurse
- Print Media Arts
- Receptionist
- Social Services
- Sous Chef
- Supervisory Management
- Teacher Aid I
- Teacher Aid II
- Teleservices
- UNIX System Administrator
- Webmaster
- Welding Technology
- Workplace English
- Workplace Spanish

ARIZONA DEPARTMENT OF CORRECTIONS CERTIFICATES**

- Advanced Business Skills
- Building Maintenance
- Consumer Electronics Repair
- Custodial Services
- Fire Leadership
- General Electronics Technician
- Lead Firefighter
- Masonry

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

Areas of Study

Administration of Justice

The Associate of Arts (SR) in Administration of Justice is designed for students who are planning to transfer to a college or university. This program will prepare them to further their education in criminal justice. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

The Associate of Applied Science in Administration of Justice degree has been designed to prepare students to enter the work force as law enforcement officers. This program will give students all the education and skills necessary to become peace officers. In order to obtain certification, the student must meet the minimum standards set forth by the Arizona Peace Officers Standards and Training Board (AZ-POST), which has approved Cochise College's Administration of Justice courses for in-service training as equivalency and/or proficiency hours.

ADMINISTRATION OF JUSTICE

Associate of Arts,
Special Requirements
Emphasis in Administration of Justice

General Education Requirements (AGEC-A)		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 or above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*
Non-English Language
4th semester proficiency 16

Common Courses		**Credits**
Select 13 credits from the following courses:		
Introduction to Administration of Justice	AJS 101	3
Substantive Criminal Law	AJS 109	3
Crime & Delinquency	AJS 225	3
The Police Function	AJS 230	3
The Corrections Function	AJS 240	3
Procedural Criminal Law	AJS 260	3
Elective		1
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement may choose elective credits.
**Elective courses must be transferable to all Arizona public universities.

ADMINISTRATION OF JUSTICE

Associate of Applied Science

General Education Requirements		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
OR		
English	ENG 109	
Mathematics	MAT 122	3
Social Sciences	SOC 101	3
Information Literacy	CIS 116 or 120	3
General Education Elective	POS 110 or 220	3
Physical Education		2
TOTAL GENERAL EDUCATION REQUIREMENTS		**20**

Core Curriculum		Credits
Introduction to Administration of Justice	AJS 101	3
Substantive Criminal Law	AJS 109	3
The Police Patrol Function	AJS 122	
OR		
The Police Function	AJS 230	3
Juvenile Justice Procedures	AJS 212	3
The Correction Function	AJS 240	3
Psychology in Law Enforcement	AJS 254	3
Procedural Criminal Law	AJS 260	3
Criminal Investigations	AJS 275	3
Essentials of Communication	COM 102	3
AJS Electives*		17
TOTAL DEGREE REQUIREMENTS		**64**

*For a list of approved AJS electives, see the Administration of Justice department

CORRECTIONAL OFFICER TRAINING ACADEMY

Certificate

This certificate program is under revision. For further information regarding this program, contact the AJS department or your faculty advisor.

This program comprises a staff development program for Arizona Department of Corrections employees. Courses are intended for current ADOC employees.

Agriculture

Cochise College's agricultural program specializes in animal husbandry. Agricultural students are encouraged to consider the Associate of Arts and Associate of General Studies degrees with specific agriculture coursework for transfer to colleges and universities; see an advisor for specific transfer information. The Associate of Applied Science in Agriculture is a flexible program intended to permit students to specialize in the agricultural field most closely related to their career choice or existing job requirements. It is not intended for transfer to a four-year institution, but for direct application to the specific demands of the agricultural work environment.

Coursework required for completion of the Equine Science Certificate is typically designed for students who are interested in the handling and care of horses. A large portion of the required coursework may transfer as agriculture electives to most universities.

AGRICULTURE

Associate of Applied Science

General Education Requirements		Credits
English Composition	ENG 100 or above	6
Mathematics	MAT 122 and above	3
Arts & Humanities or Social & Behavioral Sciences		3
General Education Electives		15
Reading Competency		
TOTAL GENERAL EDUCATION REQUIREMENTS		**27**
Must include: BIO 101, CHM 100 or CHM 151, COM 102.		

Elective Courses		Credits
19-26 Credits from the following:		
Principles of Veterinary Science	AGR 101	3
Introduction to Agriculture	AGR 102	3
Range Management	AGR 105	3
Farrier Science	AGR 107	3
Team Roping	AGR 138	3
Western Horsemanship	AGR 139	3
Rodeo Skills	AGR 140	3
English Equitation	AGR 141	3
Range Plants	AGR 207	3
Animal Industry	AGR 208	3
General Welding	AGR 210	3
Advanced Agriculture Welding	AGR 212	3
Animal Feeding	AGR 230	3
Horse Science and Management	AGR 237	3
Livestock Production and Management	AGR 243	3
Project Welding	AGR 250	3
Individual Studies	AGR 299	1-4

Recommended Business Electives		Credits
Principles of Management	BUS 143	3
Introduction to Accounting	BUS 146	3
Business Communications	BUS/OAD 167	3
Introduction to Data Processing	CIS 120	3
Written Communications and Reports	ENG 109	3
TOTAL DEGREE REQUIREMENTS		**64**

EQUINE SCIENCE AND MANAGEMENT

Certificate

Core Courses		Credits
Principles of Vet. Science	AGR 101	3
Range Management	AGR 105	3
Farrier Science	AGR 107	3
Team Roping	AGR 138	3
Western Horsemanship	AGR 139	3
Rodeo Skills	AGR 140	3
Advanced Agriculture Welding	AGR 212	3
Animal Feeding	AGR 230	3
Horse Science & Management	AGR 237	3
Livestock Production & Mgmt.	AGR 243	3
TOTAL DEGREE REQUIREMENTS		**30**

Allied Health

The Associate of Science (SR) in Allied Health is designed for students interested in pursuing Clinical Lab Science, Dental Hygiene, Health Science-Medical Technology degrees at a public university. Students should seek assistance in planning their educational future with the Student Development Center.

ALLIED HEALTH

Associate of Science,
Special Requirements
Emphasis in Allied Health

General Education Requirements (AGEC-S)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 220 or higher	3-5
Laboratory Science	PHY 230/231 or CHM 151/152	8
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Common Courses		Credits
Microbiology	BIO 205	4
General Chemistry I	CHM 151	4
Elective		21

Elective courses should be chosen after consulting the appropriate transfer guide.

Students are advised to take Chemistry and Biology for transfer to universities.

TOTAL COMMON COURSES	**29**
TOTAL DEGREE REQUIREMENTS	**64**

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

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.

Cochise College offers two primary pathways for the transfer student pursuing a degree in Art, the Associate of Arts-General Requirements (AA-GR) and the Associate of Arts-Special Requirements (AA-SR). Students seeking a specialized career in Art should see an Art instructor for advisement. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

ART

Associate of Arts
Special Requirements
Emphasis in Fine Arts

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Foreign Language	
Non-English Language 4th semester proficiency	16

Common Courses		Credits
Design Fundamentals	ART 103	3
Drawing I	ART 106	3
Survey of World Art: Prehistoric-Gothic	ART 107	3
Survey of World Art: Renaissance through The Twentieth Century	ART 108	3
Three Dimensional Design/ Sculpture	ART 231	3
Elective		1
TOTAL COMMON COURSES		**13**

NOTE: ART 107 or ART 108 must be taken in the General Education Block or student will exceed 64 credits to obtain this degree.

TOTAL DEGREE REQUIREMENTS 64

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

Professional Pilot Technology

The Professional Pilot Technology (PFT) program of Cochise College is certified by the Federal Aviation Administration (FAA Certificate HR8S200Q) under Part 141 of the regulations as a Pilot School. The program is dedicated to training students in the knowledge, pilot skills, and ratings necessary to become competent, qualified, and productive Professional Pilots.

The program is presented in a traditional course and semester manner, allowing the completion of both the pilot courses and the courses required for an Associate degree. All ratings are offered, and students may enter the program with or without prior flight training or certificates. Placement in the flight portion of the program for those with prior training will depend upon a skills analysis when the student enters the program. The normal progression will lead from the Private Pilot Certificate to a fully FAA certified Commercial Pilot with Instrument and Multi-engine ratings. In addition, Flight Instructor courses in Airplane—Single-engine, and Instrument—and the Airline Transport Pilot Certificate are available through the program.

PROFESSIONAL PILOT TECHNOLOGY

Associate of General Studies

General Education Requirements		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics MAT 220 and above		3-5
Laboratory Science PHY 230/231 or CHM 151/152 or BIO 184/190		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Core Curriculum		Credits
Stage One Ground School	PFT 101	5
Solo Flight Preparation	PFT 111	3.5
Cross-Country Navigation	PFT 112	1.5
Private Pilot Certification Completion	PFT 113	1
Stage Two Commercial Pilot Flight Course	PFT 121	3
Stage Three Ground School	PFT 130	5
Stage Three Commercial Pilot Flight Course	PFT 131	3
Stage Four Commercial Pilot Ground School	PFT 204	5
Instrument Flight Navigation and Air Traffic Control Procedures	PFT 214	3.5
Instrument Flight Cross-Country Procedures and Practical Test Preparation	PFT 215	1.5
Stage Five Commercial Pilot Completion Course	PFT 218	1
Electives		7-8
TOTAL DEGREE REQUIREMENTS		**75-78**

Optional Courses		Credits
Private Pilot Practicum	PFT 102	1
Private Pilot Review	PFT 103	1
Multi-Engine Class Rating Ground School	PFT 210	1
Multi-Engine Class Rating Flight	PFT 211	1
Instrument Pilot Practicum	PFT 216	1
Instrument Pilot Review	PFT 217	1
Commercial Pilot Practicum	PFT 219	1
Commercial Pilot Review	PFT 220	1
Flight Instructor Fundamentals of Instruction	PFT 230	3
Flight Instructor Airplane Ground School	PFT 231	5
Flight Instructor Airplane Flight Course	PFT 232	3

Flight Instructor Airplane Review	PFT 233	1
Flight Instructor Practicum	PFT 234	2.5
Multi-Engine Airplane Instructor Ground School Course	PFT 240	2
Multi-Engine Airplane Instructor Flight Course	PFT 241	2
Flight Instructor Instrument Airplane Ground School	PFT 250	3
Flight Instructor Instrument Airplane Flight Course	PFT 251	3
Airline Transport Pilot Ground School	PFT 260	3
Airline Transport Pilot Flight	PFT 261	1

Acceptance into Professional Pilot Program requires an interview with the Chief Flight Instructor plus completion of admission requirements and departmental acceptance. Admission to Cochise College does not guarantee acceptance into the pilot program.

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

PROFESSIONAL PILOT TECHNOLOGY

Associate of Applied Science

General Education Requirements		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 122 and above	3
Arts & Humanities or Social & Behavioral Sciences		3
General Education Electives		6
Physical Education		2
Reading Competency		
TOTAL GENERAL EDUCATION REQUIREMENTS		**42**

Must include: Laboratory Science (4 Credits), BUS 104, BUS 201, BUS 202, BUS 123, BUS 145, ECN 201, ECN 202, BUS 143 or PFT 200, BUS 233 or PFT 247. Suggested elective PFT 245.

Core Curriculum		**Credits**
Stage One Ground School	PFT 101	5
Solo Flight Preparation	PFT 111	3.5
Cross-Country Navigation	PFT 112	1.5
Private Pilot Certification Completion	PFT 113	1
Stage Two Commercial Pilot Flight Course	PFT 121	3
Stage Three Ground School	PFT 130	5
Stage Three Commercial Pilot Flight Course	PFT 131	3
Stage Four Commercial Pilot Ground School	PFT 204	5
Instrument Flight Navigation & Air Traffic Control Procedures	PFT 214	3.5
Instrument Flight Cross-Country Procedures and Practical Test Preparation	PFT 215	1.5
Stage Five Commercial Pilot Completion Course	PFT 218	1
Electives		5
TOTAL DEGREE REQUIREMENTS		**80**

Optional Courses		**Credits**
Private Pilot Practicum	PFT 102	1
Private Pilot Review	PFT 103	1

Biology

The Associate of Science (SR) degree in Biology is designed for biology majors and many pre-professional students transferring to a four-year institution. Biology students will further specialize in the areas of interest (biology, botany, zoology, genetics, microbiology, wildlife biology, or others) upon transfer. The course requirements of many pre-professional programs (pre-agriculture, pre-dentistry, pre-medical, pre-pharmacy, pre-veterinary, and others) are included in this degree, making it the program of choice for many pre-professional students. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

BIOLOGY

Associate of Science,
Special Requirements
Emphasis in Biology

General Education Requirements (AGEC-S)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 220 or higher	3-5
Laboratory Science	PHY 230/231 or CHM 151/152	8
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Common Courses		Credits
Plant Biology	BIO 184	4
Animal Biology	BIO 190	4
General Chemistry I	CHM 151	4
General Chemistry II	CHM 152	4
Electives		13

Elective courses should be chosen after consulting the appropriate transfer guide.

Students are advised to take Chemistry and Biology for transfer to universities.

TOTAL COMMON COURSES	**29**
TOTAL DEGREE REQUIREMENTS	**64**

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

Business

The Associate of Business (GR) degree is intended for the student interested in pursuing a program of study leading to a major in business at a four-year school. It will prepare students for majors in management, marketing, or general business at a four-year school. This is a generalist degree that will not only prepare a student to transfer to ASU, U of A, or NAU as a junior in the college of business but also prepare the student for direct employment. The twenty-first century will be characterized by the increasing importance of business to the local, national, and international economies, and students completing this program of study will be poised to take advantage of the opportunities offered in the dynamic business environment.

Business certificates are designed to improve skills and help prepare students for a career in a business field.

The Certified Public Manager (CPM) program is a nationally recognized program for achieving certification in public management. As part of a national consortium, CPM is designed to provide the public sector professional with analytical approaches and managerial skills that

inspire ideas, empower people, and maximize use of resources.

The Online International Business Certificate prepares students for careers and advancement in the international economy. This sequence of courses is delivered online with a focus on preparing students for careers in international business or to transfer to a four-year degree program in international business. Courses include introduction to international business, international management, international marketing, and international trade.

The Supervisory Management Certificate Program emphasizes supervisory skills. This program provides the necessary skills to effectively meet the challenges and opportunities that public, private and nonprofit sector supervisors/managers face in a rapidly changing workplace environment. Courses must be taken in the order presented.

BUSINESS ADMINISTRATION

Associate of Business,
General Requirements
Emphasis in Business Administration

General Education Requirements (AGEC-B)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 212 or above	3
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Common Courses		Credits
Quantitative Methods in Business	BUS 172	3
OR		
Finite Mathematics	MAT 172	
Financial Accounting	BUS 201	3
Managerial Accounting	BUS 202	3
Business Statistics	BUS 219	3
The Legal Environment of Business	BUS 233	3
Introduction to Data Processing	CIS 120	3
Principles of Macroeconomics	ECN 201	3
Principles of Microeconomics	ECN 202	3
Business Elective	BUS/ECN	5
TOTAL COMMON COURSES		**29**
TOTAL DEGREE REQUIREMENTS		**64**

Accounting or CIS majors should see Transfer Programs ABus Degree.

Students transferring to U of A, ASU, or NAU are required to see a business faculty advisor for specific transfer curriculum to these Universities.

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

GENERAL BUSINESS
Certificate

Core Courses		Credits
Business Mathematics	BUS 104	3
Survey of American Business	BUS 109	3
Introduction to Accounting	BUS 146	3
Business Communications	BUS 167	3
Choose one of the following:		
Starting a Business	BUS 183	3
OR		
International Management	BUS 131	
Choose one of the following:		
Learning to Use the Personal Computer	CIS 116	3
OR		
Introduction to Data Processing	CIS 120	
OR		
Advisor Approved Course		
TOTAL CERTIFICATE REQUIREMENTS		**18**

ENTREPRENEURSHIP/SMALL BUSINESS MANAGEMENT
Certificate

Core Courses		Credits
Business Mathematics	BUS 104	3
Survey of American Business	BUS 109	3
Introduction to Accounting	BUS 146	3
Business Communications	BUS 167	3
Starting a Business	BUS 183	3
OR		
International Management	BUS 131	
Financial Accounting	BUS 201	3
The Legal Environment of Business	BUS 233	3
Small Business Management	BUS 283	3
Learning to Use the Personal Computer	CIS 116	3
OR		
Introduction to Data Processing	CIS 120	
OR		
Advisor Approved Course		
Principles of Macroeconomics	ECN 201	3
TOTAL CERTIFICATE REQUIREMENTS		**30**

INTERNATIONAL MANAGEMENT
Certificate

General Education Courses		Credits
Business Mathematics	BUS 104	3
Survey of American Business	BUS 109	3
Introduction to Accounting	BUS 146	3
Business Communications	BUS 167	3
International Management	BUS 131	3
OR		
Starting a Business	BUS 183	
Learning to Use the Personal Computer	CIS 116	3
OR		
Introduction to Data Processing	CIS 120	
OR		
Advisor Approved Course		
TOTAL GENERAL EDUCATION REQUIREMENTS		**18**

Core Courses		Credits
International Marketing	BUS 134	3
Financial Accounting	BUS 201	3
Principles of Macroeconomics	ECN 201	3
International Trade	ECN 221	3
CORE REQUIREMENTS		**12**
TOTAL REQUIREMENTS		**30**

ONLINE INTERNATIONAL BUSINESS
Certificate

Core Courses		Credits
Survey of International Business	BUS 110	3
International Management	BUS 131	3
International Marketing	BUS 134	3
Financial Accounting	BUS 201	3
Electronic Commerce	BUS 285	3
Principles of Macroeconomics	ECN 201	3
International Trade	ECN 221	3
TOTAL REQUIREMENTS		**21**

CERTIFIED PUBLIC MANAGER
Certificate

Offered in partnership with Arizona State University

Program Prerequisites:

1. Successful completion of PAD 101-103 or an ASU approved supervisory program within the last five years.

OR

Advanced Entry Requirements:

1. Two year degree from an accredited institution that includes nine credit hours (135 clock hours) in management development or training.
2. Specific training in performance appraisal, grievance, and EEO/Affirmative Action.
3. Supervisory experience and education to total eight years.

Core Courses		Credits
Management in the Public Organization	PAD 201	4
Systems Approach to Public Management	PAD 202	3
Case Studies in Decision Management	PAD 203	2

Ethics and Management Simulation provided through Arizona State University (32 contact hours). Certified Public Manager Certificate awarded in annual graduation ceremony at Arizona State University. For more information contact the Center for Professional Development.

Supervisory Management

The Supervisory Management Certificate program is designed to provide the knowledge and analytical skills necessary to effectively meet the challenges and opportunities facing supervisors and managers in the workplace. This program provides the skills necessary to manage resources and personnel in a rapidly changing work environment. Upon successful completion of program requirements, students will receive a certificate in supervisory management.

SUPERVISORY MANAGEMENT
Certificate

Program Prerequisite: Sponsorship by a governmental agency or private/non private organization, a current supervisory or management position or potential for appointment to a supervisory/management position.

Core Courses		Credits
Introduction to Management Skills	PAD 101/ MGT 101	2
The Manager and System Relationships	PAD 102/ MGT 102	2
The Manager and the Work Group	PAD 103/ MGT 103	2
Composition*	ENG 101	3
Mathematics*	Above 100 level	3
Recommended Electives*		3
TOTAL REQUIREMENTS		**15**

Reading minimum of 11.5 grade level in accordance with standardized test scores.
*Requirement waived for individuals holding an AA/AS degree or higher.

Management Program

The Management Certificate program is designed to provide private and non-profit sector supervisors and managers with the knowledge and analytical skills necessary to effectively meet the challenges and opportunities facing today's and tomorrow's competitive organizations. Particular attention is paid to honing the leadership and resource management skills of supervisors and managers in the private and non-profit sectors who are not currently eligible for enrollment in the College's Certified Public Manager Program. The focus of MGT 101-103 is managing resources. MGT 201-203 focuses on managing programs. Upon successful completion of the Management Certificate Program, students will receive a joint Cochise College - American Management Association certificate in management.

MANAGEMENT PROGRAM
Certificate

Prerequisite: Students must have the written sponsorship of a private or non-profit employer or approval of the Coordinator of Cochise College Center for Professional Development (CPD) prior to enrollment in the program. Students may gain ADVANCED ENTRY into MGT 201 upon completion of the Supervisory Management program (or an equivalent training program), or upon completion of a two-year college degree, which includes six credit hours (or ninety clock hours of training) in management, to include performance evaluation, affirmative action and related topics.

Core Courses		Credits
Introduction to Management Skills	MGT 101 or PAD 101	2
The Manager and System Relationships	MGT 102 or PAD 102	2
The Manager and the Work Group	MGT 103 or PAD 103	2

Leadership Skills for Managers	MGT 201	3
Effective Decision Making	MGT 202	3
Successful Project Management	MGT 203	3
Composition*	ENG 101	3
OR		
Business Communications*	BUS 167	
Recommended Electives*		3
TOTAL REQUIREMENTS		**21**

*Requirement waived for individuals holding an AA/AS degree or higher.

Recommended Electives		**Credits**
Principles of Marketing	BUS 145	3
Financial Accounting	BUS 201	3
Managerial Accounting	BUS 202	3
Computer Applications	CIS 181	3
Introduction to Psychology	PSY 101	3
Introduction to Sociology	SOC 101	3
Introduction to Social Work	SOC 207	3

Chemistry

The Associate of Science (SR) degree in Chemistry provides curriculum mainly for (but not restricted to) the various transfer degree programs in the areas of life sciences (biology), physical sciences (astronomy, chemistry, geology, physics), and allied health (nursing, pharmacy, pre-med, pre-dental, and pre-vet). To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

CHEMISTRY

Associate of Science,
Special Requirements
Emphasis In Chemistry

General Education Requirements (AGEC-S)		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 220 or higher	3-5
Laboratory Science	PHY 230/231 or CHM 151/152	8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Common Courses		**Credits**
General Organic Chemistry I	CHM 235	4
General Organic Chemistry II	CHM 236	4
Laboratory Science	PHY 230/231 and CHM 151/152	8
Calculus II	MAT 231	4
Electives		9
TOTAL COMMON COURSES		**29**
TOTAL DEGREE REQUIREMENTS		**64**

PHY 230/231 and CHM 151/152 are required, may count as AGEC or common courses.

NOTE: Calculus III is recommended for university transfer, not required.

*Students testing out of this requirement must choose general education elective credit.
**Elective courses must be transferable to all Arizona public universities.

Communications

The Associate of Arts (SR) degree in Communications is designed for students who plan to transfer to a four-year college or university to pursue a degree in speech, communications or communication studies. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

COMMUNICATIONS

Associate of Arts
Special Requirements
Emphasis in Communications

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 or above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Elective**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*		
Non-English Language 4th semester proficiency		16

Common Courses		Credits
Essentials of Communication	COM 102	3
Public Speaking	COM 110	3
Electives		7
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

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 Data Base Administrator.

The Associate of Business (SR) in Computer Information Systems is designed to prepare students for direct transfer to four-year institutions. Information Technology is one of the fastest growing career fields in the world. The curriculum provides the foundation for the following rewarding careers: Applications Programmer, Systems Programmer, and Database Administrator.

To satisfy degree and certificate requirements for all CIS/CS programs, all courses require a grade of C or better.

The various certificate programs can prepare students for direct employment and/or improved skills in rewarding, technology-related careers. The Information Technology field is one of the fastest growing career fields in the world. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

COMPUTER INFORMATION SYSTEMS

Associate of Business, Special Requirements
Emphasis In Computer Information Systems

General Education Requirements (AGEC-B)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 212	3
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Common Courses		Credits
Financial Accounting	BUS 201	3
Managerial Accounting	BUS 202	3
Business Statistics	BUS 219	3
The Legal Environment of Business	BUS 233	3
Programming (Select One)		4
C Programming	CIS 204	
C++ Programming	CIS 227	
Programming (Select One)		4
COBOL Programming	CIS 202	
JAVA Programming	CIS 208	
Visual Basic Programming	CIS 218	
Principles of Macroeconomics	ECN 201	3
Principles of Microeconomics	ECN 202	3
Finite Mathematics	MAT 172	3
TOTAL COMMON COURSES		**29**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

COMPUTER APPLICATIONS

Associate of Applied Science

General Education Requirements		Credits
Applied Technical Writing	ENG/BUS/CIS 179	3
Advanced Applied Technical Writing	ENG/CIS 279	3
Intermediate Algebra	MAT 122	3
OR		
Business Mathematics	BUS 104	
Information Literacy	CIS 116	3
AAS Humanities/Social Science/Behavioral Sciences		6
TOTAL GENERAL EDUCATION REQUIREMENTS		**18**

Major Courses		Credits
Introduction to Data Processing	CIS 120	3
Introduction to Operating Systems	CIS 140	3
PC and Printer Support	CIS 142	3
Essentials of Networking	CIS 150	3
Computer Applications	CIS 181	3
Introduction to the Internet	CIS 185	3
Advanced Operating Systems (Select One):		4
Unix Operating System	CIS 128	
Introduction to Novell Networks	CIS 234	
Network Operating Systems	CIS 236	
WWW Programming	CIS 242	
OR		
World Wide Web Graphics	CIS 244	3
Advanced Computer Applications	CIS 281	3
World Wide Web Development	CIS 287	3
Field Experience	CIS 294	3
Your Professional Image	OAD 150	3
Computerized Office Management	OAD 216	3
Advanced Computerized Office Management	OAD 217	3
Technical Presentations	OAD 268	3
MAJOR TOTAL		**46**
TOTAL DEGREE REQUIREMENTS		**64**

COMPUTER INFORMATION SYSTEMS

Associate of Applied Science

General Education Requirements		Credits
English	ENG/BUS/ CIS 179	3
Mathematics	MAT 122 and above	3
Introduction to Data Processing	CIS 120	3
Advanced Applied Technical Writing	ENG/CIS 279	3
Humanities/Social & Behavioral Sciences		6
TOTAL GENERAL EDUCATION REQUIREMENTS		**18**

Core Curriculum		Credits
Customer Relations in the Workplace	BUS 168	1
Programming Logic	CIS 130	3
Introduction to Operating Systems	CIS 140	3
Essentials of Networking	CIS 150	3
Computer Applications	CIS 181	3
Introduction to the Internet	CIS 185	3
Digital Logic	CIS 221	3
Data Base Management	CIS 250	4
Systems Analysis	CIS 270	3
Advanced Computer Applications	CIS 281	3
WWW Development	CIS 287	3
Field Experience in CIS	CIS 294	3
Programming (Select One):		4
COBOL Programming	CIS 202	
FORTRAN Programming	CIS 203	
C Programming	CIS 204	
Java Programming	CIS 208	
C++ Programming	CIS 227	
Data Structures (in language selected above)	CIS 220	4
Advanced Operating Systems (Select One):		4
UNIX Operating System	CIS 128	
Introduction to Novell Networks	CIS 234	
Network Operating Systems	CIS 236	
Technical Presentations	OAD 268	3
CORE CURRICULUM TOTAL		**50**
TOTAL DEGREE REQUIREMENTS		**68**

COMPUTER PROGRAMMER

Certificate

Core Courses		Credits
Customer Relations in the Workplace	BUS 168	1
Information Literacy	CIS 120	3
Programming Logic	CIS 130	3
Programming (Select Three):		12
COBOL Programming	CIS 202	
FORTRAN Programming	CIS 203	
C Programming	CIS 204	
Assembler w/ Architecture	CIS 206	
Java Programming	CIS 208	
Visual Basic Programming	CIS 218	
C++ Programming	CIS 227	
Digital Logic	CIS 221	3
Advanced Programming (Select One):		4
Data Structures (in a language selected above)	CIS 220	
Advanced Visual Basic Programming	CIS 223	
Advanced Java Programming	CIS 209	
Systems Analysis	CIS 270	3
TOTAL REQUIREMENTS		**29**

COMPUTER PROGRAMMING

Associate of Applied Science

General Education Requirements		Credits
Applied Technical Writing	ENG/BUS/ CIS 179	3
Intermediate Algebra	MAT 122 or higher	3
Information Literacy	CIS 116 or CIS 120	3
Advanced Applied Technical Writing	ENG/CIS 279	3
Humanities/Social Science/ Behavioral Sciences		6
TOTAL GENERAL EDUCATION REQUIREMENTS		**18**

Major		Credits
Customer Relations in the Workplace	BUS 168	1
Programming Logic	CIS 130	3
Introduction to Operating Systems	CIS 140	3
Essentials of Networking	CIS 150	3
Introduction to Internet	CIS 185	3
Digital Logic	CIS 221	3
Systems Analysis	CIS 270	3
Field Experience in CIS	CIS 294	3
Programming (Select Three):		12
COBOL Programming	CIS 202	
FORTRAN Programming	CIS 203	
C Programming	CIS 204	
Assembler with Architecture	CIS 206	
JAVA Programming	CIS 208	
Visual Basic Programming	CIS 218	
C++ Programming	CIS 227	
Advanced Programming (Select One):		4
Data Structures (in a language selected above)	CIS 220	
Advanced Visual Basic Programming	CIS 223	
Advanced JAVA Programming	CIS 209	
Advanced Operating Systems (Select One):		4
Unix Operating System	CIS 128	
Introduction to Novell Networks	CIS 234	
Network Operating Systems	CIS 236	
College Algebra	MAT 151 or higher	4
MAJOR TOTAL		**46**
TOTAL DEGREE REQUIREMENTS		**64**

NETWORK MANAGEMENT

Associate of Applied Science Degree

General Education Requirements		Credits
Composition	ENG 101	3
OR		
Applied Technical Writing	ENG 179	
Advanced Applied Technical Writing	ENG 279	3
Mathematics	MAT 122 and above	3
Digital Logic	CIS 221	3
Arts & Humanities or Social & Behavioral Sciences		3
Reading Competency		
TOTAL GENERAL EDUCATION REQUIREMENTS		**15**

Core Curriculum		Credits
Introduction to Operating Systems	CIS 140	3
PC & Printer Support	CIS 142	3
Essentials of Networking	CIS 150	3
Computer Applications	CIS 181	3
Service & Maintenance of Personal Computers	CIS 260	3
Network Support & Troubleshooting	CIS 262	4
Field Experience in	CIS 294	3
Technical Presentations	OAD 268	3
Information Management Division Approved Electives		6
TOTAL CORE CURRICULUM		**31**

Network Tracks

(Select two full tracks plus introductory class of the non-selected track)

Track I		Credits
Introduction to Novell Networks	CIS 234	4
Novell Network Management	CIS 235	4
Track II		
Network Operating Systems	CIS 236	4
Advanced Microsoft Network Management	CIS 237	4
Track III		
UNIX Operating System	CIS 128	4
UNIX System Administration	CIS 229	4
TOTAL NETWORK TRACKS		**20**
TOTAL DEGREE REQUIREMENTS		**66**

NETWORK SUPPORT

Certificate

The Network Support Certificate shown below is designed to provide the student with the fundamentals of Network Administration to include PC operation, connectivity, Network functions and communications.

Core Courses		Credits
Introduction to Operating Systems	CIS 140	3
PC and Printer Support	CIS 142	3
Essentials of Networking	CIS 150	3
Digital Logic	CIS 221	3
Introduction to Novell Networks	CIS 234	4
Novell Network Management	CIS 235	4
Network Operating Systems	CIS 236	4
Advanced Microsoft Network Management	CIS 237	4
Service & Maintenance of Personal Computers	CIS 260	3
Network Support and Troubleshooting	CIS 262	4
Field Experience	CIS 294	1
TOTAL REQUIREMENTS		**36**

PC MAINTENANCE AND REPAIR
Certificate

Core Courses		Credits
Introduction to Operating Systems	CIS 140	3
PC and Printer Support	CIS 142	3
Essentials of Networking	CIS 150	3
Service and Maintenance of PCs	CIS 260	3
Field Experience	CIS 294	2
TOTAL REQUIREMENTS		**14**

UNIX SYSTEM ADMINISTRATOR
Certificate

The certificate course of study is designed to provide the student with basic UNIX Operating System skills as they apply to users, shell programming and system administration. The UNIX Operations and Field Experience courses give the student opportunities to apply these skills to operational UNIX Operating Systems at the college or in the workplace.

Deficiency: Algorithms (or completion of waiver exam)	CIS 130	3
Core Courses		**Credits**
UNIX Operating System	CIS 128	4
UNIX System Administration	CIS 229	4
Perl Scripting	CIS 248	3
UNIX Shell Programming	CIS 257	4
TOTAL REQUIREMENTS		**15**

WEB DEVELOPER CERTIFICATE
Certificate

Operating System Foundation		
Choose One Path		**Credits**
Windows Path		
Network Operating System	CIS 236	4
AND		
Advanced Microsoft Network Management	CIS 237	4
OR		
Unix Path		
Unix Operating System	CIS 128	4
AND		
Unix Shell Programming	CIS 257	4
Programming Foundation		
Programming Logic	CIS 130	3
Communication Foundation		
Applied Technical Writing	CIS 279	3
World Wide Web Foundation		
Introduction to the Internet	CIS 185	3
WWW Programming	CIS 242	3
World Wide Graphics	CIS 244	3
Perl Scripting	CIS 248	3
World Wide Web Development	CIS 287	3
Total Certificate Requirements		**29**

Culinary Arts

The Associate of Applied Science degree in Culinary Arts provides training in the culinary arts for direct employment in the field of professional cooking as an assistant to the chef, or food and beverage director. The degree provides general education and allows elective study in general business and hotel administration.

The Chef de Cuisine Certificate trains students to start a career as a prep-cook or assistant cook. It provides grounding in the principles of professional cooking, restaurant sanitation, and food and beverage control.

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

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

The Sous Chef Certificate provides training in all areas of professional cooking, including food and beverage control, restaurant sanitation, meat cutting, gourmet preparations, baking and garde manger and an introduction to restaurant operations and dining service operations. The certificate is intended to prepare the student for a management position in kitchens and restaurants as a professional chef.

CULINARY ARTS
Associate of Applied Science

General Education Requirements		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Business Math	BUS 104	3
Learning to Use the Personal Computer	CIS 116	3
Social or Behavioral Sciences		6
TOTAL GENERAL EDUCATION REQUIREMENTS		**18**

Core Courses		**Credits**
Food Service Math Principles	HAD 110	3
Food Purchasing and Control	HAD 204	3
Nutrition in Food Service	HAD 205	3
Restaurant Sanitation	HAD 207	3
Meat Cutting for the Food Service Industry	HAD 208	2
Food Service Specialty: Culinary Preparation	HAD 215	3
Food Service Specialty: Culinary Preparation II	HAD 216	2
Food Service Specialty: Baking	HAD 220	3
Food Service Specialty: Baking II	HAD 221	2
Food Service Specialty: Garde-Manger	HAD 225	3
Food Service Specialty: Garde-Manger II	HAD 226	2
Dining Service Management	HAD 242	3
TOTAL CORE COURSES		**32**
Department Approved Electives		14
TOTAL DEGREE REQUIREMENTS		**64**

Drafting and Design

The Associate of Applied Science degree in Drafting and Design is intended to prepare students for entry and mid-level employment in drafting-related careers. Career opportunities include: computer-aided drafter, designer, and engineering assistant. Special emphasis is placed on the employment skills necessary in high tech industries, such as manufacturing and aerospace. This program is also popular with professionals wishing to update their skills in computer-aided drafting and product design.

The Drafting and Design Certificate is intended to prepare students for entry-level positions in various areas of drafting and design. Students are introduced to traditional and computer-aided drafting techniques, including theory and practice useful in many drafting and technical jobs. Product design is also included in order to familiarize the students with common industry problems.

DRAFTING AND DESIGN
Associate of Applied Science

General Education Requirements		Credits
English	ENG 179 and 279	6
Mathematics	MAT 122 and 151	7
Arts & Humanities or Social & Behavioral Sciences		3
General Education Electives		6
Reading Competency		
TOTAL GENERAL EDUCATION REQUIREMENTS		**22**

Core Curriculum		Credits
Technical Graphics I	DFT 112	3
Technical Graphics II	DFT 113	3
Spatial Relationships	DFT 120	3
Computer-Aided Drafting	DFT 150	3
Illustration	DFT 170	3
Topics in Drafting	DFT 201	4
Product Design	DFT 231	3
Design and Fabrication	DFT 232	3
Engineering Design	DFT 241	4
Computer-Aided Drafting II	DFT 250	3
Manufacturing Materials & Processes I	GTC 105	3
Engineering Materials & Processes	GTC 206	4
Welding Survey	WLD 202	4
TOTAL DEGREE REQUIREMENTS		**65**

DRAFTING AND DESIGN
Certificate

Core Courses		Credits
Technical Graphics I	DFT 112	3
Technical Graphics II	DFT 113	3
Spatial Relationships	DFT 120	3
General Education Elective		3
Computer-Aided Drafting	DFT 150	3
Illustration	DFT 170	3
Product Design	DFT 231	3
Applied Technical Writing	ENG 179	3
Manufacturing Materials & Processes I	GTC 105	3
Intermediate Algebra	MAT 122	3
College Algebra	MAT 151	4
TOTAL REQUIREMENTS		**34**

Economics

The Associate of Arts (SR) degree in Economics is intended for students interested in pursuing a program of study leading to a major in economics from a four-year school. The program of study is parallel to that of the ABUS and will prepare economics students for junior standing at Arizona public universities. The twenty-first century will be characterized by increasing complexity and interdependency, and a concentration in economics will provide a sound foundation for students seeking academic advancement or employment.

To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

ECONOMICS

Associate of Arts
Special Requirements
Emphasis In Economics

General Education Requirements (AGEC-A)		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Elective**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses

Language Requirement*
Non-English Language
4th semester proficiency 16

Common Courses		
Business Statistics	BUS 219	3
Principles of Macroeconomics	ECN 201	3
Principles of Microeconomics	ECN 202	3
Mathematics:		3-5
Calculus for Business OR	MAT 212	3
Calculus I	MAT 220	5
TOTAL COMMON COURSES		**13-15**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general elective credits.

**Elective courses must be transferable to all Arizona public universities.

Education

Education is one of the nation's fastest growing career fields. Students are reminded that education is an upper-level major in Arizona's public universities and that admission is increasingly competitive and is dependent upon a variety of factors, such as grade point average and pre-professional experience. It is therefore imperative that students plan their course of study with the assistance of an academic advisor.

The Pre-elementary Education Associate of Arts degree meets all curricular requirements for junior standing in the College of Education at all Arizona state universities. In addition to providing a seamless transfer pathway, the Pre-elementary education associates degree gives the student the practical and theoretical basis necessary for making an informed choice of education as a career, a career which promises almost unlimited employment opportunities.

Students are reminded that successful completion of the Pre-elementary Education associates degree does not guarantee admission to a university College of Education. Additional criteria such as grade point average, community service, leadership activities and prior classroom experience (e.g. volunteer tutoring) may

also be used by a College of Education in making admission decisions.

The Teacher Aide Certificate program is a progressive course of study designed in close coordination with public school administrators. The program provides students with the academic and interpersonal skills needed to be effective teacher aides and valued members of a public school instructional team. Many of the courses are also required as a part of the first two years of a baccalaureate degree in elementary or secondary education.

PRE-ELEMENTARY EDUCATION
Associate of Arts
Special Requirements
Emphasis in Pre-Elementary Education

General Education Requirements (AGEC-A)		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 or higher	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social and Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Recommended AGEC Courses
Sciences: One Physical and one Biological Science Social and Behavioral Sciences: HIS 110 or 111

Common Courses		**Credits**
Introduction to Education	EDU 201	3
Introduction to Special Education	EDU 222	3
Field Experience in Education	EDU 224	1-3
Cultural Diversity in Education	EDU 226	3
Recommended Electives		19-17
TOTAL COMMON COURSES		**29**

Recommended Electives*		**9-17**
Electives must be selected from the following list		
Non-English Language		4-16
Essentials of Communication	COM 102	
OR		
Public Speaking	COM 110	3
Macroeconomics	ECN 201	
OR		
Microeconomics	ECN 202	3
Cultural Geography	GEO 102	
OR		
World Regional Geography	GEO 121	3
Math for Elementary Education Majors I	MAT 125	3
Federal and Arizona Constitution	POS 220	3
Introduction to Psychology	PSY 101	3
OR		
Introduction to Sociology	SOC 101	
Fine Arts (Art, Music, Dance and Theatre)		3
TOTAL DEGREE REQUIREMENTS		**64**

*Electives must be selected from the following list. Exceptions require approval of the appropriate instructional manager.
**Elective courses must be transferable to all Arizona public universities.

TEACHER AIDE

Teacher Aide I Certificate

Core Courses		Credits
Composition	ENG 101	3
Any other English writing class at the 100 or 200 level		3
Mathematics	100 level or above	3
Information Literacy	CIS 116 or above	3
Introduction to Sociology	SOC 101	3
Introduction to Psychology	PSY 101	3
Spanish Literacy*		
Any 4 credit Spanish course at the 100 or 200 level		4
Internship	EDU 224	1-4
TOTAL REQUIREMENTS		**23-26**

*For additional foreign language literacy options of 3-4 credits - see advisor.

Teacher Aide II Certificate

Prerequisite: Successful completion of Teacher Aide I Certificate.

Core Courses		Credits
Developmental Psychology	PSY 240	3
Ethnic Groups and Minorities	SOC 160	3
Spanish Literacy*		4
Any 4 credit Spanish course at the 100 or 200 level not used in Teacher Aide I.		
Speech	OAD 268, COM 102 or COM 110	3
TOTAL CORE REQUIREMENTS		**13**

Electives	Credits
Health & Physical Education	5-6
(Two courses selected from the following) HPE 186, 189, 180,185, 190, 192, 193, 194, 195, 197	
OR	
Art	6
(Two courses selected from the following) ART 120, and one of the following: ART 103, 106, 107, 108	

*For additional foreign language literacy options of 3-4 credits - see an advisor.

Social Sciences	6
(Two courses selected from the following) History, Anthropology, Sociology, Psychology, Administration of Justice (101, 130), Counseling, Political Science (220), Social Services	
OR	
Physical and Biological Sciences	8
(Two courses selected from the following) Biology, Astronomy, Chemistry, Physics, Geology	
Internship EDU 224	1-4
TOTAL REQUIREMENTS	**25-31**

Electronics

The Associate of Applied Science in Electronics prepares students for employment in general electronics. Completion of the common core courses allows the student to obtain competencies in electricity, digital and analog devices and circuits, measurements, electronic communications, microprocessors and microcomputers. Courses include designing and experimenting with electromechanical systems and team problem solving.

ELECTRONICS TECHNOLOGY

Associate of Applied Science

General Education Requirements		Credits
Composition	ENG 101	3
Mathematics	ELT 110 or MAT 122	3
Mathematics	ELT 120 or MAT 151	3-4
Arts & Humanities and/or Social & Behavioral Sciences		3
General Education Electives		6
TOTAL GENERAL EDUCATION REQUIREMENTS		**18-19**

Core Curriculum		Credits
Introduction to DC Circuits	ELT 105	3
Introduction to AC Circuits	ELT 106	4
Semiconductors & Transistors	ELT 122	4
Electronic Circuits & Systems	ELT 125	4
Pulse Circuits	ELT 231	4
Digital Circuits & Systems	ELT 233	4
Modern Electronic Devices	ELT 243	4
Communications Electronics I	ELT 245	4
Communications Electronics II	ELT 247	4
Microprocessors & Microcomputers	ELT 265	4
Electives		6-7
TOTAL CORE REQUIREMENTS		**45-46**
TOTAL DEGREE REQUIREMENTS		**64**

English

The Associate of Arts (SR) degree in English is designed to provide the English major with a strong foundation in written communication, literature and general education, enabling transfer with junior standing to all Arizona public universities and virtually all others. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor.

ENGLISH

Associate of Arts, Special Requirements
Emphasis in English

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*		
Non-English Language 4th semester proficiency		16

Common Courses		Credits
British Literature I	ENG 220	3
British Literature II	ENG 221	3
Select two courses below:		
American Literature I	ENG 224	3
American Literature II	ENG 225	3
Major American Writers	ENG 265	3
Elective		1
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general elective credits.
**Elective courses must be transferable to all Arizona public universities.

English as a Second Language

Three complete programs are offered on the Douglas campus in English as a Second Language: the intensive daytime program (for students who plan to go into regular academic or vocational programs after completing ESL); the evening program, English for Professionals, (which focuses on communication skills for business or professional purposes); and the Summer Immersion Program.

ESL programs develop speaking, listening, reading and writing skills. The summer program is designed to help students develop their proficiency in English. Audio-visual materials, computer-assisted learning, and other learning opportunities including field trips, guest lectures, and cultural activities enhance classroom instruction. Through the International Club, Douglas campus students have the opportunity to participate in sightseeing, and cultural and social events. For further information about admissions to any of the programs, contact the Admissions Office.

The Workplace English Certificate program provides students with communicative competence in English, through practical application of frequently used technical workplace language, preparing them for employment or advancement in a work environment in which English is essential.

WORKPLACE ENGLISH
Certificate

Core Courses		Credits
Workplace English I	ESL 001	3
taken concurrently with	COM/ESL 091	1
Workplace English II	ESL 002	3
taken concurrently with	ENG/GTC 092	1
Workplace English III	ESL 003	3
taken concurrently with	HUM/BUS 093	1
Workplace English IV	ESL 004	3
taken concurrently with	ENG/SPA 094	1
Cultural Values in the Borderlands Workplace	HUM 167*	3
Field Experience	CED 224*	1-6
TOTAL REQUIREMENTS		**22**

*Taught bilingually in a cross-cultural setting

Exercise Science, Health and Physical Education, Recreation and Wellness (HPE)

Cochise College offers a wide range of activity, health, recreation, and wellness classes for students of all ages and fitness levels. Countywide you can find an activity that suits your interest in fitness, recreation, or sports. Cochise College offers courses for those students interested in a Physical Education teaching major or minor and/or Athletic Coaching at four-year institutions. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

EXERCISE SCIENCE, HEALTH AND PHYSICAL EDUCATION, RECREATION AND WELLNESS
Associate of Arts,
Special Requirements
Emphasis in Exercise Science, Health and Physical Education, Recreation and Wellness

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*		
Non-English Language 4th semester proficiency		16

Common Courses		Credits
Human Anatomy and Physiology I	BIO 201	4
Human Anatomy and Physiology II	BIO 202	4
Electives		5
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose education electives.
**Elective courses must be transferable to all Arizona public universities.

Family and Consumer Sciences

The Associate of Arts (SR) degree in Family and Consumer Sciences prepares students for transfer to university programs in Family Resources, Family Studies, and Human Development. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

FAMILY AND CONSUMER SCIENCES

Associate of Arts, Special Requirements
Emphasis in Family and Consumer Sciences

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement* Non-English Language 4th semester proficiency		16

Common Courses		Credits
Marriage and the Family	SOC 210	3
Childhood Development	FCS 184	3
Developmental Psychology	PSY 240	3
Nutrition	FON 101	3
Elective		1
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general elective credits.
**Elective courses must be transferable to all Arizona public universities.

FIRE SCIENCE TECHNOLOGY

Associate of Applied Science

General Education Requirements		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Written Communications and Reports	ENG 109	3
Mathematics	MAT 122 and above	3
Arts & Humanities or Social & Behavioral Sciences		3
General Education Electives		6
Physical Education		2
Reading Competency		
TOTAL GENERAL EDUCATION REQUIREMENTS		**23**
Must include: CIS 181, COM 102, and CPD 107.		

Core Curriculum		Credits
Fundamentals of Fire Prevention	FST 106	3
Fire Fighter I	FST 110	6
Fire Fighter II	FST 111	6
Fire Service Hydraulics	FST 120	3
Fire Apparatus & Equipment	FST 200	3
Rescue Practices	FST 220	3
Fire Fighting Tactics & Strategy	FST 240	3
Supervisory Training for Firefighters	FST 265	3
Hazardous Material Incident "First Responder"	AJS 266	3
Emergency Medical Technology	EMT 174	8
Field Experience in Fire Science Technology	FST 224	3
TOTAL CORE REQUIREMENTS		**44**
TOTAL DEGREE REQUIREMENTS		**67**

FIRE SCIENCE TECHNOLOGY

Certificate

Fire Fighter Level I

Core Courses		Credits
Hazardous Material Incident "First Responder"	AJS 266	3
Introduction to Fire Science	FST 101	3
Fundamentals of Fire Prevention	FST 106	3
Fire Fighter I	FST 110	6
Emergency Medical Technology	EMT 174	8
Field Experience in Fire Science Technology	FST 224	3
Public Safety Communications and Special Topics in Fire Science (National Fire Academy/ Field Courses)*	FST 193	2
or Special Topics in Fire Science (National Fire Academy/ Field Courses)*	FST 193	5
TOTAL REQUIREMENTS		**36**

*Or coursework from the Fire Science Technology AAS degree General Education Requirements.

Fire Fighter Level II

Core Courses	Credits	
Fire Fighter II	FST 111	6
Fire Service Hydraulics	FST 120	3
Special Topics in Fire Science (National Fire Academy/ Field Courses)*	FST 193	3
Fire Apparatus & Equipment	FST 200	3
Rescue Practices	FST 220	3
Field Experience in Fire Science Technology	FST 224	3
Fire Fighting Tactics and Strategy	FST 240	3
Fire Investigation	FST 260	3
Supervisory Training for Fire Fighters	FST 265	3
TOTAL REQUIREMENTS		**30**

*Or coursework from the Fire Science Technology AAS degree General Education Requirements.

Geography

The Associate of Arts (SR) degree in Geography prepares students for transfer to university programs in Public Planning, Regional Development, Applied Geography, and Geography. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

GEOGRAPHY

Associate of Arts
Special Requirements
Emphasis in Geography

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*		
Non-English Language 4th semester proficiency		16

Common Courses		Credits
Physical Geography	GEO 101	4
Cultural Geography	GEO 102	3
World Regional Geography	GEO 121	3
Electives		3
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement may choose general education elective.
**Elective courses must be transferable to all Arizona public universities.

History

The Associates of Arts degree in History combines a strong theoretical foundation in history with the necessary general education courses needed for transfer with junior standing to all Arizona universities and to virtually all others. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College advisor. In addition to preparing students for a teaching career, history provides an excellent background for careers in education, law, business, social work and government.

HISTORY

Associate of Arts, Special Requirements
Emphasis in History

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-4
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*		
Non-English Language 4th semester proficiency		16
Core Curriculum		**Credits**
History of the United States 1607-1877	HIS 110	3
History of the United States Since 1877	HIS 111	3
Survey of Western Civilization I	HIS 140	3
Survey of Western Civilization II	HIS 141	3
Elective		1
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement may choose general education elective.
**Elective courses must be transferable to all Arizona public universities.

Hospitality

The Associate of Applied Science degree in Hospitality Administration combines a firm foundation for employment in hotel administration with general education for students who plan to continue their studies at a university. This degree program has been completely articulated with Northern Arizona University.

The Certificate in Hospitality Administration provides grounding in business and in the fundamental principles involved in hotel and restaurant operations. The certificate is intended for those students planning to go directly to work and for those who want to prepare themselves for career advancement.

HOSPITALITY ADMINISTRATION
Associate of Applied Science

General Education Requirements		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-4
Laboratory Science		8
Arts & Humanities or Social & Behavioral Sciences		6
Foreign Language (Second semester proficiency)		8
Physical Education		2
Reading Competency		
TOTAL GENERAL EDUCATION REQUIREMENTS		**33-34**
Must include: GEO 102, 104 or 105, and HUM 205 or 206, or JRN 101.		

Core Curriculum		**Credits**
Introduction to the Hospitality Industry	HAD 100	3
Introduction to Property Management	HAD 120	3
Guest Services Management	HAD 210	3
Hospitality Law	HAD 235	3
Hospitality Financial Management	HAD 250	3
Hospitality Automation	HAD 270	3
Financial Accounting	BUS 201	3
Business Statistics	BUS 219	3
Principles of Macroeconomics	ECN 201	3
Principles of Microeconomics	ECN 202	3
Computer Applications	CIS 181	3
TOTAL CORE REQUIREMENTS		**33**
TOTAL DEGREE REQUIREMENTS		**66-67**

Recommended Electives:		**Credits**
Field Experience in Hospitality Administration	HAD 224	1-6
Commercial Food Preparation Theory	HAD 240	3
Advanced Commercial Food Preparation & Lab	HAD 241	4

HOSPITALITY ADMINISTRATION
Certificate

Core Courses		Credits
Introduction to the Hospitality Industry	HAD 100	3
Introduction to Property Management	HAD 120	3
Guest Services Management	HAD 210	3
Field Experience	HAD 224	1-6
Hospitality Automation	HAD 270	3
Composition	ENG 101	3
Business Mathematics	BUS 104	3
Financial Accounting	BUS 201	3
Principles of Microeconomics	ECN 202	3
Computer Applications	CIS 181	3
TOTAL REQUIREMENTS		**28-33**

Recommended Electives		Credits
Commercial Food Preparation Theory	HAD 240	3
Advanced Commercial Food Preparation and Lab	HAD 241	4

Humanities

Humanities majors are encouraged to complete the Associate of Arts, General Requirements. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

International Communications

The International Communications Certificate is a program of study to prepare students in the use of Spanish and English for business purposes. This certificate develops culturally appropriate problem-solving and planning skills in both languages, and utilizes accurate and effective communication in the cultures of both the United States and Mexico. Course content is geared to the development of practical, employment-related language and cultural proficiencies.

INTERNATIONAL COMMUNICATIONS
Certificate

General Education Requirements:
Completion of the following courses with a grade of C or better or equivalent proficiency demonstrated by placement tests: ENG 101/107, SPA 202, BUS 104 or MAT 072, OAD 103, and RDG 021.

Core Courses		Credits
Humanities in Contemporary Life	HUM 101	
OR		
The Modern World	HUM 207	3
Heritage from Mexico	HUM 104	3
Cultural Values in the Borderlands Workplace	HUM 167	3
Spanish Business Communications	SPA 267	3
Business Communications	ENG/BUS/ OAD 167	3
Effective Messages	LIN 180	
OR		
Fundamentals of Translation & Interpretation	SPA 290	3
Word Processing (or more advanced)	OAD 213	3
TOTAL REQUIREMENTS		**21**

Journalism and Media Arts

The Associate of Arts (SR) degree in Journalism and Media Arts is designed to prepare students to transfer with junior standing to a university, where they can continue their studies in the field. It also provides students with the opportunity for practical experience, including contribution to and publication in a newspaper. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

JOURNALISM AND MEDIA ARTS

Associate of Arts, Special Requirements
Emphasis in Journalism and Media Arts

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*	
Non-English Language 4th semester proficiency	16

Core Curriculum		Credits
Introduction to Mass Communications	JRN 101	3
Writing for Publications	JRN 102	3
Public Speaking	COM 110	3
Electives		4
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENT		**64**

*Students testing out of this requirement may choose elective credits.
**Elective courses must be transferable to all Arizona public universities.

MEDIA COMMUNICATIONS

Associate of Applied Science

Prerequisite: Permission of program advisor and the following proficiencies: OAD 101 and 213 or equivalent proficiency in word processing, ENG 100 with grade of C or better or equivalent proficiency, COM 100 with grade of C or better or equivalent proficiency.

General Education Requirements		Credits
Composition	ENG 101	3
Written Communications & Reports	ENG 109	3
Mathematics	MAT 122 or BUS 104 and above	3
Arts & Humanities or Social & Behavioral Sciences		3
General Education Electives		22
Reading Competency		
TOTAL GENERAL EDUCATION REQUIREMENTS		**34**

Must include: COM 102, COM 110, ECN 201, GEO 101, HIS 142 or HUM 207, HUM 101, and PHI 130 or BUS 150.

Core Curriculum		Credits
Introduction to Mass Communication	MED/JRN 101	3
Writing for Publications	MED/JRN 102	3
Student Newspaper	MED/JRN 201	3
Introduction to Desktop Publishing	MED/JRN 207 or CIS 285	3
Advanced Desktop Publishing	CIS 286	3
Field Experience	JRN 224	3
Literary Magazine Productions	JRN 257	3
Electives*		9
TOTAL CORE REQUIREMENTS		**30**
TOTAL DEGREE REQUIREMENTS		**64**

*Electives in ART, CIS, COM, ELT, MED, as agreed upon with program advisor, to complete a minimum of 64 Credits for the AAS degree. Higher-level classes will be substituted for students who have demonstrated proficiency in specific areas. Tech Prep students should consult with the Program Advisor about their placement.

PRINT MEDIA ARTS

Certificate

Prerequisite: Permission of program advisor. Students must demonstrate essential proficiencies in English (both writing and speaking), computer keyboarding and mathematics fulfilling the following requirements: ENG 101, BUS 104, OAD 101, OAD 213, and COM 102 (placement/testing available to demonstrate proficiency).

Core Courses		Credits
Introduction to Mass Communications	MED/JRN 101	3
Introduction to Desktop Publishing	MED/JRN 207/ CIS 285	3
Computer Illustration and Design	MED 209	3
Writing for Publications	JRN 102	3
Elective		3
Field Experience	JRN 224	3
TOTAL REQUIREMENTS		**33**

News Reporting, JRN 103, recommended. Those interested in graphic design are encouraged to take ART 103 and ART 265.

Language

The Associate of Arts (SR) in Language is designed to provide students with the linguistic foundation in written and spoken language and the lower-division general education coursework necessary for seamless transfer with junior standing to all Arizona universities and virtually all others. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor. See Spanish Immersion Program (summer) and Workplace Spanish for language certificate offerings.

LANGUAGE

Associate of Arts
Special Requirements
Emphasis in Language

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*	
Non-English Language 4th semester proficiency	16

Common Courses		Credits
Introduction to the English Language	ENG 255	
OR		
Introduction to Linguistics	LIN 101	3
Electives		10
OR		
Recommended Courses for Spanish Majors - Choose 3:		
Introduction to Spanish Literature I	SPA 220	3
Introduction to Spanish Literature II	SPA 221	3
Introduction to Mexican Literature I	SPA 224	3
Introduction to Mexican Literature II	SPA 225	3
Intermediate Spanish Conversation and Composition	SPA 275	3
Intermediate Conversation and Composition	SPA 276	3
Elective		1
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general education electives.
**Elective courses must be transferable to all Arizona public universities.

Spanish Immersion Program (Summer)

The college offers a Summer Spanish Immersion Program that provides intensive, daylong instruction to non-native speakers. The program is designed to improve basic listening and speaking facility in the Spanish language. Students receive four or eight credits of transferable credit (equivalent to one or two semesters of first year Spanish) upon successful completion of the program.

Workplace Spanish

The Workplace Spanish certificate program provides students with communicative competence in Spanish, through practical application of frequently used technical workplace language in the workplace, preparing them for employment or advancement in a work environment in which proficiency in Spanish is essential.

WORKPLACE SPANISH
Certificate

Prerequisite: Permission of program adviser and demonstrated proficiency in word processing.

Students will earn the certificate by completing the following courses with a grade of C or better.

Core Courses		**Credits**
Elementary Spanish	SPA 101	4
taken concurrently with	SPA 189 and/ or SPA 190	1-2
Elementary Spanish	SPA 102	4
taken concurrently with	SPA 191	1
Intermediate Spanish	SPA 201	4
taken concurrently with	SPA 283	1
Intermediate Spanish	SPA 202	4
taken concurrently with	SPA 284	1
The following two capstone courses are taught bilingually in a cross-cultural setting.		
Cultural Values in the Borderlands Workplace	HUM 167	3
Field Experience	CED 224	3
TOTAL REQUIREMENTS		**26-27**

Manufacturing Engineering

The Associate of General Studies degree in Manufacturing Engineering is intended to prepare students for employment in the field of Industrial Manufacturing. The manufacturing and machining trades offer excellent employment opportunities.

MANUFACTURING ENGINEERING
Associate of General Studies

General Education Requirements		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 220 or higher	3-5
Laboratory Science	PHY 230/231	8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

TOTAL GENERAL EDUCATION REQUIREMENTS		**35**
Common Courses		**Credits**
Computer-Aided Drafting	DFT 150	3
Engineering Design	DFT 241	4
Computer Aided Drafting II	DFT 250	3
Manufacturing Materials & Processes I	GTC 105	3
Engineering Materials & Processes	GTC 206	4
Manufacturing Processes	GTC 231	4
College Algebra	MAT 151	4
Welding Survey	WLD 202	4
TOTAL COMMON COURSES		**29**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement may choose general education elective credit.

**Elective courses must be transferable to all Arizona public universities.

MANUFACTURING ENGINEERING

Associate of Applied Science

General Education Requirements		Credits
Composition	ENG 101	3
OR		
Applied Technical Writing	ENG 179	
English Composition	ENG 102	3
OR		
Advanced Applied Technical Writing	ENG 279	
Mathematics	MAT 122 or higher	3-5
Arts/Humanities/Social and Behavioral Sciences		3
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**18**

Common Courses		Credits
Computer-Aided Drafting	DFT 150	3
Engineering Design	DFT 241	4
Computer-Aided Drafting II	DFT 250	3
Manufacturing Materials & Processes I	GTC 105	3
Engineering Materials & Processes	GTC 206	4
Manufacturing Processes	GTC 231	4
Welding Survey	WLD 202	4
Electives		21
TOTAL COMMON COURSES		**46**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement may choose general education elective credit.

Mathematics

The Associate of Arts (SR) degree in Mathematics is designed for students who plan to transfer to a four-year college or university to pursue a degree in mathematics. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

MATHEMATICS

Associate of Arts, Special Requirements Emphasis in Mathematics

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*	
Non-English Language 4th semester proficiency	16

Common Courses (select 13 credits)		Credits
Calculus I	MAT 220	5
Calculus II	MAT 231	4
Calculus III	MAT 241	4
Differential Equations	MAT 262	3
Electives		2
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general education electives.
**Elective courses must be transferable to all Arizona public universities.

Motor Transport Technology

The Motor Transport Technology Certificate prepares students for direct employment in the trucking industry. Students earn a Commercial Driver's License (CDL), and complete coursework in handling hazardous materials, loading freight, and preparing required documents. They also acquire extensive driving experience under a variety of conditions. Professional truckers are in high demand, with many rewarding career opportunities.

MOTOR TRANSPORT TECHNOLOGY
Certificate

Core Courses		Credits
Motor Transport Basic	MTT 101	4
Over the Road Operations	MTT 102	5
Vehicle Maintenance & Inspection	MTT 103	1.5
Freight & Truck Operations	MTT 104	5.5
TOTAL REQUIREMENTS		**16**

Music

The Associate of Arts (SR) degree in Music is designed for students who plan to transfer to a four-year college or university to pursue a degree in music, interdisciplinary arts and performance, or related areas of study. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

MUSIC
Associate of Arts, Special Requirements
Emphasis in Music

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*
Non-English Language
4th semester proficiency 16

Common Courses		Credits
Music Theory	MUS 132	3
Music Theory	MUS 133	3
Music Theory	MUS 232	3
Music Theory	MUS 233	3
Elective		1
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to *all* Arizona public universities.

NOTE: The music department recommends MUS 132 be taken concurrently with MUS 134 and MUS 133 be taken concurrently with MUS 135.

Nursing

Associate Degree Nurse
Associate of Applied Science

General Education Requirements
See AAS degree General Education minimum requirements in the Degrees and Programs section.

Minimum General Education Credit Hours 18

Also offered as part of a ladder program:
Nursing Assistant - Certificate
Practical Nurse - Certificate

Cochise College offers a nursing program that is accredited by the National League of Nursing Accrediting Commission (NLNAC) and certified by the Arizona State Board of Nursing. The program prepares men and women to take the National Certification Licensing Exam for Registered Nurse (NCLEX-RN) and/or Licensed Practical Nurse (NCLEX-PN).

Entry into the Nursing Program requires prior admission. Advanced placement for Licensed Practical Nurses or for those with prior nursing education is available (certain requirements must be met). For admission procedures to the Nursing Program, contact the Nursing Department, (520) 364-0216.

The nursing program prepares men and women to become Certified Nursing Assistants (CNA), Licensed Practical Nurses (LPN), and/or Registered Nurses (RN). Since nursing is both an art and a science, students learn therapeutic communication skills and critical thinking skills, as well as technical nursing skills. Collaborative teaching/learning takes place in the classroom and learning laboratory, and in clinical settings such as hospitals, long term care, assistive living and rehabilitation facilities, clinics, and community settings and agencies.

The program is based on the ladder concept that permits students to enter or exit from the program based on their specific needs, space availability, and time limitations.

CNA. The first semester student learns to care for sub-acutely ill patients and to work as a member of the health care team. A student who successfully completes the first semester may take the Arizona State Certification Test to become a Certified Nursing Assistant (CNA).

LPN. The second semester student learns to care for acutely ill patients under the supervision of a registered nurse. Practical nurses give basic nursing care and assist other members of the health-care team. A student who successfully completes the first and second semesters may take the National Certification Licensing Exam as a practical nurse - NCLEX-PN.

RN (Associate Degree Nurse). The third and fourth semester student learns to give nursing care to individuals with common health problems. Registered nurses provide care to individuals with common health problems. They function as members of the health care team in hospitals and community settings. A student who successfully completes the third and fourth semesters may take the National Certification Licensing Exam as a registered nurse - NCLEX-RN.

FRESHMAN

First Semester		**Credits**
Human Anatomy & Physiology I	BIO 201	4
Composition	ENG 101	3
Medication Math	NUR 121	1
Nursing I	NUR 122	8
		16
Second Semester		
Human Anatomy & Physiology II	BIO 202	4
Introduction to Psychology	PSY 101	3
Nursing II	NUR 123	10
		17

Student is eligible to take the National Certification Licensing Exam to become licensed by the State Board of Nursing as a Practical Nurse.

SOPHOMORE

Third Semester		**Credits**
Microbiology	BIO 205	4
Society & Culture	ANT 102	3
OR		
Introduction to Sociology	SOC 101	
Controlled Elective		3
Nursing III	NUR 232	9
		19

Fourth Semester		
Fundamental Chemistry	CHM 130	4
or General Chemistry I	CHM 151	
English Composition	ENG 102	3
Nursing IV	NUR 233	9
		16
TOTAL DEGREE REQUIREMENTS		**68**

The student is eligible to apply to take the National Certification Licensing Exam to become licensed by the State Board of Nursing as a Registered Nurse.

Acceptance into the Nursing Program does not guarantee successful completion of the program. Attendance at classes and clinicals, which means travel to both campuses and clinical locations throughout Cochise County is required. Experience in multiple clinical agencies is essential for completion of the program. Any possible legal impediment to licensure must be made known to the Nursing Department prior to assignment to a clinical agency. Acceptance into the program and/or successful completion of the program does not guarantee a certificate or license will be granted by the Arizona State Board of Nursing or any other State Board of Nursing at the Nursing Assistant, Practical Nurse, or Registered Nurse levels.

Community Health Advisor

The certificate course of study is designed to prepare the student for direct employment as a Community Health Advisor. CHA's serve as links between rural medically underserved communities and the health care system. They provide outreach health prevention, advocacy, education and referral services within prescribed neighborhoods. Students must be available to complete 320 clock hours for the field work course. Placements are generally made within the student's home community. Admission is open to any interested high school or GED graduate or students 18 years or age or older. Must complete health screening and proof of immunization. Students are encouraged to meet with a program advisor before enrolling in the CHA course.

COMMUNITY HEALTH ADVISOR
Certificate

Core Courses		**Credits**
Introduction to Community Health Advisor*	HLT 120	3
First Aid and CPR*	HPE 188	1
Community Health Advisor Practicum	HLT 121	6
Introduction to Social Work	SOC 207	3
Communication Elective (to be approved by an advisor) Reading, Writing, Speech, Computer Skills, English as a Second Language, Conversational Spanish Or Border Health Issues (HLT 219)		3
TOTAL REQUIREMENTS		**16**

*HLT 120 and HPE 188 are prerequisites to HLT 121.

Paramedicine

The Associate of Applied Science degree in Paramedicine prepares students to practice pre-hospital emergency medicine for fire departments, ambulance services, and hospital emergency units. This program offers coursework to help prepare students for nursing programs.

The program, certified by the Arizona Department of Health Services, Division of Emergency Medical Services, prepares individuals for a vocational career as a nationally registered paramedic. Graduates are eligible to work in fire and rescue operations, ambulance services, and hospital settings.

The Cochise College Paramedicine Certificate is awarded only to those students who have successfully completed the required Cochise College coursework and who have been certified as Paramedics through the Arizona Department of Health Services.

Students wishing certification also must complete the state-mandated hours of clinical experience in the following clinical areas: Hospital Emergency Room, Intensive Care, Pediatrics, Labor and Delivery and Newborn Nursery. Travel to the approved clinical sites is required of the student. In addition, the student must complete 150 hours of ambulance "ride time" under the supervision of a qualified preceptor.

Prerequisite:

- Minimum of one year working with ambulance/fire or rescue organizations as an EMT.
- Ability to read at the 10th grade level or above.
- Good physical condition.
- Negative TB test or chest x-ray within six months of class start date.
- Immunity against Rubella and Rubeola as proven by immunization record or titer.

Applicant Screening Process:

Prior to enrollment in the Paramedicine Certificate Program, all students must pass written and practical exams as outlined by the Arizona Department of Health/Department of Emergency Medical Services (ADHS/EMS). A required oral interview is also used in determining admission to the program. The testing and interview process will normally take place the month before class start date.

PARAMEDICINE
Associate of Applied Science Degree

General Education Requirements		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Introduction to Psychology	PSY 101	3
Introduction to Sociology	SOC 101	3
Human Anatomy & Physiology I	BIO 201	4
Human Anatomy & Physiology II	BIO 202	4
Chemistry	CHM 130 or CHM 151	4
Microbiology	BIO 205	4
Electives		3
TOTAL GENERAL EDUCATION REQUIREMENTS		**31**

Core Courses		Credits
Emergency Medical Technician	EMT 174	8

NOTE: Current Arizona Department of Health Services require that an individual must practice as an EMT for one year prior to entry into the upper level EMT-Paramedicine courses.

Paramedicine I	EMT 201	12
Paramedicine II	EMT 202	14
Paramedicine III	EMT 203	2
TOTAL CORE COURSES		**36**
TOTAL DEGREE REQUIREMENTS		**67**

PARAMEDICINE
Certificate

Core Courses		Credits
Paramedicine I	EMT 201	12
Paramedicine II	EMT 202	14
Paramedicine III	EMT 203	2
TOTAL REQUIREMENTS		**28**

Physics, Atmospheric Sciences and Astronomy

The Associate of Science (SR) degree in Physics, Atmospher c Sciences, and Astronomy provides the first two years of coursework for students transferring in these areas to Arizona universities. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

PHYSICS, ATMOSPHERIC SCIENCES, AND ASTRONOMY

Associate of Science,
Special Requirements
Emphasis in Physics, Atmospheric Sciences and Astronomy

General Education Requirements (AGEC-S)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 220 or higher	3-5
Laboratory Science	CHM 151/152 or PHY 230/231	8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Common Courses		Credits
Laboratory Science		8
Electives		21
Elective courses should be chosen after consulting the appropriate transfer guide.		
Suggested Courses	PHY 230/231 CHM 151/152	
TOTAL COMMON COURSES		**29**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general education elective credit.
**Elective courses must be transferable to all Arizona public universities.

Political Science

The Associate of Arts (GR) degree in Political Science program has full transferability to all Arizona public universities and provides the first two years of a four-year program in political science. Following completion of a four-year degree, students may enter government service or pursue a graduate degree in political science, law, public administration and management, international business, secondary education or similar fields of study. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

POLITICAL SCIENCE

Associate of Arts, General Requirements
Emphasis in Political Science

General Education Requirements (AGEC-A)		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*	
Non-English Language	
4th semester proficiency	16

Common Courses		**Credits**
American National Government	POS 110	3
World Politics	POS 230	3
Comparative Politics	POS 240	3
Electives		4
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

Professional Administrative Assistant

The Associate of Applied Science degree in Professional Administrative Assistant prepares students for direct employment as administrative assistants and executive secretaries. The program provides graduates with a broad foundation of knowledge and skills needed for employment in business, industry, government, law and medical offices, and public and private agencies.

The Computerized Office Applications Certificate prepares students to utilize computer applications software in today's technologically oriented workplace. The courses provide skill training in data entry, operating systems, word processing, spreadsheets, database, and presentation software.

The Office Assistant Certificate adds to the skill level of those students wishing to work in a modern office. Students learn to develop interpersonal skills, producing advanced computer applications, manage records, and use essential accounting procedures.

The Paralegal Studies Certificate prepares students to work in law, corporate, and government offices, as well as to freelance as a legal assistant. The emphasis is on a basic knowledge of substantive and procedural law legal terminology, and legal research.

The Receptionist Certificate prepares students to perform entry-level tasks involving telephone, customer service, word processing, document preparation, business math, and English skills.

The Medical Transcriptionist Certificate prepares students for entry-level positions as a Medical Transcriptionist.

PROFESSIONAL ADMINISTRATIVE ASSISTANT

Associate of Applied Science

AREAS OF SPECIALIZATION: Consult with a division advisor before starting this program or selecting a specialization.

Executive Secretarial, Microcomputer Specialist, Accounting Assistant, Management Support, General Administration, Paralegal Studies, or Medical Transcriptionist.

Program Prerequisites: Computer Keyboarding or demonstrated keyboarding skill, basic reading, math and writing proficiency.

Challenge Note: Up to 30 credits of coursework are available for challenge for students with work experience and/or prior non-transferable training. See a division advisor for further information.

Graduation Requirement: To satisfy graduation requirements for this degree, all courses require a grade of C or better.

General Education Requirements		**Credits**
Business Mathematics	OAD/BUS 104	3
Business English	OAD 111	3
Applied Technical Writing	CIS/ENG 179	
OR		
Business Communications	OAD/BUS 167	3
Leadership and Supervision	BUS 127	
OR		
Introduction to Business Ethics	BUS 150	3
Introduction to Accounting	OAD/BUS 146	3
Principles of Office Administration	OAD 207	3
Business Speech Communications	OAD 209	3
Technical Presentations	OAD 268	3
TOTAL GENERAL EDUCATION REQUIREMENTS		**24**

Core Course Requirements		**Credits**
Learning to Use the Personal Computer	CIS 116	3

Document Preparation Courses (Two)*: Elementary		6
Document Preparation	OAD 102	
Intermediate		
Document Preparation	OAD 103	
Advanced		
Document Preparation	OAD 201	
Professional		
Document Preparation	OAD 202	

*Course level determined by division

Your Professional Image	OAD 150	3
Records Management	OAD 206	3
Automated Office Procedures (Legal, Medical or Executive)	OAD 210	3
Automated Office Practice (Legal, Medical or Executive)	OAD 211	3
Terminology and Transcription (Legal, Medical or Executive)	OAD 212	3
Word Processing	OAD 213	3
Advanced Word Processing	OAD 214	3
Computerized Office Management	OAD 216	3
TOTAL REQUIREMENTS		**33**

Professional Block (10-15 Credits)*

Select one area of the following specializations: Executive Secretarial, Microcomputer Specialist, Accounting Assistant, Management Support, General Administration, Paralegal Studies or Medical Transcriptionist.

Students are encouraged to include microcomputer courses, notetaking and Cooperative Education/Work Experience/Student Organizations (PBL/AFCEA) Experience (1-6 Credits) in their Professional Block.

Options for Executive Secretarial*		**Credits**
Introduction to Business Ethics	BUS 150	3
Current Office Applications	OAD 193	1
Shorthand I (required)	OAD 204	3
Shorthand II (required)	OAD 205	3
Advanced Computerized Office Management	OAD 217	3
Field Experience in Office Technology	OAD 224	1-6
Desktop Publishing	CIS 285	3
Advanced Desktop Publishing	CIS 286	3
Advanced Current Office Applications	OAD 293	1
Other Approved Courses	OAD/CIS	1-6

*Legal Secretarial - Business Law or Legal Environment and Legal Field Experience are required. Business Ethics is suggested. Shorthand courses are optional.

*Medical Secretarial - Advanced Terminology/Transcription and Medical Field Experience are required. Business Ethics, Ward Clerk, Anatomy & Physiology and Nursing Assistant courses are recommended. Shorthand courses are optional.

Options for Microcomputer Specialist		**Credits**
Introduction to Data Processing	CIS 120	3
Introduction to Operating Systems	CIS 140	3
Data Base Management	CIS 250	4
Advanced Computer Applications	CIS 281	3
Desktop Publishing	CIS 285	3
Advanced Desktop Publishing	CIS 286	3
Field Experience	CIS 294	1-6
Current Office Applications	OAD 193	1
Advanced Computerized Office Management	OAD 217	3
Field Experience in Office Technology	OAD 224	1-6
Advanced Current Office Applications	OAD 293	1
Other Approved CIS/OAD courses		

Options for Accounting Assistant		Credits
Financial Accounting	BUS 201	3
Managerial Accounting	BUS 202	3
PBL Experience	BUS 224	1-6
Advanced Computerized Accounting	CIS 280	3
Advanced Computer Applications	CIS 281	3
Computerized Accounting	OAD 180	3
Current Office Applications	OAD 193	1
Advanced Computerized Office Management	OAD 217	3
Field Experience	OAD 224	1-6
Advanced Current Office Applications	OAD 293	1
Other Approved Accounting Courses		

Options for Management Support		Credits
Human Resource Management	BUS 123	3
Leadership and Supervision	BUS 127	3
Principles of Management	BUS 143	3
Field Experience	BUS 224	1-6
PBL/AFCEA Experience	BUS 224	1-6
Business Law	BUS 231	3
Small Business Management	BUS 283	3
Advanced Computer Applications	CIS 281	3
Current Office Applications	OAD 193	1
Advanced Computerized Office Management	OAD 217	3
Other Approved Management Courses		

Options for Paralegal Studies	Credits	
Introduction to Paralegalism	OAD 220	3
Legal Assistant I	OAD 221	3
Legal Assistant II	OAD 222	3
Basic Legal Research	OAD 223	3
Field Experience (Legal)	OAD 224	3-6

Options for Medical Transcription		Credits
Introduction to Human Anatomy & Physiology	BIO 160	4
Advanced Medical Transcription/ Terminology	OAD 215	3
Field Experience (Medical)	OAD 224	3-6

Options for General Administration	
Courses approved by divisional advisor to equal	10-15
TOTAL PROFESSIONAL BLOCK	**10-15**
TOTAL DEGREE REQUIREMENTS	**67-73**

COMPUTERIZED OFFICE APPLICATIONS
Certificate

Prerequisites: Basic math, reading and writing proficiency (determined by placement tests). Challenge Note: Up to 30 Credits of coursework are available for challenge by students with work experience and/or prior non-transferable training. See a division advisor for further information.

Core Courses		**Credits**
Learning to Use the Personal Computer	CIS 116 OR OAD 116	3
Introduction to Operating Systems	CIS 140	3
Computer Keyboarding	OAD 101	3
Word Processing	OAD 213	3
Advanced Word Processing	OAD 214	3
Computerized Office Management	OAD 216	3
Advanced Computerized Office Management	OAD 217	3
Technical Presentations	OAD 268	3
Division Approved Electives		**6**
Computer Applications	CIS 181	3
Current Computer Applications OR Current/Advanced Current Office Applications	CIS 193 OAD 193/293	1-9
Advanced Computer Applications	CIS 281	3
Desktop Publishing	CIS 285	3
Advanced Desktop Publishing	CIS 286	3
Your Professional Image	OAD 150	3
Records Management	OAD 206	3
Document Preparation Courses		**3**
Division Placement Required: Elementary Document Preparation	OAD 102	3
Intermediate Document Preparation	OAD 103	3
Advanced Document Preparation	OAD 201	3
Professional Document Preparation	OAD 202	3
TOTAL REQUIREMENTS		**30**

MEDICAL TRANSCRIPTIONIST
Certificate

Core Courses		**Credits**
Applied Technical Writing	CIS/ENG 179	3
Business English	OAD 111	3
Advanced or Professional Document Preparation	OAD 201 or 202	3
Transcription/Terminology	OAD 212	3
Professional Courses:		
Automated Office Practice (Medical)	OAD 211	3
Advanced Medical Transcription/ Terminology	OAD 215	3
Field Experience	OAD 224	3-6
Division Approved Medical Electives		3
TOTAL REQUIREMENTS		**24-27**

Certificate Competency Statements:
The student outcome competencies (college outcomes and program outcomes) are shown in matrix form for all OAD courses in this certificate and are filed in the Division Office. Course student outcomes are included in each course outline. Performance measures are included in each course procedure sheet.

OFFICE ASSISTANT
Certificate

Certificate Prerequisites: Computer Keyboarding, OAD 101, or demonstrated keyboarding skill, basic math, reading, and writing proficiency.

Challenge Note: Up to 30 credits of coursework are available for challenge for students with work experience and/or prior non-transferable training. See a division advisor for further information

Applied Academic Requirements	**Credits**
Applied Technical Writing CIS 179	3
OR	
Written Communications and Reports ENG 109	
Business English OAD 111	3
Business Mathematics OAD/BUS 104	3
Introduction to Accounting OAD/BUS 146	3
Business Communications OAD/BUS 167	3
Business Speech Communications OAD 209	3
Total Applied Academic Credits	**18**

Core Course Requirements	**Credits**
Learning to Use the Personal Computer CIS 116	3
Document Preparation Courses (Two)*	6
Elementary Document Preparation OAD 102	
Intermediate Document Preparation OAD 103	
Advanced Document Preparation OAD 201	
Professional Document Preparation OAD 202	
*Course level determined by division	
Word Processing OAD 213 or Advanced Word Processing OAD 214	3
Total Basic Core Curriculum	**12**

Professional Block	**Credits**
Your Professional Image OAD 150	3
Records Management OAD 206	3
Automated Office Procedures OAD 210	3
Automated Office Practice OAD 211	3
Total Professional Block	**12**
TOTAL REQUIREMENTS	**42**

PARALEGAL STUDIES
Certificate

Preparatory Block	**Credits**
Selection determined by Placement tests, division advisor consultation and evaluation of work experience.	
Reading, Writing basic courses	3-11
English Skills OAD 111, CIS 179, ENG 101 or better	3-6
Basic Math Skills OAD 104 or better	3
Word Processing Skills	3-6
Basic Document Preparation Skills	3-9
Basic Microcomputer Skills	3-6
Your Professional Image OAD 150	3
(21-31 Credits preparatory block, if needed)	

Challenge NOTE: Up to 30 credits of course work are available for challenge for students with work experience and/or prior non-transferable training. See a division advisor for further information.

Certificate Requirements: To satisfy completion requirements for this certificate, all courses require a grade of C or better. A comprehensive exam must be passed to complete this certificate.

Paralegal Studies Professional Courses	**Credits**
Intro to Paralegalism OAD 220	3
Legal Assistant I OAD 221	3
Legal Assistant II OAD 222	3
Basic Legal Research OAD 223	3
Division Approved Electives	6
Field Experience (Legal) OAD 224	6
Comprehensive Paralegal Studies Exam	
TOTAL REQUIREMENTS	**24**

RECEPTIONIST
Certificate

Preparatory Block		**Credits**
(Selection determined by Placement Tests)		
Reading, Writing, English, Math		3-11
Keyboarding or Document Preparation		3
Learning to Use the Personal Computer and Other First Semester Courses	CIS 116	3-9
Your Professional Image	OAD 150	3
Notetaking I	OAD M193	1
Notetaking II	OAD N193	1
Business Speech Communications	OAD 209	3

Core Courses		**Credits**
Elementary, Intermediate OR Advanced Document Preparation	OAD 102, 103 OR OAD 201	3
Business Mathematics	BUS/OAD 104	3
Applied Technical Writing	CIS/ENG 179	3
Business English	OAD 111	3
Learn to Use Microcomputers	OAD 116	3
Your Professional Image	OAD 150	3
Automated Office Procedures	OAD 210	3
Select one or more below Determined by student background and desired learning outcomes:		
Records Management	OAD 206	3
Business Speech Communications	OAD 209	3
Word Processing	OAD 213	3
Advanced Word Processing	OAD 214	3
TOTAL REQUIREMENTS		**33**

Psychology

The Associate of Arts (SR) degree in Psychology is designed for students who wish to pursue a baccalaureate degree in psychology at a university. University specialty areas include chemical/counseling, developmental, school/educational, forensic, social, industrial/organizational, sport, psychological and psychometry. Psychology coursework is beneficial for students interested in education, medicine, law, social work, business, or any of the human service fields especially mental health, nursing, child care and criminal justice. This degree does not directly lead to employment in psychology, and career opportunities often require a graduate degree. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

PSYCHOLOGY
Associate of Arts, Special Requirements
Emphasis in Psychology

General Education Requirements (AGEC-A)		**Credits**
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		1-3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirement*	
Non-English Language 4th semester proficiency	16

Common Courses		Credits
Introduction to Psychology	PSY 101	3
Social Psychology	PSY 210	3
Introduction to Psychological Research, Measurements and Statistics	PSY 250	3
Experimental Psychology	PSY 290	4
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

Social Work (Social Services)

The Associate of Arts (SR) degree in Social Work enables students to fulfill university lower-division requirements for baccalaureate degrees in Social Work, Human Services and related fields. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

The Associate of Applied Science degree in Social Services prepares students for entry-level positions in the social services. The Certificate improves basic skills for entry-level social services employment.

SOCIAL WORK

Associate of Arts,
Special Requirements
Emphasis in Social Work

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirements*
Non-English Language
4th Semester Proficiency 16

Common Courses (choose 13 credits)		Credits
Human Anatomy and Physiology I	BIO 201	4
Introduction to Macroeconomics	ECN 201	3
Introduction to Psychology	PSY 101	3
Developmental Psychology	PSY 240	3
Introduction to Psychological Research,Measurements and Statistics	PSY 250	3
Introduction to Philosophy	PHI 111	3
OR		
Ethics	PHI 130	3
American National Government	POS 110	3
Introduction to Social Work	SOC 207	3
Electives		1
TOTAL COMMON COURSES		**13**

NOTE: BIO 201, HIS 110, PSY 101, 240, PHI 111 can be taken in the AGEC. See an advisor for the best option.

TOTAL DEGREE REQUIREMENTS 64

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

SOCIAL SERVICES

Associate of Applied Science

General Education Requirements		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 122 and above	3
Arts & Humanities or Social & Behavioral Sciences		3
General Education Electives		6
Computer Literacy		
Reading Competency		
TOTAL GENERAL EDUCATION REQUIREMENTS		**18**

Core Curriculum		Credits
Principles of Macroeconomics	ECN 201	3
Principles of Microeconomics	ECN 202	3
Introduction to Philosophy	PHI 111	3
Introduction to Psychology	PSY 101	3
American National Government	POS 110	3
Introduction to Sociology	SOC 101	3
Ethnic Groups & Minorities	SOC 160	3
Social Problems	SOC 202	3
Introduction to Social Work	SOC 207	3
Field Experience in Social Services	SSV 224	1-8
Interpersonal Communications	SSV 270	3
Communications in Small Groups	SSV 271	3
Major Emphasis		15

Recommended Electives		Credits
Substantive Criminal Law	AJS 109	3
Psychology in Law Enforcement	AJS 254	3
Human Anatomy & Physiology I	BIO 201	4
History		3
Social Psychology	PSY 210	3
Developmental Psychology	PSY 240	3

Major Emphasis

The student can choose a major emphasis from one of the following:

Social Services in Corrections		Credits
Introduction to Administration of Justice	AJS 101	3
Correctional Institutions	AJS 111	3
Public Speaking	COM 110	3
Substance Abuse: Causes and Treatment	SSV 183	3
Determinants of Human Behavior	SSV 273	3
Electives		3

Guidance and Counseling		Credits
Personality and Adjustment	CPD 103	3
Challenge of Parenting	CPD 105	3
Career and Life Planning	CPD 121	3
Determinants of Human Behavior	SSV 273	3
Electives		3

Social Work		Credits
Personality Theories & Research	PSY 230	3
Marriage and the Family	SOC 210	3
Human Services Resources	SSV 272	3
Determinants of Human Behavior	SSV 273	3
Electives		3

Rehabilitation		Credits
Substance Abuse: Causes and Treatment	SSV 183	3
Loss, Grief, and Dying	SSV 210	3
Determinants of Human Behavior	SSV 273	3
Electives		6
TOTAL DEGREE REQUIREMENTS		**64-71**

SOCIAL SERVICES
Certificate

Core Courses		Credits
Composition	ENG 101	3
Introduction to Psychology	PSY 101	3
Introduction to Sociology	SOC 101	3
Social Problems	SOC 202	
OR		
Ethnic Groups & Minorities	SOC 160	
OR		
Society & Culture	ANT 102	3
Introduction to Social Work	SOC 207	3
15 Credits selected from one of the Social Services AAS Major Emphasis.		
TOTAL REQUIREMENTS		**30**

Sociology

The Associate of Arts (GR) degree program in Sociology has full transferability to all Arizona public universities and provides the first two years of a four-year program in sociology and human resources. To ensure seamless transfer, students must develop their specific program of study in close coordination with a Cochise College Advisor.

SOCIOLOGY
Associate of Arts, General Requirements
Emphasis in Sociology

General Education Requirements (AGEC-A)		Credits
Composition	ENG 101	3
English Composition	ENG 102	3
Mathematics	MAT 151 and above	3-5
Laboratory Science		8
Arts		3
Humanities		3
Social & Behavioral Sciences		6
Information Literacy*	CIS 116 or CIS 120	3
General Education Electives**		3
TOTAL GENERAL EDUCATION REQUIREMENTS		**35**

Six credits of Arts/Humanities/Social & Behavioral Sciences/General Education Electives must be Intensive Writing/Critical Inquiry Courses.

Language Requirements*		
Non-English Language 4th Semester Proficiency		16

Common Courses		Credits
Select 13 credits:		
Introduction to Sociology	SOC 101	3
Ethnic Groups and Minorities	SOC 160	3
Social Problems	SOC 202	3
Marriage and the Family	SOC 210	3
Women and Men in a Changing Society	SOC 212	3
Elective		1
TOTAL COMMON COURSES		**13**
TOTAL DEGREE REQUIREMENTS		**64**

*Students testing out of this requirement must choose general education elective credits.
**Elective courses must be transferable to all Arizona public universities.

Drug and Alcohol Studies

In order to obtain the state certification for drug and alcohol counseling, the student needs both coursework and field experience. Courses within this certificate program will provide the necessary coursework for state certification.

The Drug and Alcohol certificate program will consist of 13 courses listed below. Ten courses or 30 total credits will be required. The seven-core courses are mandatory, along with three of the elective courses.

DRUG AND ALCOHOL STUDIES
Certificate Program

Core Courses		Credits
Introduction to Psychology	PSY 101	3
Introduction to Sociology	SOC 101	3
Substance Abuse: Causes and Treatment	SSV 183	3
Prevention of Drug and Alcohol Abuse	SSV 221	3
Treatment and Rehabilitation for Drug & Alcohol Dependency	SSV 222	3
Psycho-Pharmacology	SSV 223	3
Substance Abuse and The Family	SSV 225	3
TOTAL CORE REQUIREMENTS		**21**

Electives		Credits
Select 9 credits from the following list of courses.		
Developmental Psychology	PSY 240	3
Social Problems	SOC 202	3
Introduction to Social Work	SOC 207	3
Interpersonal Communications	SOC 270	3
Communications in Small Groups	SSV 271	3
Determinants of Human Behavior	SSV 273	3
TOTAL REQUIREMENTS		**30**

NOTE: Courses require a grade of C or better to satisfy completion requirements for this certificate.

Teleservices Program

The Teleservices Certificate Program is a program of study designed to prepare the entry level teleservices employee with both the computer skills and the procedural knowledge necessary to fulfill the duties and responsibilities of the teleservices customer service representative.

Prerequisite(s): Sponsorship by a Teleservices Provider

TELESERVICES PROGRAM
Certificate

Core Courses		Credits
Work Experience in Cooperative Education	CED 224	3
Introduction to Teleservices	TLS 101	5
Teleservices Practicum	TLS 102	1
Customer Service in The Teleservice Industry	TLS 103	5
Teleservices Practicum II	TLS 104	1
TOTAL REQUIREMENTS		**15**

Welding Technology

The Associate of Applied Science degree program in Welding Technology is designed to prepare students to enter the workforce in almost any facet of the diverse field of Welding Technology. This program will fulfill the needs of everyone from the beginner to the experienced welder looking to upgrade their skills and certifications.

The Aerospace Thermal Fusion Certificate program is designed to prepare students seeking employment in the rapidly growing fields of aircraft and aerospace welding. New regulations mandated by the FAA have created strict certification requirements for welders in the aerospace, aircraft and missile industry. This program trains students to meet standards for employment.

WELDING TECHNOLOGY
Associate Of Applied Science

General Education Requirements		Credits
English	CIS/ENG 179	3
English	CIS/ENG 279	3
Mathematics	MAT 122 and above	3
Arts & Humanities or Social & Behavioral Sciences		3
General Education Electives		6
Computer Literacy		
Reading Competency		
TOTAL GENERAL EDUCATION REQUIREMENTS		**18**

Core Curriculum		Credits
Technical Graphics I	DFT 112	3
Technical Graphics II	DFT 113	3
Computer-Aided Drafting	DFT 150	3
Manufacturing Materials & Processes	GTC 105	3
Engineering Materials & Processes	GTC 206	4
Oxyacetylene Welding	WLD 105	3
Arc Welding	WLD 106	3
Welding Survey	WLD 202	4
Gas Metal Arc Welding	WLD 208	3
Gas Tungsten Arc Welding	WLD 209	3
Pipe and Plate Welding	WLD 210	3
Pipe Fitting & Welding	WLD 211	3
Welding Design	WLD 215	3
Pipe Layout and Fitting	WLD 217	3
Electives		3
TOTAL CORE REQUIREMENTS		**47**
TOTAL DEGREE REQUIREMENTS		**65**

WELDING TECHNOLOGY
Certificate

Core Courses		Credits
Technical Graphics I	DFT 112	3
Computer-Aided Drafting	DFT 150	3
Applied Technical Writing	ENG/CIS 179	3
Manufacturing Materials & Processes	GTC 105	3
Intermediate Algebra	MAT 122	3
Oxyacetylene Welding	WLD 105	3
Arc Welding	WLD 106	3
Gas Metal Arc Welding	WLD 208	3
Gas Tungsten Arc Welding	WLD 209	3
Pipe and Plate Welding	WLD 210	3
TOTAL REQUIREMENTS		**30**

AEROSPACE THERMAL FUSION
Certificate

Core Courses		Credits
Applied Technical Writing	ENG/CIS 179	3
Manufacturing Materials & Processes	GTC 105	3
Intermediate Algebra	MAT 122	3
Oxyacetylene Welding	WLD 105	3
Arc Welding	WLD 106	3
Blueprint Interpretation	WLD 203	3
Gas Tungsten Arc Welding	WLD 209	3
Advanced GTAW Soft Metals	WLD 218	3
Advanced GTAW Hard Metals	WLD 219	3
Advanced GTAW Exotic Metals	WLD 220	3
TOTAL REQUIREMENTS		**30**

ARIZONA DEPARTMENT OF CORRECTIONS

The following programs have been designed for the inmates of the Arizona Department of Corrections in Douglas:

Building Maintenance Certificate

A student who completes the Building Maintenance program will be qualified to patch and paint surfaces, to understand and perform electrical wiring, to build and repair walls, to make and read blueprints, and to use the blueprints to accurately estimate materials required.

BUILDING MAINTENANCE
Certificate

Core Courses		Credits
Painting: Exterior & Interior	GTC 121	3
Air Conditioning Maintenance	GTC 122	3
Electrical Maintenance and Repair	GTC 123	3
Carpentry Maintenance and Repair	GTC 124	3
Plumbing Maintenance and Repair	GTC 125	3
Maintenance Management	GTC 126	3
Blueprint Reading and Estimating	GTC 127	3
TOTAL REQUIREMENTS		**21**

Advanced Business Certificate

A student who completes the Advanced Business program will be qualified for an entry-level position in the business world. The student will learn word processing, spreadsheet, and database computer skills; how to find and compete for a job in the field of business; how to write and speak like business people; and a number of other skills to enhance success in business.

ADVANCED BUSINESS SKILLS PROGRAM
Certificate

(Prerequisite: General Business Certificate)

Core Courses		Credits
Principles of Management	BUS 143	3
Principles of Marketing	BUS 145	3
Job and Family Success Skills	BUS 160	3
Computer Applications	CIS 181	3
Business English	OAD 111	3
Word Processing	OAD 213	3
Electives (choose any 2)		
Introduction to Business Ethics	BUS 150	3
Principles of Finance	BUS 156	3
Personal Financial Planning and Investments	BUS 228	3
Advanced Word Processing	OAD 214	3
TOTAL REQUIREMENTS		**24**

Custodial Services Certificate

A student who completes the Custodial Services program will be qualified for an entry-level position in the custodial services, with the potential of self-employment in the field. The student will learn how to mix and use cleaning chemicals; how to clean and maintain all types of floors, carpets, and walls; and the special requirement of cleaning windows and rest rooms.

CUSTODIAL SERVICES

Certificate

Core Courses		Credits
Introduction to Custodial Maintenance	CMS 101	3
Custodial Chemicals, Usage and Safety	CMS 110	3
Floors and Floor-care Equipment	CMS 120	3
Maintaining Walls, Windows, & Other Surfaces	CMS 130	3
Cleaning Carpet and Fabric	CMS 140	3
Rest Room Cleaning	CMS 150	3
TOTAL REQUIREMENTS		**18**

Consumer Electronics Repair Certificate

A student who completes the Consumer Electronics Repair Program will be qualified for a position in electronics repair after completing the basic General Electronics Technician Program and the upper-level Consumer Electronics Repair Program. The student will learn specific repair techniques in a variety of small appliances.

CONSUMER ELECTRONICS REPAIR

Certificate

Core Courses		Credits
Radio Theory and Repair	CER 100	3
Audio Tape Recorder/Player Repair	CER 102	3
Television Theory and Repair	CER 104	4
Video Cassette Recorder Repair	CER 200	4
Compact Disc Player Repair	CER 202	3
Microwave Oven Repair	CER 204	4
Power Amplifier Repair	CER 205	3
Advanced Television Repair	CER 206	4
TOTAL REQUIREMENTS		**28**

Fire Leadership Certificate

A student who completes the Fire leadership program will be qualified for an entry-level position as a fire fighter. The student will learn the national Fire Protection Association (NFPA) requirements for certification as Firefighter II and Fire Officer I. Completion makes the student a competitive candidate in today's job market.

FIRE LEADERSHIP PROGRAM
Certificate

Core Courses		Credits
Hazardous Materials Incident "First Responder"	AJS 266	3
Introduction to Fire Science	FST 101	3
Fundamentals of Fire Prevention	FST 106	3
Fire Fighter I	FST 110	6
Fire Fighter II	FST 111	6
Fire Service Hydraulics	FST 120	3
Fire Apparatus & Equipment	FST 200	3
Rescue Practices	FST 220	3
Fire Fighting Tactics & Strategy	FST 240	3
Supervisory Training for Firefighters	FST 265	3
TOTAL REQUIREMENTS		**36**

Lead Firefighter Certificate

A student who completes the Lead Firefighter program will be qualified for an entry-level position as a fire fighter. The student will learn the National Fire Protection Association (NFPA) requirements for certification as Firefighter I.

LEAD FIREFIGHTER
Certificate

Core Courses		Credits
Hazardous Materials Incident "First Responder"	AJS 266	3
Introduction to Fire Science	FST 101	3
Fire Fighter I	FST 110	6
Fire Fighter II	FST 111	6
TOTAL REQUIREMENTS		**18**

General Electronics Technician Certificate

A student who completes the General Electronics Technician program will be qualified for an entry-level position in electronics repair. The student will learn the nature of electronic circuits, specific diagnostics for direct and alternating current circuits, and an overview of consumer electronics repair.

GENERAL ELECTRONICS TECHNICIAN
Certificate

Core Courses		Credits
Math for Electronics	ELT 110	3
Basic Electronic Circuits & Diagnostics	GET 103	3
Direct Current Circuit Diagnostics	GET 104	3
Alt. Current Circuit Diagnostics	GET 108	4
Semiconductor Device Diagnostics & Repair	GET 123	4
Electronic Systems Diagnostics & Repair	GET 240	6
TOTAL REQUIREMENTS		**23**

Masonry Certificate

A student who completes the Masonry program will be qualified for an entry-level position in the following trowel trades: concrete finishing, brick laying, stonework, and stucco. The student will learn to make foundations, walls, sidewalks, barbecue pits, arches, and many other brick and concrete things.

MASONRY
Certificate

Core Courses		Credits
Blueprint Interpretation and Basic Drafting	DFT 100	3
Technical Mathematics I	GTC 100	3
Masonry I	GTC 110	3
Masonry II	GTC 111	3
Masonry III	GTC 112	3
Concrete Construction and Finish	GTC 120	3
Estimating Construction	GTC 130	3
TOTAL REQUIREMENTS		**21**

Course Descriptions

NOTE * Indicates Laboratory or Studio Fees

Administration of Justice

AJS 101 INTRODUCTION TO ADMINISTRATION OF JUSTICE (3)
Prerequisite(s): None.

Recommended: Reading 11.5 grade level or higher.

A study of the organization and jurisdiction of local, state, and federal law enforcement, judicial, and correctional systems. Also includes the history and philosophy, career opportunities and qualifying requirements, terminology and constitutional limitations of the system.

3 hours lecture.

AJS 104 PHYSICAL TRAINING (2)
Prerequisite(s): None.

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.

AJS 109 SUBSTANTIVE CRIMINAL LAW (3)
Prerequisite(s): AJS 101, ENG 101, Reading 11.5 grade level or higher.

The study of the philosophy of legal sanctions and their historical development, from common law to modern American criminal law. Includes the judicial process, classification of crimes, elements of and parties to crimes, general definitions of crimes, and common defenses.

3 hours lecture.

AJS 110 DEFENSIVE TACTICS (2)
Prerequisite(s): Passing pre-admission physical test, students must be enrolled in a certified police academy or is a sworn peace officer.

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.

AJS 111 CORRECTIONAL INSTITUTIONS (3)
Prerequisite(s): None.

An examination of correctional institutions with an emphasis on personnel and security measures, care and treatment programs and institutional planning. Includes an overview of the

criminal justice system, inmate subcultures and organized crime in correctional institutions.

3 hours lecture.

AJS 112 EMERGENCY VEHICLE OPERATIONS (1)
Prerequisite(s): Valid drivers license, enrolled in a certified police academy or be sworn officer or certified EMS provider.

This course is designed for emergency and commercial vehicle operators. The course will emphasize the legal aspects of emergency vehicle operation, vehicle dynamics, vehicle maintenance, vehicle inspections and human dynamics. The practical exercise of the course will be conducted at an outdoor site where students will practice, then demonstrate their individual proficiency in operating the type of vehicle appropriate for their individual operation. The outdoor course will be set up in conformance with the recommended National Law Enforcement Drivers Training guide and Federal Emergency Management Agency Training Guide. Identical to FST 112.

1 hour lecture.

AJS 120* FIREARMS CERTIFICATION (2)
Prerequisite(s): Student must be registered as part of a law enforcement or corrections program.

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.

AJS 122* THE POLICE PATROL FUNCTION (3)
Prerequisite(s): None.

A study of the history, theory, duties and responsibilities of the patrol division; communications, 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.

2 hours lecture; 3 hours laboratory.

AJS 123* TRAFFIC ENFORCEMENT (3)
Prerequisite(s): Student must be enrolled as part of the AJS-AAS program.

This course provides the student with the knowledge needed to analyze traffic control problems and the fundamentals of traffic accident investigations. The course will include motor vehicle laws in the state of Arizona.

2 hours lecture; 3 hours laboratory.

AJS 125 PRIVATE SECURITY, PRINCIPLES AND PRACTICES (3)
Prerequisite(s): None.

This course is designed to present the history, nature and scope of private security in modern society. Also included are basic principles of physical security, internal loss prevention, defensive systems, fire prevention and safety, and security function in the corporate structure. Operations and career opportunities are exemplified in such specific areas as retail, hospital, cargo and computer security, and security services, both contract and proprietary.

3 hours lecture.

AJS 135* OPEN WATER AND ADVANCE DIVER (3)
Prerequisite(s): Student must be an intermediate swimmer.

Identical to HPE 135. Open water diver provides the student with the knowledge and skills they need to safely gain experience in the SCUBA environment. The course is designed to take a student through a progression of skills in academic, pool, and open water (4 dives). The advanced diver portion of the class is designed to expand the diver's knowledge and skills through both academics and a progression of five open water dives. The advance diver starts with a general orientation and a simple navigation dive (60 ft. maximum) and progresses to more advanced training dives. The four remaining dives are to be chosen from the following areas:

1. current/drift 60 ft. maximum
2. light salvage 60ft. maximum
3. boat 100 ft. maximum
4. night 60 ft. maximum
5. navigation 60 ft. maximum
6. wreck (simple) 100 ft. maximum
7. deep 100 ft. maximum
8. More difficult dives are to be conducted as dives 4 and 5.

2 hours lecture; 3 hours laboratory.

AJS 140 ARIZONA DETENTION OFFICERS BASIC TRAINING (6)
Prerequisite(s): Student must be employed by a recognized Arizona law enforcement agency.

Provides the basic training required to become certified as an Arizona Detention Officer.

5 hours lecture; 3 hours laboratory.

AJS 150 UNITED STATES PENOLOGY (3)
Prerequisite(s): None.

An examination of punishment from primitive times to the modern correctional era, emphasizing the influence of historical events on the philosophy of punishment and the methods of prison discipline.

3 hours lecture.

AJS 187 CRIMINAL JUSTICE MANAGEMENT PROBLEMS (1)
Prerequisite(s): Student must be part of a Criminal Justice Department or AJS major.

A review of the common management problems in criminal justice agencies including conflict management, employee relations, fiscal affairs and time management. Includes a discussion of the process of organizational change and development.

1 hour lecture.

AJS 193 HAZ-MAT COMMUNICATIONS (1)
Prerequisite(s): None.

A study of the 29 Codes of Federal Regulations (CFR), Section 1910.1200 and the Hazard Communications (Right-to-Know) Regulation. The course focuses on the impacts these regulations have on the occupational workforce. Requirements for implementation and monitoring of the regulations are examined. Also included are the studies of Federal Regulations cited in Section 301, Title III, Superfund Amendments and Reauthorization Act (SARA) of 1968, Right to Know Act of 1968.

1 hour lecture.

AJS 204 ELEMENTS OF INTERCULTURAL COMMUNICATION (3)
Prerequisite(s): ENG 101 with a grade of C or better or permission of instructor.

Introduction to communication between cultures. Emphasis will be on understanding and applying practical communication strategies and skills so as to communicate effectively with people of diverse cultural backgrounds in a multicultural society and world. Identical to BUS 204, COM 204.

3 hours lecture.

AJS 205 COMMUNITY CORRECTIONS (3)
Prerequisite(s): AJS 101, AJS 112, ENG 101, Reading 11.5 grade level or higher.

A practical study of the origins and development of probation and parole, including the primary roles of lawyers, judges, probation and parole officers in the administration of each, and an examination of various sentencing alternatives.

3 hours lecture.

AJS 208 DEFENSIVE TACTICS INSTRUCTOR (3)
Prerequisite(s): Student must be employed or sponsored by a law enforcement agency.

This course is designed to give the students the necessary information to give instruction on use-of-force alternatives within the force continuum. It will emphasize speed cuffing, pressure points, escorts, take downs, defensive counter-measures, vascular restraints, officer safety, use of baton, gun retention, and disarming techniques. Upon successful completion of the course, students will receive instructor's certification from Pressure Points and control Tactics Management Systems, Inc. (PPCT).

3 hours lecture.

AJS 212 JUVENILE JUSTICE PROCEDURES (3)
Prerequisite(s): ENG 101 with a grade of C or better.

A practical study of the history and development of juvenile justice theories, procedures and institutions.

3 hours lecture.

AJS 215 PENOLOGY (3)
Prerequisite(s): AJS 101, AJS 112, ENG 101, Reading 11.5 grade level or higher.

A study of correctional management topics including sentencing, classification, "good time" credit, discipline, prisoner's rights and security/control measures; additional emphases are placed on the guard's role, different management styles, and various correctional models.

3 hours lecture.

AJS 224 FIELD EXPERIENCE IN ADMINISTRATION OF JUSTICE (1-6)
Prerequisite(s): A declared major in Administration of Justice. Permission and approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in law enforcement and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

AJS 225 CRIME AND DELINQUENCY (3)
Prerequisite(s): ENG 101 with a grade of C or better, reading 11.5 grade level or higher.

Recommended: SOC 101 or PSY 101.

The study of deviance and society's role in defining behavior. Theories of criminality and the economic, social, and psychological impact of crime, victimization, and relationships between statistics and crime trends.

3 hours lecture.

AJS 230 THE POLICE FUNCTION (3)
Prerequisite(s): None.

The study of theories, procedures and methods of operation of public police with emphasis on discretionary powers. Also includes a review of career opportunities and current trends in law enforcement.

3 hours lecture

AJS 240 THE CORRECTION FUNCTION (3)
Prerequisite(s): None.

The study of the history and development of correctional theories and institutions.

3 hours lecture.

AJS 254 PSYCHOLOGY IN LAW ENFORCEMENT (3)
Prerequisite(s): AJS 101, PSY 101, ENG 101, Recommended: Reading 11.5 grade level or higher.

A study of the changing role of police, including the law enforcement, attitude toward human behavior, normal personality conflicts, defense mechanisms, abnormal behavior, personality disorders, neuroses, psychoses, psychopathology, deviance, drug dependency, paranoia, violent, and suicidal behavior. Also studied are the behavioral aspects of disasters, riots, riot control and legal aspects of abnormal behavior.

3 hours lecture.

AJS 260 PROCEDURAL CRIMINAL LAW (3)
Prerequisite(s): Reading 11.5 grade level or higher.

Recommended: AJS 109, ENG 101

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.

AJS 265 CRITICAL ISSUES IN CRIMINAL JUSTICE (.5-1)
Prerequisite(s): None.

A rotating forum emphasizing current issues in the field of criminal justice. Topics will vary in accordance with needs of the local criminal justice community.

1/2-1 hour lecture.

AJS 266 HAZARDOUS MATERIAL INCIDENT "FIRST RESPONDER" (3)
Prerequisite(s): Student must be a certified first responder or employed as a law enforcement officer or fire fighter.

A course designed to teach the fundamentals of chemistry used in fire service; types of chemicals and processes; laws at the federal, state, and local levels pertaining to use, storage and transportation of chemicals; and the fundamentals of chemistry used in fire science including hazards of radioactives, precautions to observe in fighting fires involving hazardous materials, and laboratory demonstration of incompatibles.

3 hours lecture.

AJS 267 HAZARDOUS WASTE SITE WORKERS HEALTH AND SAFETY (3)
Prerequisite(s): None.

A course designed to teach potential hazardous waste site workers the health and safety implications of working with HAZMATS.

3 hours lecture.

AJS 270 COMMUNITY RELATIONS (3)
Prerequisite(s): AJS 101, SOC 101 with a grade of C or better.

Recommended: ENG 101 with a grade of C or better, Reading 11.5 grade level or higher.

A study of the police officer's role in attaining and maintaining public support. Includes recognition and understanding of community problems, community action programs, methods of coping with crisis situations, victimology, ethnic and minority cultures, environments, crime prevention and police operations.

3 hours lecture.

AJS 275* CRIMINAL INVESTIGATIONS (3)
Prerequisite(s): AJS 101, 122, ENG 101 with a grade of C or better.

Recommended: Reading 11.5 grade level or higher.

A study of the theory of criminal investigation, crime scene procedures, case preparation, interviewing, and basic investigative techniques.

2 hours lecture; 2 hours laboratory.

AJS 290 INSTRUCTOR SKILL DEVELOPMENT (3)
Prerequisite(s): Student must be a certified law enforcement or corrections officer, currently employed by a law enforcement agency or a sophomore in the Administration of Justice Program.

Designed to impart a wide range of teaching skills, concepts, and techniques specific to the law enforcement trainer. Topics covered include adult learning, training needs, research methodology, instructional objectives, program development, instructional methodology, and evaluation techniques. Successful course completers will be eligible for certification as ALEOAC Certified Instructors.

3 hours lecture.

Agriculture

AGR 101 PRINCIPLES OF VETERINARY SCIENCE (3)
Prerequisite(s): None.

An introduction to the veterinary sciences for potential pre-veterinary students as well as those students of animal science or husbandry interested in the care and health of all domestic animals and livestock.

3 hours lecture.

AGR 102 INTRODUCTION TO AGRICULTURE (3)
Prerequisite(s): None.

An introductory class involving the overall concepts of agriculture. This class introduces the theoretical basis of agriculture in order that the student may better select career options.

3 hours lecture.

AGR 104 PRINCIPLES OF AGRONOMY (3)
Prerequisite(s): None.

This course deals with principles of field crop production with special emphasis on origin, distribution, cultural practices and improvements.

3 hours lecture.

AGR 105 RANGE MANAGEMENT (3)
Prerequisite(s): None.

A study of the history of rangeland use, the influences of use on plant physiology and ecology, and the interrelationships and coordination of rangeland uses for farm and ranch managers interested in plants, soils, and livestock.

3 hours lecture.

AGR 107* FARRIER SCIENCE (3)
Prerequisite(s): None.

A study of the basic principles of farrier science, including an introduction to the physiology and anatomy of the horses' legs and hooves, horse shoeing, diagnosis of minor hoof and leg problems and proper methods for correcting stride and alignment.

1 hour lecture; 3 hours laboratory.

AGR 138* TEAM ROPING (3)
Prerequisite(s). None

This course will provide an opportunity for students to participate for pleasure and for later competition in rodeo team roping.

2 hours lecture; 3 hours laboratory.

AGR 139 WESTERN HORSEMANSHIP (3)
Prerequisite(s) None.

A course enabling students who now own or intend to buy a pleasure horse to handle and care for the animal in the western tradition; how to handle a western saddle, how to select appropriate equipment, how to evaluate a pleasure horse before purchasing, and how to provide for the general well-being of the animal.

2 hours lecture; 3 hours laboratory.

AGR 140* RODEO SKILLS (3)
Prerequisite(s): None.

A course designed for a student to learn rodeo rules and to develop rodeo skills in barrel racing, team roping, calf roping, goat tying, and riding events and the personal ethics and attitudes of a good competitor.

2 hours lecture; 3 hours laboratory

AGR 141* ENGLISH EQUITATION (3)
Prerequisite(s): None.

A course for students who now own or intend to purchase a pleasure horse to handle and care for the animal in an arena situation: how to handle English equipment, how to evaluate a pleasure horse and how to provide for the general well-being of the animal.

2 hours lecture; 3 hours laboratory.

AGR 207 RANGE PLANTS (3)
Prerequisite(s): Botany.

Introduction to the study of local grasses, shrubs, and forbs, including identification, forage value, and ecological use. Also, range plants will be studied that are toxic or have poisonous effects on animal life.

1 hour lecture; 3 hours laboratory.

AGR 208 ANIMAL INDUSTRY (3)
Prerequisite(s): None.

Fundamental principles as applied to animal, dairy, and poultry science, and the marketing and distribution of animal products.

3 hours lecture.

AGR 210* GENERAL WELDING I (3)
Prerequisite(s): None.

Techniques of operating arc welding machines; oxyacetylene torches for fusion welding, heating, brazing, cutting, hardfacing, and soldering of all common types of metal. Emphasis on individual projects.

1 hour lecture; 3 hours laboratory.

AGR 211 ECONOMICS IN AMERICAN AGRICULTURE (3)
Prerequisite(s): None.

A study of economic principles governing the production of agriculture including the principles of supply and demand, pricing, investing, mea-

suring and consuming with emphasis on theories and practical applications to current economic problems.

3 hours lecture.

AGR 212* ADVANCED AGRICULTURE WELDING (3)

Prerequisite(s): None.

Techniques of operating arc welding machine in the various welding positions; flat, horizontal, vertical, and overhead, and the use of oxyacetylene equipment for fusion welding, brazing, cutting, hardfacing and soldering all common types of metal with emphasis on individual projects.

2 hours lecture; 3 hours laboratory.

AGR 214 SOILS & FERTILIZERS (3)

Prerequisite(s): None.

Fundamental properties of soils, their relation to plant growth and soil amendment.

3 hours lecture.

AGR 215 HOME GARDENING (3)

Prerequisite(s): None.

The study of the care and maintenance of trees, shrubs, hedges, and flowers for those students who want to sharpen their skills in growing vegetable and flower gardens.

3 hours lecture.

AGR 224 FIELD EXPERIENCE IN AGRICULTURE & NATURAL RESOURCES (1-6)

Prerequisite(s): A declared major in Agriculture and Natural Resources. Permission and approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Agriculture & Natural Resources and related fields., Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

AGR 225 INTRODUCTION TO AGRI-BUSINESS (3)

Prerequisite(s) ENG 100 or above, 11 0 reading grade level

This course will familiarize students with the basic concepts of agri-business from a functional and commodity approach.

3 hours lecture.

AGR 230 ANIMAL FEEDING (3)

Prerequisite(s): None.

Basic principles of animal nutrition and digestion and selection, evaluation, and use of feeds in balancing rations for livestock and poultry.

3 hours lecture.

AGR 237 HORSE SCIENCE & MANAGEMENT (3)

Prerequisite(s): None.

An introduction to the types, breeds, and management of horses with emphasis on feeding, breeding, and daily care.

3 hours lecture.

AGR 243 LIVESTOCK PRODUCTION AND MANAGEMENT (3)

Prerequisite(s): None.

Livestock production and management will teach the managerial skills necessary in the production, feeding, and the care of livestock on farms and ranches. The economics of the livestock industry will also be emphasized

3 hours lecture

AGR 250* PROJECT WELDING (3)
Prerequisite(s): AGR 210 or AGR 212 or permission of instructor.

Designed for students with demonstrated welding skills to work on a specific project. The project may be one selected by the student or one the instructor has assigned. The project will be made using the arc welding and/or the oxyacetylene equipment in the shop.

May be repeated for non-transfer credit only.

2 hours lecture; 3 hours laboratory.

AGR 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Permission of associate dean and instructor.

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 associate dean prior to initiation of the study.

American Sign Language

ASL 101 AMERICAN SIGN LANGUAGE I (4)
Prerequisite(s): None

Introduction to American Sign Language. Includes principles, methods and techniques for communicating with deaf individuals who sign. Also includes a brief history of sign, introduction to deaf culture, development of receptive and expressive sign skills, manual alphabet, numbers and sign vocabulary. Class is conducted primarily without voice.

4 hours lecture; 1 hour laboratory.

ASL 102 AMERICAN SIGN LANGUAGE II (4)
Prerequisite(s): ASL 101 with a grade of C or better or equivalent proficiency.

Continuation of ASL 101. Includes sign vocabulary, numbers, fingerspelling, and culture. Emphasis is on the enhancement of receptive sign skills, further development of expressive sign skills, and the application of rudimentary syntactical and grammatical structures. Class is conducted primarily without voice.

4 hours lecture; 1 hour laboratory.

ASL 201 AMERICAN SIGN LANGUAGE III (4)
Prerequisite(s): ASL 102 with a grade of C or better or equivalent proficiency.

Continuation of ASL 102. Includes an integration of ASL receptive and expressive skills using bilingual techniques. Also includes vocabulary expansion, idioms, manual and non-manual aspects of ASL, ASL linguistics, cross-cultural communication, and cultural knowledge of ASL. Class is conducted primarily without voice.

4 hours lecture; 1 hour laboratory.

ASL 202 AMERICAN SIGN LANGUAGE IV (4)
Prerequisite(s): ASL 201 with a grade of C or better or equivalent proficiency.

Continuation of ASL 201. Includes continued expansion of sign vocabulary, sharpening of fingerspelling and number skills, and review of and instruction in linguistical knowledge of ASL. Also includes am emphasis on conversational techniques and skills in ASL in a cross-cultural framework. This class is conducted primarily without voice.

4 hours lecture; 1 hour laboratory

Anthropology

ANT 101 THE ORIGIN AND ANTIQUITY OF MAN (3)
Prerequisite(s): None.

A survey of human biological origins, based upon paleontological and archaeological records, including recent developments in physical anthropology.

3 hours lecture.

ANT 102 SOCIETY AND CULTURE (3)
Prerequisite(s): Reading 12.0 grade level.

A theoretical and practical introduction to cultural anthropology designed to provide insight into cultural forces, which 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.

ANT 110 EXPLORING ARCHAEOLOGY (3)
Prerequisite(s): None.

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.

ANT 111 EXPLORING PHYSICAL ANTHROPOLOGY (3)
Prerequisite(s): None.

An introduction to human evolution for the non-science student. Also serves as an introduction to Primatology and General Anthropology, grounding the student in the methods and ideas of modern anthropology.

3 hours lecture.

ANT 138* ARCHAEOLOGICAL SITE SURVEY (3)
Prerequisite(s): None.

An introduction to identifying, locating, and recording archaeological sites, with emphasis on gaining practical experience in documenting archaeological remains. Students participate in exploring areas in Southern Cochise County.

1.5 hours lecture; 4.5 hours laboratory.

ANT 140* ROCK ART OF THE AMERICAN INDIAN (3)
Prerequisite(s): None.

The study of the prehistoric carvings and paintings on rock surfaces throughout North America with an emphasis on recording processes, field work, and the Southwest.

2 hours lecture; 3 hours laboratory.

ANT 192 SPECIAL TOPICS IN ANTHROPOLOGY (.5-1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing anthropological topics of current regional significance which will vary with changes in student needs and interests. May be repeated for Cochise College credit. Cochise College elective credit only unless otherwise designated in degree programs.

1/2-1 hour lecture.

ANT 235 PRINCIPLES OF ARCHAEOLOGY (3)
Prerequisite(s): ENG 101 or permission of instructor.

An introduction to the methods and theories used in archaeological research and interpretation with emphasis upon the practical aspects of archaeology.

3 hours lecture.

ANT 285 PREHISTORIC CULTURES OF NORTH AMERICA (3)
Prerequisite(s): ENG 101 or permission of instructor.

A survey of prehistoric cultures in North America. Included are basic anthropological, archaeological and ethnological theory methods and concepts.

3 hours lecture.

ANT 286 HISTORIC INDIAN TRIBES OF NORTH AMERICA (3)
Prerequisite(s): ENG 101 or permission of instructor.

A survey of historical Native cultures in the ten North American environmental regions from contact through the twentieth century. Contemporary issues are addressed. Included are basic anthropological, historical and ethnological theory, methods and concepts.

3 hours lecture.

ANT 287 ARCHAEOLOGY OF THE SOUTHWEST (3)
Prerequisite(s): None.

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.

ANT 288 NATIVE PEOPLES OF THE SOUTHWEST (3)
Prerequisite(s): ENG 102 with a grade of C or better or permission of instructor.

A survey of Southwestern Native American cultures from historic times to the present. Includes Athabaskan, Puebloan, O'odham societies, adaptations to their respective environments, and cultural effects from historic events.

3 hours lecture.

ANT 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 dean prior to initiation of the study. May be repeated for credit.

Art

Note: All studio courses may be repeated once for credit. (The second semester is usually allowed as an art elective.) These courses may be repeated indefinitely beyond the second semester for non transfer credit.

ART 103* DESIGN FUNDAMENTALS (3)
Prerequisite(s): None.

An introduction to the basic elements of design: line, shape, value, texture and color. This includes skill development in arranging these elements according to the basic principles of organization (harmony and variety) within a two-dimensional framework.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 106* DRAWING I (3)
Prerequisite(s): None.

An elementary course in representational drawing and pictorial design. Students utilize the local landscape and various still-life objects as subject matter for individual projects. Freehand drawing is stressed to develop hand-eye coordination. Also encouraged is the use of imagination and memory in the development of ideas.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 107 SURVEY OF WORLD ART: PREHISTORIC-GOTHIC (3)
Prerequisite(s): None

A survey presentation of the art and architecture of western civilizations through the Gothic era, including prehistoric and primitive cultures of the world.

For students interested in art for career opportunities as well as personal growth and self-expression.

3 hours lecture

ART 108 SURVEY OF WORLD ART: RENAISSANCE THROUGH THE TWENTIETH CENTURY (3)
Prerequisite(s): None.

A survey presentation of the art and architecture of western civilizations from the Renaissance through the twentieth century.

For students interested in art for career opportunities as well as personal growth and self-expression.

3 hours lecture.

ART 120 APPRECIATION OF THE VISUAL ARTS (3)
Prerequisite(s): None.

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.

ART 130* PAINTING FOR PERSONAL DEVELOPMENT I (2)
Prerequisite(s): None.

An introduction to techniques of watercolor, oil or acrylic with emphasis on composition and materials. Students must complete several projects judged on the basis of individual skill and development. Not intended for transfer to a four-year institution. May be repeated for credit.

For students interested in art for career opportunities as well as personal growth and self-expression.

1 hour lecture; 3 hours studio.

ART 131* PAINTING FOR PERSONAL DEVELOPMENT II (2)
Prerequisite(s): ART 130.

The development of skills and techniques introduced in ART 130 with special emphasis on student projects and preparation of works for exhibition. May be repeated for credit. Not intended for transfer to four-year institutions.

For students interested in art for career opportunities as well as personal growth and self-expression.

1 hour lecture; 3 hours studio.

ART 192* SPECIAL TOPICS IN ART (.5-4)
Prerequisite(s): None

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. May be repeated for Cochise College credit.

For students interested in art for career opportunities as well as personal growth and self-expression.

1/2-4 hours lecture/studio.

ART 216* DRAWING II (3)
Prerequisite(s): ART 106 or permission of instructor. (Art majors must have prerequisite.)

Recommended: (For non-art majors.)

An intermediate course in representational drawing and pictorial design. Students utilize the landscape, still life objects and individual initiative to develop subject matter for their projects. Freehand drawing is stressed to develop hand-eye coordination. Students are expected to have developed some basic drawing skills before taking this course.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 230* COLOR AND DESIGN (3)
Prerequisite(s): ART 103 or permission of instructor. (Art majors must have prerequisite.)

Recommended: (For non-art majors.)

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.

ART 231* THREE DIMENSIONAL DESIGN/SCULPTURE (3)
Prerequisite(s): ART 103 or permission of instructor. (Art majors must have prerequisite.)

Recommended: (For non-art majors.)

An introduction to the basic elements of three-dimensional design: line, shape, texture, color, volume and mass. This includes skill development in arranging these elements according to the basic principles of organization (harmony and variety) within a three-dimensional framework as they exist in actual space.

2 hours lecture; 4 hours studio.

ART 245* FIGURE DRAWING (3)
Prerequisite(s): ART 106 or permission of instructor. (Art majors must have prerequisite.)

Recommended: (For non-art majors.)

Drawing from the model and other subjects to develop pictorial and perceptual skills with an emphasis on the human figure in its environment.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 250* BEGINNING JEWELRY (3)
Prerequisite(s): ART 103 and 231 or permission of instructor.

A studio course in basic jewelry-making processes including fabrication, silver-soldering, lapidary and casting.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture, 4 hours studio.

ART 255* BASIC METALWORK (3)
Prerequisite(s): ART 103 and 231 or permission of instructor.

A studio course in essential aspects of metalworking processes including silver soldering, brazing, welding, forging, and casting.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 265* BEGINNING COMMERCIAL DESIGN (3)
Prerequisite(s): ART 103 or permission of instructor. (Art majors must have prerequisite(s).)

Recommended: (For non-art majors.)

An introduction to the basic elements and principles of commercial design and the techniques of advertising layout. This includes their practical applications with the tools and materials used in the field of advertising. Identical to MED 265.

2 hours lecture; 4 hours studio.

ART 270* CERAMICS I (3)
Prerequisite(s): ART 103 and ART 231 or permission of instructor. (Art majors must have prerequisite(s).)

Recommended: (For non-art majors.)

An introduction to clay, glaze and kiln processes and wheelthrown techniques with a general historical survey of ceramics.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 270A RAKU WORKSHOP (1)
Prerequisite(s): None.

An introduction to the traditional and experimental Raku processes.

For students interested in art for career opportunities as well as personal growth and self-expression.

.67 hours lecture; 1.33 hours studio.

ART 275* CERAMICS II (3)
Prerequisite(s): ART 103, ART 231, and ART 270 or permission of instructor. (Art majors must have prerequisites.)

Recommended: (For non-art majors.)

A more advanced course than ART 270, Ceramics I. Students will need to have a basic knowledge of handbuilt and wheelthrowing techniques with various clay bodies and, a basic knowledge of glazes, their application and kiln loading and firing processes.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 280* PAINTING I (3)
Prerequisite(s): ART 103 or ART 106 or permission of instructor. (Art majors must have prerequisite.)

Recommended: (For non-art majors.)

A studio course in beginning oil and/or acrylic painting techniques with emphasis on color theory and color mixing. Preparation of painting surfaces is also introduced.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 281* PAINTING II (3)
Prerequisite(s): ART 103 or ART 106, and ART 280, or permission of instructor. (Art majors must have prerequisites.)

Recommended: (For non-art majors.)

An intermediate course in painting with an emphasis on developing individual expressive and pictorial skills in oil and/or acrylic media. Students must have a basic knowledge of the tools and materials of their chosen medium and a basic knowledge of color theory and color mixing. Students must also be skilled in preparing various painting surfaces.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 285* BEGINNING PHOTOGRAPHY (3)
Prerequisite(s): None.

An introduction to the use and function of the camera and black-and-white darkroom technique. Students must have access to a fully adjustable 35mm camera. Identical to MED 285.

For students interested in beginning photography for career opportunities, as well as for personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 286* INTERMEDIATE PHOTOGRAPHY (3)
Prerequisite(s): ART/MED 285 or permission of instructor. (Art majors must have prerequisite.)

Recommended: (For non-art majors.)

An intermediate course in photography for students who understand the basics of black-and-white film exposure, development, and printing. Emphasis on photojournalism, art photography, portraiture, and landscapes. Students must have access to a fully adjustable 35mm camera. Identical to MED 286.

For students interested in photography for career opportunities as well as for personal growth and self -expression.

2 hours lecture; 4 hours studio.

ART 290* SCULPTURE (3)
Prerequisite(s): ART 103, ART 231, or permission of instructor. (Art majors must have prerequisites.)

Recommended: (For non-art majors.)

An introduction to traditional and contemporary sculptural concepts, media and techniques, with student involvement from the raw materials to the finished product.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 292* ADVANCED TOPICS IN ART (.5-4)
Prerequisite(s): ART 192 or permission of instructor.

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. May be repeated for Cochise College credit. 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.

1/2 hour to 4 hours lecture/studio.

ART 295* WATERCOLOR PAINTING I (3)
Prerequisite(s): ART 103 or 106 or permission of instructor.

An introductory course in Watercolor Painting, exploring basic materials and techniques, with an emphasis on color theory and color mixing.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 296* WATERCOLOR PAINTING II (3)
Prerequisite(s): ART 295 or permission of instructor.

An intermediate course in Watercolor Painting, with an emphasis on developing individual and expressive pictorial skills.

For students interested in art for career opportunities as well as personal growth and self-expression.

2 hours lecture; 4 hours studio.

ART 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

The student will complete a research problem or an outlined course of study under the direction of a faculty member. A contract for the individual study agreed upon by the student, the instructor and the associate dean prior to initiation of the study must be signed. May be repeated for credit.

Astronomy

AST 180* INTRODUCTION TO ASTRONOMY (4)
Prerequisite(s): MAT 122 or permission of instructor.

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.

Aviation Maintenance Technology

A specialized 1936 contact hour program that meets the requirements of Federal Aviation Regulations, Part 147.

AMT 120* SEMINAR: JOB SEARCH TECHNIQUES FOR AVIATION TECHNOLOGY (1)
Prerequisite(s): Permission of a Cooperative Education Program Coordinator.

A course to assist aviation technology students in acquiring knowledge and basic employment skills including job hunting techniques, job applications, resumes, and interviewing upon program completion.

1 hour lecture.

AMT 150* PHASE 1 GENERAL (19)
Prerequisite(s): None.

A comprehensive study of general subjects required by the Federal Aviation Administration (FAA) for certification as an aviation maintenance technician.

50% lecture; 50% laboratory.

AMT 160* PHASE 2 BASIC AIRFRAME (17)
Prerequisite(s): AMT 150.

A comprehensive study of aircraft structures featuring wood and covering techniques, welding with emphasis on sheet metal structural repairs, composite construction, aircraft assembly, rigging and inspection, as well as radio, navigation and instrument systems.

50% lecture; 50% laboratory.

AMT 170 UNMANNED AERIAL VEHICLE (UAV) MAINTENANCE TECHNICIAN COMMON (4)
Prerequisite(s): PFT 170.

A practical study of Unmanned Aerial Vehicle (UAV) maintenance with emphasis upon system components, performance criteria, diagnosis and inspection techniques, communications equipment, and operational safety. Enrollment is limited to TRW employees and the Department of Defense.

2 hours lecture; 6 hours laboratory.

AMT 171 UAV FLIGHTLINE OPERATOR (13)
Prerequisite(s): PFT 170 and AMT 170.

This course provides the basic skills and knowledge to allow safe operation of the UAV system. A practical study of Unmanned Aerial Vehicle (UAV) maintenance with emphasis upon system components, performance criteria, diagnosis and inspection techniques, communications equipment, and operational safety. Enrollment is limited to TRW employees and the Department of Defense.

3 hours lecture; 29 hours laboratory.

AMT 172 UAV MECHANICAL TECHNICIAN (17)
Prerequisite(s): PFT 170 and AMT 170.

This course provides the knowledge and skills needed to safely repair and maintain the UAV system. A practical study of Unmanned Aerial Vehicle (UAV) maintenance with emphasis upon system components, performance criteria, diagnosis and inspection techniques, communications equipment, and operational safety. Enrollment is limited to TRW employees and the Department of Defense.

10 hours lecture; 22 hours laboratory.

AMT 260* PHASE 3 ADVANCED AIRFRAME (17)
Prerequisite(s): AMT 150 and 160.

A comprehensive study of aircraft systems on both private and commercial aircraft with emphasis on electrical, hydraulics, landing gear, fire protection, environmental atmosphere controls, fuel systems, ice and rain control.

50% lecture; 50% laboratory.

AMT 270* PHASE 4 POWERPLANT (17)
Prerequisite(s): AMT 150.

An introductory study of aircraft powerplant theory, construction and maintenance, with emphasis on reciprocating engines, propellers, ignition systems, lubricating systems and component overhaul.

50% lecture; 50% laboratory.

AMT 275* PHASE 5 ADVANCED POWERPLANT (17)
Prerequisite(s): AMT 150 and 270.

A continuation of the comprehensive study of advanced aircraft powerplants and related systems with emphasis on turbine engines, jet engines, propellers, lubrication systems, cooling, exhaust, starting and fire protection, fuel metering systems and electrical systems.

50% lecture; 50% laboratory.

AMT 280* HELICOPTER MAINTENANCE AND INSPECTION FUNDAMENTALS (4)
Prerequisite(s): Completion of AMT 150, 160, 260 or have a FAA Airframe Mechanic Certificate or permission of the Aviation Department Airframe and Powerplant instructors.

A study of helicopter inspection and maintenance techniques and basic rotary wing aerodynamics with emphasis on the exacting requirements of rotary wing aircraft maintenance.

AMT 282 TRANSPORT CATEGORY AIRCRAFT FAMILIARIZATION COURSE (5)
Prerequisite(s): Student must hold A & P Certificates or permission of instructor.

A lecture course focused on the operating systems of large FAR Part 25 certified aircraft.

5 hours lecture.

AMT 290* AIRFRAME AND POWERPLANT UPGRADE (6)
Prerequisite(s): None.

This course is designed for those individuals who meet the experience requirement for the Airframe and Powerplant certificate as stipulated in the Federal Aviation Regulation Part 65, and who qualify to take the Federal Aviation Administration's (FAA) written examination for Airframe and/or Powerplant. Course not open to AMT students.

6 hours lecture.

AMT 294 FIELD EXPERIENCE IN AVIATION MAINTENANCE TECHNOLOGY (1-6)
Prerequisite(s): A declared major in Aviation Maintenance Technology and completion of Phase 3. Permission and approval of a cooperative education program coordinator.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Aviation Maintenance Technology and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

AMT 295* PRACTICUM AVIATION MAINTENANCE TECHNOLOGY UPGRADING (6)
Prerequisite(s): None.

Three categories of students will be eligible to take this course:

- a student who has completed AVN 290.
- a student who has passed the written FAA Airframe and/or Powerplant Mechanic's examination.
- a student who holds a current FAA Airframe and/or Powerplant license.

An upgrade or refresher course in Aviation Maintenance Technology with emphasis on the development of practical skills required in the 43 subject areas of the aviation maintenance occupation as outlined in the FAA's Advisory Circular 65-2D. This course is not open to A & P students, as it does not meet degree requirements.

4 hours lecture; 6 hours laboratory.

Avionics Technology

AVT 101 MATH FOR BASIC ELECTRONICS (3)
Prerequisite(s): One year high school algebra or equivalent.

A review of arithmetic and the study of algebraic principles and applications necessary to provide the student with the tools needed to solve problems in electricity and electronics.

3 hours lecture.

AVT 104* INTRODUCTION TO ELECTRONICS (7)
Prerequisite(s): AVT 101 or equivalent (AVT 101 may be taken concurrently).

An introduction to direct and alternating current circuits, with emphasis on Ohm's Law, Kirchoff's Laws and network theorems used in the analysis of basic electronic circuits.

5 hours lecture; 6 hours laboratory.

AVT 107* AVIONICS FUNDAMENTALS (6)
Prerequisite(s): AVT 104 (may be taken concurrently).

An introduction to avionics fundamentals with emphasis on the navigation and communication systems required to support flight operations.

4 hours lecture; 4 hours laboratory.

AVT 112* ELECTRONIC DEVICES AND CIRCUITS I (6)
Prerequisite(s): AVT 104.

The study of semiconductor devices at an operational level. Major emphasis will be placed on analysis of diodes, power supplies, filters, transistor and field effect transistor amplifiers, stressing the importance of DC biasing, AC signal analysis, load lines, hybrid parameters, and troubleshooting multistage systems.

4 hours lecture, 4 hours laboratory.

AVT 115* DIGITAL CIRCUITS WITH MICROPROCESSOR FUNDAMENTALS (6)
Prerequisite(s): AVT 101 and 104.

A study of digital concepts, logic elements and logic gates, with emphasis on combinational logic, sequential logic, memory circuits, and support circuits of various components that together form the microcomputer.

5 hours lecture (72 clock hours); 3 hours laboratory (48 clock hours).

AVT 118* PULSE AND DIGITAL CIRCUITS (6)
Prerequisite(s): AVT 101 and 104.

A study of the components of circuitry most often encountered for pulse shaping and time delay in microcomputer systems. Major emphasis will be placed on RC networks, diodes and transistor switching circuits, and their applications.

5 hours lecture (72 clock hours); 3 hours laboratory (48 clock hours).

AVT 171 UAV AVIONICS TECHNICIAN (14)
Prerequisite(s): PFT 170 and AMT 170.

This course provides the required skills and knowledge to safely repair UAV system avionics. A practical study of Unmanned Aerial Vehicle maintenance with emphasis upon system components, performance criteria, diagnosis and inspection techniques, communications equipment, and operational safety. Enrollment is limited to TRW employees and the Department of Defense.

5 hours lecture; 27 hours laboratory.

AVT 202* ELECTRONIC COMMUNICATIONS (6)
Prerequisite(s): AVT 112.

The study of basic communication concepts and circuits, including modulation techniques as well as radio transmitters, receivers, antennas, radar, microwave techniques, data communication techniques, fiber optics, high-tech communication components, circuits, and equipment.

5 hours lecture (72 clock hours); 3 hours laboratory (48 clock hours).

AVT 205* ELECTRONIC DEVICES AND CIRCUITS II (6)
Prerequisite(s): AVT 112.

A continuation of Electronic Devices and Circuits I, including a study of MOSFETs, operational amplifiers, applications, and analysis of practical amplifier circuits, negative feedback, oscillators, solid-state switching circuits, thyristors, optoelectronic devices, and selected material covering other electronic devices.

4 hours lecture (60 clock hours); 6 hours laboratory (96 clock hours).

AVT 208 FCC/FAA REGULATIONS (4)
Prerequisite(s): AVT 112 and 115.

An in-depth study of the Federal Communications Commission examination, preparing the student to take the FCC test. Also, an introduction to the Federal Aviation Administration and its rules and regulations.

4 hours lecture (60 clock hours).

AVT 220* NAVIGATION SYSTEMS (6)
Prerequisite(s): AVT 202.

An introduction to aircraft navigation systems with emphasis on the theory and systems analysis of modern electronic equipment.

4.4 hours lecture (66 clock hours); 4.8 hours laboratory (72 clock hours).

AVT 224 FLIGHT MANAGEMENT/ CONTROL SYSTEMS (4)
Prerequisite(s): AVT 208.

An introduction to the principles, system analysis, and operation of flight director and automatic flight control systems.

4 hours lecture (60 clock hours).

AVT 228* AIRCRAFT RADAR & PULSE SYSTEMS (6)
Prerequisite(s): AVT 118.

A study of radar principles and application, microwave principles, signal processing and display systems.

4.4 hours lecture (66 clock hours); 4.8 hours laboratory (72 clock hours).

AVT 294 FIELD EXPERIENCE IN AVIONICS TECHNOLOGY (1-6)
Prerequisite(s): Sophomore standing in a declared major and prior approval of Cooperative Education Program Coordinator.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Avionics Technology. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

NOTE: Lower- and upper-division Cooperative Education courses may be combined but cannot exceed 16 credits.

Biological Sciences

BIO 101* GENERAL BIOLOGY (NON-MAJORS): SELECTED TOPICS (4)
Prerequisite(s): None.

Recommended: MAT 082.

Selected biological topics including methods used by biologists to make discoveries and evaluate scientific data, principles and concepts of biology with reference to the organization and function of cells, inheritance and man. Not open to majors in the biological sciences or the pre-professional curricula.

3 hours lecture; 3 hours laboratory.

BIO 105* ENVIRONMENTAL BIOLOGY (4)
Prerequisite(s): None.

Recommended: ENG 101, reading level 11th grade or above.

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.

BIO 114 SPECIAL TOPICS IN BIOLOGY (.5-1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing biological science topics of current regional or global significance, which will vary with scientific advance and changes in student, needs and interests. May be repeated up to 4 times for Cochise College credit. Cochise College elective credit only unless otherwise designated in degree programs.

lecture and/or laboratory (8 to 16 hours per semester).

BIO 114A ECOLOGY OF THE SONORAN DESERT OF ARIZONA (1)
A field study of the rich varied ecology of the Sonoran Desert in Arizona.

weekend field trip or 16 hours lecture.

BIO 114C WILDLIFE OF SOUTHERN AFRICA (1)
A study of the ecology of Southern Africa, including current wildlife management systems, predator-prey relationships and bird life. Also includes a brief introduction to the relationship between the ecology and native cultures.

16 hours lecture.

BIO 114D TAXONOMY OF BIRDS (1)
A practical introduction of species identification, using size, silhouette, behavior and natural setting. Arizona's fifteen hummingbird species will illustrate the basics of bird taxonomy.

weekend field trip.

BIO 114F WILDLIFE ECOLOGY AND ENVIRONMENTAL HAZARDS OF THE HUACHUCA MOUNTAINS (.5)
An introductory study of the plants and wildlife of Southeastern Arizona, emphasizing their relationship to one another and to the environment. Includes information on poisonous reptiles and arachnids.

weekend field trip or 8-16 hours of lecture

BIO 114G FLORA AND FAUNA OF COCHISE COUNTY (.5-1)
An overview of the varied Southeastern Arizona ecosystem in relationship to physical features such as altitude and surface water.

weekend field trip or 8-16 hours of lecture.

BIO 114H CACTUS AND SUCCULENTS OF ARIZONA (.5-1)
An introductory study of plant habitats, emphasizing barrel, beehive, hedgehog, pincushion, pineapple, prickly pear and button cacti as well as century, ocotillo and desert spoon succulents Includes seminar discussions and field presentations.

weekend field trip or 16 hours of lecture.

BIO 114I BIRDS OF SOUTHEASTERN ARIZONA (1)
A field-based study of Southeastern Arizona birdlife, including the elegant trogon, painted redstart and numerous hummingbird species, emphasizing relationships to the natural environment.

weekend field trip.

BIO 114J DANGEROUS ANIMALS OF ARIZONA (1)
An introduction to the dangerous animals of Arizona. Includes identification of species, their role in the ecosystem, preventing their invasion of our space, first aid and medical intervention needs.

16 hours lecture.

BIO 114K FRESHWATER ENVIRONMENTS OF COCHISE COUNTY (1)
An introduction to the biology of freshwater environments of Cochise County including marshes, ponds, lakes, streams and rivers. Both permanent and transient water sources are considered.

weekend field trip.

BIO 114L BIOLOGY AND DESERT SURVIVAL (1)
An introduction to survival in the Sonoran Desert of Arizona by using native plants, animals, and water sources. Includes evaluating and treating common survival injuries, poisons, and venoms.

weekend field trip or 16 hours of lecture.

BIO 160* INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY (4)
Prerequisite(s): None.

Recommended: ENG 101, MAT 082, reading level 11th grade or higher.

Not for biology or pre-med majors. Examination of the systems of the human body. For students in health occupation programs which require a one-semester anatomy and physiology course, or to fulfill a one-semester laboratory science requirement.

3 hours lecture; 3 hours laboratory.

BIO 181* GENERAL BIOLOGY I (4)
Prerequisite(s): None.

Recommended: ENG 101, MAT 082 and either one year of high school chemistry or one semester of college level chemistry, reading grade level 11.

Principles of structure and function of living things at molecular, cellular, and organismic levels of organization.

3 hours lecture; 3 hours laboratory.

BIO 182* GENERAL BIOLOGY II (4)
Prerequisite(s): BIO 101 or permission of instructor.

Recommended: General Chemistry.

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.

BIO 183* MARINE BIOLOGY (4)
Prerequisite(s): Strong performance in a high school biology course or one semester of a college-level biology course or permission of instructor.

Recommended: ENG 101 and MAT 082.

Basic concepts of physical oceanography, marine habitats, plant and animal evolution, habitat and adaptation, interrelationships, taxonomy, and marine ecology. Emphasis on parameters of evolution, reproduction, and inter/intraspecific competition, food chains, adaptations and ecological balance.

3 hours lecture; 3 hours laboratory.

BIO 184* PLANT BIOLOGY (4)
Prerequisite(s): One year high school biology with a grade of C or better, taken within the last five years or BIO 101 or permission of instructor.

Recommended: ENG 101, MAT 082, and Reading grade level 11.

The study of the structure, functions and development of the organisms considered plants under the five-kingdom system classification.

3 hours lecture; 3 hours laboratory.

BIO 190* ANIMAL BIOLOGY (4)
Prerequisite(s): One year high school biology with a grade of C or better, taken within the last five years or BIO 101 or permission of the instructor.

Recommended: ENG 101, MAT 082, reading grade level 11.

Principles of animal structure and function, including characteristics and evolution of organisms, environmental relations, behavior, metabolism and an evolutionary survey of the animal kingdom. For biology and preprofessional majors and other interested students.

3 hours lecture; 3 hours laboratory.

BIO 201* HUMAN ANATOMY AND PHYSIOLOGY I (4)
Prerequisite(s): Either one year high school biology (C or better) taken in last five years or one semester of a 100 college level biology course or permission of the instructor.

Recommended: Reading level 11th grade or above and ENG 101.

An integrated study of the physical, structural, and functional features of the cells, tissues, skeletal system, muscular system, and nervous system.

3 hours lecture; 3 hours laboratory. Discussion 1 hour (optional).

BIO 202* HUMAN ANATOMY AND PHYSIOLOGY II (4)
Prerequisite(s): BIO 201.

Recommended: ENG 101, and reading level 11th grade or above.

An integrated study of the structural and functional features of the endocrine system, circulatory system, urinary system, respiratory system, digestive system, and reproductive system.

3 hours lecture; 3 hours laboratory. Discussion 1 hour (optional).

BIO 205* MICROBIOLOGY (4)
Prerequisite(s): Successful completion of a semester of a college-level biological science.

Recommended: ENG 101, MAT 082, reading grade level 11.

A survey of microbic life and fundamental biological types of all microorganisms; characteristics and importance of microorganisms; control of microorganisms and disease, and other aspects of applied microbiology.

3 hours lecture; 3 hours laboratory.

BIO 226* ECOLOGY (4)
Prerequisite(s): MAT 082 and one semester of a college level biological science.

Recommended: ENG 101, reading grade level 11.

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; 1 Saturday field trip.

BIO 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to the initiation of the study. May be repeated for credit.

Botany

See Biological Sciences.

Business Administration

BUS 093 CULTURAL CONTEXT: CASE STUDIES (1)
Prerequisite(s): Concurrent enrollment in ESL 014 or permission of instructor.

Introduction to the social norms, cultural values and assumptions underlying workplace behavior with emphasis on case studies and practical application.

2 hours laboratory.

BUS 104 BUSINESS MATHEMATICS (3)
Prerequisite(s): MAT 072.

This course examines the fundamentals of business mathematics and the use of the number language to communicate in the business world. Identical to OAD 104.

3 hours lecture.

BUS 105 TECHNICAL REPORT WRITING (1)
Prerequisite(s): None

A practical overview of technical report writing with emphasis on clarity, conciseness, and precision of written language. Includes a review of English grammar and spelling, critical reading/summarizing techniques, and listening, note-taking, and proofreading.

BUS 109 SURVEY OF AMERICAN BUSINESS (3)
Prerequisite(s): None.

This course examines the fundamental characteristics and functions of modern business, with emphasis on career opportunities.

3 hours lecture.

BUS 110 SURVEY OF INTERNATIONAL BUSINESS (3)
Prerequisite(s): None.

A study of international business in a socio-political and multicultural context. This course focuses on the cultural, economic and political aspects of foreign environments and their effect on the operation of an international firm.

3 hours lecture.

BUS 123 HUMAN RESOURCE MANAGEMENT (3)
Prerequisite(s): None.

A study of human resource management policies and techniques pertaining to the recruitment, selection, development, compensation, retention, evaluation, and promotion of personnel within an organization.

3 hours lecture.

BUS 125 MANAGEMENT AND ORGANIZATIONAL BEHAVIOR (3)
Prerequisite(s): None.

Study of actions and attitudes of people in organizations. Focuses on the study of group behavior, interpersonal and intergroup relationships in an organization. Conceptual tools for analyzing behavior and managing group processes of conflict, communication and task accomplishments.

3 hours lecture.

BUS 126 EXPLORING YOUR POTENTIAL AS A MANAGER (3)
Prerequisite(s): None.

A course to assist women in evaluating their aptitudes, capabilities and values, and relating this evaluation to possible career choices in the business world.

3 hours lecture.

BUS 127 LEADERSHIP AND SUPERVISION (3)
Prerequisite(s): BUS 123 or permission of instructor.

In-depth study of the supervision and leadership functions in management. Case studies emphasized.

3 hours lecture.

BUS 131 INTERNATIONAL MANAGEMENT (3)
Prerequisite(s): None.

An overview of managerial issues confronting managers doing business in the international sector, focusing on the design of the organization, political, legal, cultural and economic concerns, personnel issues and negotiating strategies.

3 hours lecture.

BUS 134 INTERNATIONAL MARKETING (3)
Prerequisite(s): None.

An overview of the marketing principles involved in international business. This class will consider globalization, trade issues, and the application of the 4 Ps of marketing to the international business environment.

3 hours lecture.

BUS 143 PRINCIPLES OF MANAGEMENT (3)
Prerequisite(s): None.

A study of managerial challenges relating to such issues as people, diversity, quality, ethnic, and the global environment. Managerial principles with emphasis on planning, organizing, motivating, and controlling for effective business decisions.

3 hours lecture.

BUS 145 PRINCIPLES OF MARKETING (3)
Prerequisite(s): None.

A study of marketing principles involved in the distribution of goods and services from the producer to the ultimate consumer, including functions of wholesaling, retailing, direct selling, risk taking, and storage.

3 hours lecture.

BUS 146 INTRODUCTION TO ACCOUNTING (3)
Prerequisite(s): BUS 104 or higher math course.

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. Identical to OAD 146.

3 hours lecture; 1 hour laboratory.

BUS 149 MERCHANDISING MANAGEMENT (3)
Prerequisite(s): None.

Examines the organization and operation of retail outlets, trends and concepts in retail selling, problems in retailing both goods and services, and solutions for buying, selling, stocking, servicing and controlling in retail outlets.

3 hours lecture.

BUS 150 INTRODUCTION TO BUSINESS ETHICS (3)
Prerequisite(s): ENG 101.

An introductory course in the application of moral philosophy to contemporary ethical and moral problems in business; an examination of individual, organizational, and macrolevel issues in business ethics. It will provide students with a framework that they can use to identify, analyze, and control ethical issues in business decision making.

3 hours lecture.

BUS 156 PRINCIPLES OF FINANCE (3)
Prerequisite(s): BUS 146 or BUS 201 or permission of instructor.

A study of the world of finance dealing with the relationship of money to our economy and an in-depth study of the role and techniques of financial management within a company.

3 hours lecture.

BUS 160 JOB AND FAMILY SUCCESS SKILLS (3)
Prerequisite(s): None.

A study of problem areas workers may encounter in obtaining and maintaining their employment including job seeking skills, dressing for success, decision making strategies, self-esteem, job stress, nutrition, communication skills and coping with stress as a working parent.

3 hours lecture.

BUS 167 BUSINESS COMMUNICATIONS (3)
Prerequisite(s): CIS 116 or equivalent proficiency and ENG 101 or ENG/OAD 111 with a grade of C or better, or placement into ENG 101.

A study of business communications prepared in a business organization, including typical internal and external communications (letters, memos, proposals and reports). Emphasis will be on applying English fundamentals, usage, syntax and organization ideas as well as on using technology appropriately to conduct research and to create documents. This course will also stress listening and speaking skills. Identical to ENG 167 and OAD 167.

3 hours lecture.

BUS 172 QUANTITATIVE METHODS IN BUSINESS (3)
Prerequisite(s): MAT 151 or permission of instructor.

This course concentrates on business applications of quantitative optimization methods in operations management decisions. Quantitative methods and modeling to support business decision making will be the focus.

3 hours lecture.

BUS 179 APPLIED TECHNICAL WRITING (3)
Prerequisite(s): ENG 100 (C or better) or placement into ENG 101. College-level reading.

An applied skills course on writing clear organizational reports and communications. Assignments will stress the processes and products for reporting technical information with emphasis on writing mechanics/syntax, forms/formats and technical style. Identical to CIS 179 and ENG 179.

3 hours lecture.

BUS 180* COMPUTERIZED ACCOUNTING (3)
Prerequisite(s): BUS 146 or BUS 201.

Course includes the use of automated accounting software to complete general ledger, accounts payable, accounts receivable and payroll reports.

3 hours lecture.

BUS 183 STARTING A BUSINESS (3)
Prerequisite(s): None.

Recommended: Computer and Internet literacy.

A primer on business success emphasizing investigation and evaluation of business opportunities. The course will also emphasize the acquisition of skills and knowledge to establish the business, including practical problems in marketing, financial analysis and control, and management and organization.

3 hours lecture.

BUS 192 APPLICATIONS IN MANAGEMENT DEVELOPMENT (.5)
Prerequisite(s): None.

Seminars designed for personal/professional skill enhancement. Principles and practice of various professional development applications are taught. Each session is focused on mastering a particular subject with emphasis on the effective use of the topics under study. Each seminar provides a minimum of eight hours of instruction.

1/2 hour lecture.

192A Business Communications and Writing Skills
192B Making Presentations with Confidence and Power
192C Communicating Across Cultures
192D Fundamentals of Supervision
192E Personnel Aspects of Supervision
192F Leadership Techniques for Technical Managers
192G Conflict Resolution
192H Thinking Beyond the Boundaries
192I Harmony in the Workplace
192J Self-Directed Work Teams
192K Management Skills for Support Staff
192L Leading Organizational Change
192M Positive Approaches to Change
192N Proofreading, Editing and Grammar Skills
192O Customer Service – A Positive Approach
192P Introduction to Grant Writing
192Q Intermediate Grant Writing
192R Positive Approaches to Difficult People
192S Mastering Negativity
192T Coping with Stress
192U Project Management
192V Starting a Small Business
192W Writing a Winning Business Plan
192X Marketing Small Business on the Internet

192Y Developing a Safety Program for Business
192Z Coaching and Counseling for Supervisors
A192 Writing an Effective Contract Proposal

BUS 201 FINANCIAL ACCOUNTING (3)
Prerequisite(s): MAT 082 or BUS 104 or equivalent.

An introductory course in gathering, recording and using the financial data of a business: 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.

BUS 202 MANAGERIAL ACCOUNTING (3)
Prerequisite(s): BUS 201, CIS 181 (or knowledge of spreadsheets).

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.

BUS 204 ELEMENTS OF INTERCULTURAL COMMUNICATION (3)
Prerequisite(s): ENG 101 with a grade of C or better or permission of instructor.

Introduction to communication between cultures. Emphasis will be on understanding and applying practical communication strategies and skills so as to communicate effectively with people of diverse cultural backgrounds in a multicultural society and world. Identical to AJS 204, COM 204.

3 hours lecture.

BUS 219 BUSINESS STATISTICS (3)
Prerequisite(s): MAT 151.

Introductory topics of business statistics such as data presentation, data summarization, probability, probability distributions, sampling distributions, elementary decision-making, estimation of population means, testing of hypotheses, analysis of variance and regressive analysis.

3 hours lecture.

BUS 220 BUSINESS STATISTICS (3)
Prerequisite(s): BUS 219.

Testing and estimation, statistical inference, variance analysis, regression, correlation, time series, and index number application.

3 hours lecture.

BUS 224 FIELD EXPERIENCE IN BUSINESS ADMINISTRATION (1-6)
Prerequisite(s): A declared major in business administration and prior approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in business administration. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

BUS 228 PERSONAL FINANCIAL PLANNING AND INVESTMENTS (3)
Prerequisite(s): BUS 146, BUS 201 or permission of instructor.

An introduction to the principles and techniques of personal financial planning, including preparation of personal financial statements; budgeting; goal setting; investing; determining insurance needs; tax, retirement, and estate planning. A strong emphasis will be placed on investment techniques and selection.

3 hours lecture.

BUS 229 INTRODUCTION TO PERSONAL INVESTING (3)
Prerequisite(s): BUS 228 or permission of instructor.

An introduction to the investment opportunities open to individual investors including a description of available investment instruments, brokerage procedures, applicable rules and regulations, tax impacts and analysis techniques.

3 hours lecture.

BUS 230 MONEY AND BANKING (3)
Prerequisite(s): ECN 201, or permission of instructor.

The practical aspects of money and banking, and monetary theory needed by the banking student. The students will be introduced to major private and public institutions in the field of money and banking, the major three traditional divisions of finance (corporate finance, investments, capital markets), the role of the Federal Reserve, and the growth of monetary aggregates and its impact on the economy.

3 hours lecture.

BUS 231 BUSINESS LAW (3)
Prerequisite(s): Sophomore standing.

A presentation of law as part of the American society with an emphasis on judicial procedures, business transactions, contracts, torts, personal and real property, administrative, criminal, and consumer law.

3 hours lecture.

BUS 232 BUSINESS LAW (3)
Prerequisite(s): Sophomore standing and completion of BUS 231 or permission of instructor.

A presentation of the laws pertaining to sales, commercial paper, creditor's rights and secured transactions, agency and employment, partnerships and special ventures, and corporations.

3 hours lecture.

BUS 233 THE LEGAL ENVIRONMENT OF BUSINESS (3)
Prerequisite(s): None.

An examination of the legal framework governing rules of conduct among businesses and its impact on establishing business policy.

3 hours lecture.

BUS 240 PRINCIPLES OF REAL ESTATE I (3)
Prerequisite(s): None.

A course in basic real estate principles including introduction to the profession and license law, definition of real property, legal descriptions, rights and interest in property, ownership, contracts, real estate economics, financing and foreclosures, use and valuation of property. This course is one of two courses required for the Arizona Real Estate salespersons' examination.

3 hours lecture.

BUS 241 PRINCIPLES OF REAL ESTATE II (3)
Prerequisite(s): BUS 240 or permission of instructor.

An advanced course in real estate including escrow procedures and title insurance, liens and encumbrances, advanced contracts, water rights, toxic waste and environmental hazards, agency, ethics and professional relationships, real estate codes and the commissioners' rules, investment, property management and government restrictions, and real estate mathematics.

3 hours lecture.

BUS 245 SEMINAR: TRENDS AND PRACTICES IN MARKETING AND MANAGEMENT (3)
Prerequisite(s): Sophomore level or permission of instructor.

Applying problem-solving and decision-making techniques to practical business situations based on current readings in marketing and management. Designed to blend and apply current business theories and practices to meet class and individual needs.

3 hours lecture.

BUS 282 MANAGEMENT INFORMATION SYSTEMS (3)
Prerequisite(s): CIS 120, comparable work experience, or permission of instructor.

A study of the management sciences involved in meeting the informational needs of business, industry, governmental and educational agencies; a study of skills and knowledge of man versus machine to develop and design data processing systems in a problem-oriented approach.

2 hours lecture; 1 hour laboratory.

BUS 283* SMALL BUSINESS MANAGEMENT-A SEMINAR APPROACH (3)
Prerequisite(s): BUS 143, 145, 201, 202 and CIS 181.

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.

BUS 285 ELECTRONIC COMMERCE (3)
Prerequisite(s): BUS 110, 131, 134, 201, ECN 201, 221 or permission of instructor.

This is the final course for the International Business Certificate. 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.

BUS 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

Chemistry

CHM 100* PREPARATION FOR CHEMISTRY (4)

Prerequisite(s): MAT 082 or equivalent.

Elements of general chemistry adapted to the needs of those students who have not had high school chemistry.

3 hours lecture; 3 hours laboratory.

CHM 130* FUNDAMENTAL CHEMISTRY (4)

Prerequisite(s): MAT 082 or equivalent.

A one-semester course introducing fundamentals of general chemistry. Emphasis is placed on principles important to the understanding of human biological functions and related medical aspects. Especially adapted to the needs of students in nursing and other health related fields. Serves as a laboratory science for degree requirements.

3 hours lecture; 3 hours laboratory.

CHM 140* FUNDAMENTAL ORGANIC AND BIOCHEMISTRY (4)

Prerequisite(s): CHM 130 or CHM 151 or permission of instructor.

Principles of organic and biochemistry designed for students who do not intend to take further chemistry, such as majors in nursing, agriculture, home economics and physical education.

3 hours lecture; 3 hours laboratory.

CHM 151* GENERAL CHEMISTRY I (4)

Prerequisite(s): MAT 122 or equivalent; also high school chemistry or CHM 100 or CHM 130 with a grade of C or better.

Introduction to the general principles of chemistry with emphasis on quantitative relationships including properties of matter, chemical bonding and structure, nomenclature, chemical equations, stoichiometry, thermochemistry, states of matter, and aqueous solutions.

3 hours lecture; 3 hours laboratory.

CHM 152* GENERAL CHEMISTRY II (4)

Prerequisite(s): CHM 151.

Introduction to the general principles of chemistry with emphasis on quantitative relationships including acids and bases, equilibria, kinetics, nuclear chemistry, electrochemistry, and possibly aspects of organic and biochemistry.

3 hours lecture; 3 hours laboratory.

CHM 235* GENERAL ORGANIC CHEMISTRY I (4)

Prerequisite(s): CHM 152.

An introduction to the naming, structure, and properties of organic compounds with an emphasis on alkanes, stereo chemistry, alkyl halides, alkenes, and NMR spectroscopy. Mechanisms and synthesis will be major themes studied in order to reveal the relationships between these different classes of compounds.

3 hours lecture; 3 hours laboratory.

CHM 236* GENERAL ORGANIC CHEMISTRY II (4)

Prerequisite(s): CHM 235.

A continuation of an introduction to the naming, structure, and properties of organic compounds with an emphasis on alcohols, ethers, epoxides, alkynes, aromatics, ketones, aldehydes, amines, carboxylic acids and their derivatives, enols, and enolate ions. Mechanisms and synthesis will be major themes studied in order to reveal the relationships between these different classes of compounds.

3 hours lecture; 3 hours laboratory.

CHM 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

Civil Engineering Technology

CET 100 ENGINEERING SURVEY I (3)
Prerequisite(s): None.

Mensuration through the application of surveying techniques; theory of errors and their analysis; fundamental concepts of horizontal, vertical, and angular measurements; basic surveying operations and computations, control systems, and datums for engineering surveys; locating & positioning man-made structures.

2 hours lecture; 4 hours laboratory.

CET 101 ENGINEERING SURVEY II (3)
Prerequisite(s): CET 100.

Advantages, disadvantages and restriction of various methods used in surveying and mapping; principles of directional control; geodetic relationships and subdivision layout.

2 hours lecture; 3 hours laboratory.

Communications

COM 091 PRONOUNCING ENGLISH (1)
Prerequisite(s): Recommendation from placement testing. Concurrent enrollment in ESL 012 or 014.

Introduction to the sounds, rhythm, stress patterns, and intonation of English, with emphasis on those aspects of the oral language which make it easier to understand and to be understood.

2 hours laboratory.

COM 100 INTRODUCTION TO COMMUNICATION (3)
Prerequisite(s): None. However, the student must have an English language proficiency at least comparable to that of the advanced level of the English-as-a-Second-Language Program at Cochise College. This course is not designed to transfer to a university.

A study of and practice in basic oral communication for transitional students. The study includes basics of oral communication in interpersonal, small group, and large group situations. Included are: 1) a study of what is involved in oral communications; and 2) practice in communication both as a speaker and a listener.

3 hours lecture/discussion.

COM 102 ESSENTIALS OF COMMUNICATION (3)
Prerequisite(s): Placement in ENG 101 or successful completion of ENG 100.

Recommended: ENG 101.

A study of the communication process as it relates to all communication (one-to-one dialogs, small- group discussions, and large group speaking situations), with an emphasis on communicating with an audience. The study includes basics in all communication: choosing and researching a topic, organizing material for speaking, and delivering speeches of information, persuasion, and demonstration.

3 hours lecture.

COM 109 PUBLIC SAFETY COMMUNICATIONS (3)
Prerequisite(s): ENG 100 or equivalent proficiency.

Theory and practice of encoding and decoding electronically-transmitted messages: radio, telephone, teletype, computer; FCC regulations; strategies to reduce ambiguity in messages; vocational report writing; telephone interviewing; call prioritization; police, fire, and medical dispatching; interagency cooperation; radio procedures for pilots.

3 hours lecture.

COM 110 PUBLIC SPEAKING (3)
Prerequisite(s): COM 102, a high school speech course or permission of instructor.

A study of public speaking, beginning with a review of the fundamentals of speech as they relate to communicating with an audience, continuing with a study of theories and techniques of persuasion with practical application and an analysis of various types of speeches with practice in researching, constructing and delivering speeches of each type. Includes a study of the basics in parliamentary procedure and public discussion with practice in participating in and leading parliamentary meetings.

3 hours lecture; discussion and presentation of speeches.

COM 115 ARGUMENTATION AND DEBATE (3)
Prerequisite(s): COM 102 or permission of instructor.

A course in practical reasoning, appraisal and use of evidence, recognition of fallacies and application of debate forms and oral style of argumentation. Intercollegiate debate optional for class members.

3 hours lecture.

COM 193 SPECIAL TOPICS IN COMMUNICATIONS (1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing a variety of communication skills ranging from telephone use to interpersonal and small-group skills to formal public speaking. Topics will vary according to changes in student need and interest.

1 hour lecture.

COM 193A	Coping with "Stage Fright"
COM 193B	Diversity Issues
COM 193C	Gender Differences in Communication
COM 193D	"Difficult" People
COM 193E	Improving Small Group Communication
COM 193F	Improving Group Problem Solving
COM 193G	Preparing for and Running Public Meetings

COM 204 ELEMENTS OF INTERCULTURAL COMMUNICATION (3)
Prerequisite(s): ENG 101 with a grade of C or better or permission of instructor.

Introduction to communication between cultures. Emphasis will be on understanding and applying practical communication strategies and skills so as to communicate effectively with people of diverse cultural backgrounds in a multicultural society and world. Identical to BUS 204 and AJS 204.

3 hours lecture.

COM 270 INTERPERSONAL COMMUNICATIONS (3)
Prerequisite(s): Sophomore standing or permission of instructor.

A course to develop self-awareness and insight into interpersonal relationships with emphasis upon the development of communications skills and techniques for one-on-one professional communication. Identical with SSV 270.

3 hours lecture.

COM 271 COMMUNICATIONS IN SMALL GROUPS (3)
Prerequisite(s): SSV 270 or COM 270 and permission of instructor.

A continuation of COM 270 and SSV 270 refining skills and techniques learned first semester and adding analysis and presentation with emphasis on small-group communication processes. Identical with SSV 271.

3 hours lecture.

Computer Information Systems

CIS 105 INTRODUCTION TO INFORMATION SECURITY (1)
Prerequisite(s): None.

Provides a concentrated examination of Information Security. Examines security models, auditing and intrusion detection, damage control and network security. Emphasis is on the impact of Information Security on an organization and its management.

1 hour lecture.

CIS 114* INTRODUCTION TO THE PERSONAL COMPUTER (3)
Prerequisite(s): None.

An introduction to the uses of the personal computer. Emphasis will be placed on how the state of the art personal computer works, using the operating system and word processing software, and an introduction to the Internet. This course is not transferable and does not fulfill the information literacy requirement.

3 hours lecture.

CIS 116* LEARNING TO USE THE PERSONAL COMPUTER (3)
Prerequisite(s): None.

An introduction to the uses of the personal computer. Emphasis will be placed on how the state-of-the-art personal computer works, using the operating system and using word processing software. Also included are introductions to the Internet, spreadsheets and presentation software. This course is taught in a hands-on environment.

3 hours lecture.

CIS 120* INTRODUCTION TO DATA PROCESSING (3)
Prerequisite(s): None.

An overview of the data processing field, general practices and aims of business, data processing systems and terminology, data collection, computer ethics and crime, the Internet and e-mail. Students will have experience using personal computers to reinforce learning.

3 hours lecture.

CIS 125 TELECOMMUNICATIONS TECHNIQUES (3)
Prerequisite(s): None.

A study of the methods of telecommunication. Topics include transmission techniques, telephonic systems, satellite communication systems, local and wide area networks, software and hardware considerations, and telecommunications applications.

3 hours lecture.

CIS 128 UNIX OPERATING SYSTEM (4)
Prerequisite(s): None. This course is for students with little or no knowledge or experience with the Unix operating system. It is also suitable for students wanting college credit for existing Unix knowledge and skills.

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.

CIS 130 PROGRAMMING LOGIC (3)
Prerequisite(s): None.

A course in software and programming concepts. Topics will include methodologies, notations, data, operators, sequence, selection, repetition, subprograms, composite data types, input/output, data files and the software development life cycle.

3 hours lecture.

CIS 140* INTRODUCTION TO OPERATING SYSTEMS (3)
Prerequisite(s): None.

Recommended: CIS 116.

An introduction to personal computer operating systems with emphasis on the use of basic file manipulation and user interface features of the current version of the Microsoft Windows operating system; configuration and customization of Microsoft Windows; and simple file and directory manipulation under MS-DOS and UNIX.

3 hours lecture; 1 hour laboratory.

CIS 142* PC AND PRINTER SUPPORT (3)
Prerequisite(s): CIS 140 or placement exam.

Designed to provide basic and introductory information on computer servicing, enabling the average PC user to diagnose and repair simple problems. Simple configuration and hardware problems will be covered. Some of the topics to be covered will be PC setup and configuration, floppy and hard disk drives, replacing and diagnosing major peripheral problems. Solve many of the most common printer and PC configuration problems. This course is taught in a hands-on environment.

2 hours lecture, 3 hours laboratory.

CIS 150 ESSENTIALS OF NETWORKING (3)
Prerequisite(s): None.

Networking is the fastest-growing area of computer office automation, offering resource sharing and group productivity technologies. This course is presented as an introduction to networks and networking essentials. The student will study and compare the various methods used in PC communications and networking. Emphasis will be placed on the connectivity hardware and how it relates to the OSI model.

3 hours lecture.

CIS 160 INTRODUCTION TO INFORMATION SECURITY (3)
Prerequisite(s): None.

Provides a concentrated examination of Information Security as it applies to Computer Information Systems and Networks. Examines security models, auditing, intrusion detection, damage control, and network issues. Emphasis is on the impact of information security on an organization and its management.

3 hours lecture.

CIS 179 APPLIED TECHNICAL WRITING (3)

Prerequisite(s): ENG 100 (C or better) or placement into ENG 101. College-level reading.

An applied skills course on writing clear, applied organizational reports and communications. Assignments will stress the processes and products for reporting technical information with emphasis on writing mechanics/syntax, forms/formats and technical style. Identical to ENG 179 and CIS 179.

3 hours lecture.

CIS 181* COMPUTER APPLICATIONS (3)

Prerequisite(s): CIS 116 or permission of instructor.

An introduction to the uses of spreadsheet and database software on the personal computer. Emphasis in the spreadsheet will be placed on the use of labels, values and formulas and the development of charts and graphs and the role of the Internet in spreadsheets. Database emphasis will be on design, doing data entry, creating queries, forms and reports.

3 hours lecture.

CIS 182* COMPUTER APPLICATIONS FOR MATH (3)

Prerequisite(s): MAT 122 or the equivalent high school course.

A course in the use of current software packages to help students perform mathematical and technical word processing, computations, and graphing for mathematical application areas. Applications include spreadsheets, word processing, graphics, scanner and the operating system. No programming experience is necessary.

3 hours lecture.

CIS 185* INTRODUCTION TO THE INTERNET (3)

Prerequisite(s): CIS 116 or permission of Instructor.

An introduction to the Internet and its navigation Emphasis is on the World Wide Web as a research tool. Use and management of electronic mail and file transfers are also covered. Strategies for conducting research on the Internet are developed. Basic HTML is addressed. No programming experience is necessary.

3 hours lecture.

CIS 192* COMPUTER APPLICATION ORIENTATION (.5)

Prerequisite(s): None.

Workshops designed for personal/professional skill enhancement. Principles and practice of various computer applications are taught. Each session is focused on mastering a particular software application with emphasis on the effective use of the software under study. Each workshop provides a minimum of eight hours of instruction.

1/2 hour lecture/laboratory.

CIS 192JUnix for Users
CIS 192Q Microcomputer Orientation
CIS 192Z Beginning Microsoft Windows
CIS A192 Intermediate Microsoft Windows
CIS D192 Beginning Excel for Windows
CIS E192 Intermediate Excel for Windows
CIS F192 Beginning ACCESS for Windows
CIS G192 Intermediate ACCESS for Windows
CIS H192 Advanced Topics in ACCESS for Windows (1)
CIS I192 Advanced Topics in ACCESS for Windows (2)
CIS J192 Beginning Word for Windows
CIS K192 Intermediate Word for Windows
CIS L192 Beginning Graphics for Windows
CIS M192 Intermediate Graphics for Windows
CIS N192 Word '97 and the Web
CIS O192 Outlook for Windows
CIS P192 Publisher '97 for Windows

CIS Q192 Using the Internet, Part 1
CIS R192 Using the Internet, Part 2
CIS S192 Building a Home Page on the Internet
CIS T192 Doing Business on the Internet
CIS U192 Introduction to Quickbooks for Windows, Part 1
CIS V192 Intermediate Quickbooks for Windows, Part 2

CIS 193* CURRENT COMPUTER APPLICATIONS (1)
Prerequisite(s): None.

One-unit modules designed for personal/professional improvement. Principles and practices of various computer applications, each session covering mastery of a particular application, with emphasis on the effective use of the application under study.

1 hour lecture/laboratory.

CIS 193A Beginning Spreadsheets
CIS 193B Intermediate Spreadsheets
CIS 193C Advanced Spreadsheets
CIS 193D Spreadsheet Macros
CIS 193E Beginning Database
CIS 193F Intermediate Database
CIS 193G Advanced Database
CIS 193K Harvard Graphics I
CIS 193L Harvard Graphics II
CIS 193M Harvard Graphics III
CIS 193N PowerPoint I
CIS 193O PowerPoint II
CIS 193P PowerPoint III

CIS 201* PASCAL (4)
Prerequisite(s): CIS 130 or permission of instructor.

A beginning course in the PASCAL programming language. Topics will include syntax and semantics, data types, operators, looping structures, decision structures, subprograms, arrays, pointers and file handling.

3 hours lecture; 3 hours laboratory

CIS 202* COBOL PROGRAMMING (4)
Prerequisite(s): CIS 130 or pass placement exam.

A detailed study of the COBOL programming language and the organization of a COBOL program. Computer organization, data structure, program procedures, input/output and operation considerations.

3 hours lecture; 3 hours laboratory.

CIS 203* FORTRAN PROGRAMMING (4)
Prerequisite(s): CIS 130, MAT 151 or pass placement exam.

A detailed study of the FORTRAN programming language to include organization of data structures, input/output operations, and control considerations. Structured programming practices are used.

3 hours lecture; 3 hours laboratory.

CIS 204* C PROGRAMMING (4)
Prerequisite(s): CIS 130 or pass placement exam.

A beginning course in the C programming language. Topics will include syntax and semantics, data types, operators, looping structures, decision structures, functions, arrays, pointers and file handling.

3 hours lecture; 3 hours laboratory.

CIS 205* ADA PROGRAMMING (4)
Prerequisite(s): CIS 130 or permission of instructor.

A beginning course in the ADA programming language. Topics will include syntax and semantics, data types, operators, looping structures, decision structures, functions, procedures, packages, exception handlers and file handling.

3 hours lecture; 3 hours laboratory.

CIS 206* ASSEMBLER WITH ARCHITECTURE (4)
Prerequisite(s): CIS 130 and CIS 221.

A detailed study of the 8088/8086 Assembly Programming language that takes individual instructions written in symbolic form and converts them into machine language. Includes an introduction to the organization and structuring of the major hardware components of a microcomputer to include primary memory, the control unit and the arithmetic logic unit.

3 hours lecture; 3 hours laboratory.

CIS 208* JAVA PROGRAMMING (4)
Prerequisite(s): CIS 130 or permission of instructor.

A beginning course in the JAVA programming language. Topics will include object-oriented programming concepts, terminology, notation, and the syntax and semantics of the JAVA programming language.

3 hours lecture, 3 hours laboratory.

CIS 209* ADVANCED JAVA PROGRAMMING (4)
Prerequisite(s): CIS 208 or permission of instructor.

An advanced course in the JAVA Programming language, covering such topics as Java networking implementations, Java security features, the Java Foundation classes, World Wide Web components, and handling graphics and other media.

3 hours lecture; 3 hours laboratory.

CIS 218* VISUAL BASIC PROGRAMMING (4)
Prerequisite(s): CIS 130 and CIS 140 or permission of instructor.

A study of the fundamentals of computer programming within the Windows environment. Emphasis is placed on Visual Basic, objects, projects and simple Windows programs.

3 hours lecture; 3 hours laboratory.

CIS 220* DATA STRUCTURES (4)
Prerequisite(s): CIS 130 and the appropriate first semester programming language course.

A course in data structures and advanced programming concepts. Topics will include the design, implementation and application of stacks, queues, lists, trees, sequential and direct access to files. Students will choose one of the following languages to implement the data structures: ADA, Assembler, C, C++, COBOL, FORTRAN, Pascal or other approved advanced languages.

3 hours lecture; 3 hours laboratory.

CIS 220A Data Structures ADA
CIS 220B Data Structures-Assembler
CIS 220C Data Structures-C
CIS 220D Data Structures-C++
CIS 220E Data Structures-COBOL
CIS 220F Data Structures-FOTRAN
CIS 220G Data Structures-PASCAL
CIS 220J Data Structures-JAVA

CIS 221* DIGITAL LOGIC (3)
Prerequisite(s): One semester of programming or one semester of networking.

Number systems, conversion methods, binary and complement arithmetic, Boolean and switching algebra, circuit minimizations, ROMs, PLAs, flipflops, synchronous sequential circuits, register transfer design.

3 hours lecture and/or laboratory.

CIS 222* COMPUTER ARCHITECTURE (3)
Prerequisite(s): CIS 130 and MAT 227.

An introduction to the organization and structuring of the major hardware components of a microcomputer to include primary memory, control unit and arithmetic logic. The student will study machine data representation, the mechanics of information transfer and control within a digital computer system, and the fundamentals of logic design.

3 hours lecture.

CIS 223* ADVANCED VISUAL BASIC PROGRAMMING (4)
Prerequisite(s): CIS 218 or permission of instructor.

An examination of advanced topics in Windows programming and Visual Basic. Topics include file access, data base access, help system development and graphics. Emphasis is placed on the development of Windows systems to include specification, development and documentation.

3 hours lecture; 3 hours laboratory.

CIS 227* C++ PROGRAMMING (4)
Prerequisite(s): CIS 130 or permission of instructor.

A beginning course in object-oriented programming using the C++ language. Topics will include object oriented concepts, terminology, notation, and the syntax and semantics of C++ language.

3 hours lecture; 3 hours laboratory.

CIS 229* UNIX SYSTEM ADMINISTRATION (4)
Prerequisite(s): CIS 242 and 257.

An introductory course in UNIX System Administration. Topics will include: starting and stopping the system; security; administering users, groups, file systems, terminals, printers, disks; electronic mail; backing up the system; tuning and troubleshooting the system.

3 hours lecture; 3 hours laboratory.

CIS 234* INTRODUCTION TO NOVELL NETWORKS (4)
Prerequisite(s): CIS 142 and 150.

The Local Area Network (LAN) is among the more important tools which support office automation. Novell NetWare is one of the market leaders in LAN operating systems. This course is presented as an introduction to the administration of LANs. The student will study network configuration and operation.

3 hours lecture; 3 hours laboratory.

CIS 235* NOVELL NETWORK MANAGEMENT (4)
Prerequisite(s): CIS 234.

This course is designed for individuals who manage a Novell network and is the third in a series of networking courses. Topics will include Novell's client-server platform, supervisor utilities, server and workstation configuration, network security, file server memory, utilization and tuning, network management procedures and design concepts.

3 hours lecture; 3 hours laboratory.

CIS 236* NETWORK OPERATING SYSTEMS (4)
Prerequisite(s): CIS 150.

Microsoft NT workstation is becoming the standard office platform. The student will learn the features of workstation, the utilization of the workstation desktop, efficient file handling, creating a functional user environment, utilizing the workstation as a server and the administration of the workstation as a server. The student will learn to use troubleshooting skills to overcome simple and complex problems in the workstation environment.

3 hours lecture; 3 hours laboratory.

CIS 237* ADVANCED MICROSOFT NETWORK MANAGEMENT (4)
Prerequisite(s): CIS 236.

This course concentrates on the advanced techniques required to effectively administer a Microsoft network. This includes the installation and use of Windows NT server and remote administration products, as well as the concepts behind the Microsoft network. The course currently concentrates on Microsoft Windows NT Server products, preparing the student to serve as a network administrator utilizing Microsoft products.

3 hours lecture; 3 hours laboratory.

CIS 238* INTRODUCTION TO TRANSMISSION CONTROL PROTOCOL/ INTERNET PROTOCOL (3)
Prerequisite(s): CIS 237.

This class will give the student a basic understanding of the TCP/IP protocol suite as instituted by Microsoft Windows NT, to include a working knowledge of routing, IP addressing, domain name service, Windows Internet name service, and dynamic host configuration protocol.

3 hours lecture.

CIS 239* IMPLEMENTING EXCHANGE SERVER 5.5 (5)
Prerequisite(s): CIS 237.

In this course, the students are expected to acquire an adequate knowledge of MS exchange server and its technology. This course will provide the student with skills to install, configure, and administer Microsoft exchange server and clients in a single exchange site environment, and customize exchange using its form designer.

3 hours lecture; 3 hours laboratory.

CIS 242* WWW PROGRAMMING (3)
Prerequisite(s): CIS 287.

Recommended: CIS 130.

Introduction to WWW Programming using JavaScript. Emphasis is on the use of existing scripts to create dynamic web pages. Limited script development is introduced.

3 hours lecture; 1 hour laboratory.

CIS 244* WORLD WIDE WEB GRAPHICS (3)
Prerequisite(s): CIS 185 or permission of instructor.

Recommended: ART 103, ART 192.

Graphics are the heart of the World Wide Web. This course addresses creation and modification of graphics. Properties of WWW graphic formats and conversions are also addressed. Strategies for incorporating graphics into World Wide Web sites for effective presentation are covered.

3 hours lecture.

CIS 246* WORLD WIDE WEB ADMINISTRATION (3)
Prerequisite(s): CIS 242, 244.

Capstone course for Webmaster Certificate. Addresses elements of administering a complete website to include security, web organization, and user accounts. Each student will administer a virtual server.

3 hours lecture.

CIS 248 PERL SCRIPTING (3)
Prerequisite(s): CIS 130 or CIS 130 waiver exam.

Provides Perl script creation and maintenance. Emphasis is on application of Perl scripts to the World Wide Web and web applications. Perl scripts are run on Unix and Windows NT systems.

3 hours lecture.

CIS 281* ADVANCED COMPUTER APPLICATIONS (3)
Prerequisite(s): CIS 181 or permission of instructor.

Advanced applications of spreadsheet and database software on the personal computer. Emphasis in the spreadsheet will be placed on the use of formulas and functions, analyzing data, and using the World Wide Web for data reporting. Database emphasis will be on the design of a relational database, enhanced querying techniques, creating forms using multiple tables and developing advanced report forms.

3 hours lecture.

CIS 285* INTRODUCTION TO DESKTOP PUBLISHING (3)
Prerequisite(s): Typing, word processing or computer experience helpful.

Principles and practice of creating printed materials combining text and graphics using major desktop publishing programs, with emphasis on the practical aspects of production. Identical to MED 207 and JRN 207.

3 hours lecture.

CIS 286* ADVANCED DESKTOP PUBLISHING (3)
Prerequisite(s): CIS 285.

Advanced techniques and practices to create printed materials of diverse size and complexity using a desktop publishing system, and a drawing software package. Emphasis will be on improving and enhancing the visual appearance of printed materials.

3 hours lecture.

CIS 287* WORLD WIDE WEB DEVELOPMENT (3)
Prerequisite(s): CIS 185 or permission of instructor.

Provides learning opportunities in web design and authoring. Emphasis is placed on cohesive web design and web authoring environments. Use and management of text, graphics, video and audio through hypertext links are also covered. No programming experience is required.

3 hours lecture.

CIS 288* DEVELOPING ONLINE COURSES (3)
Prerequisite(s): CIS 185 or Internet experience and permission of instructor.

This course provides practical experience in converting existing courses and course materials from traditional modes to an online format. Students are expected to have an existing course to use as a project. A variety of online techniques will be addressed including World Wide Web development, use of e-mail and lists, and applicability of chat facilities. Students will prepare all materials for a course as a project.

3 hours lecture.

CIS 294 FIELD EXPERIENCE IN COMPUTER INFORMATION SYSTEMS (1-6)
Prerequisite(s): A declared major in Computer Information Systems, permission and approval of a Cooperative Education Program Coordinator

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Computer Information Systems and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

Consumer Electronics Repair

The following courses, CER 100, 102, 104, 200, 202, 204, 205 and 206 were designed specifically for the Arizona Department of Corrections in Douglas.

CER 100 RADIO THEORY AND REPAIR (3)
Prerequisite(s): General Electronic Technician Certificate.

A course designed to teach the student radio receiver theory, mechanical components, and electronic circuit operation of the AM/FM radio receiver, with special emphasis on alignment procedures, proper replacement parts selection and substitution using small tools, test equipment, and a soldering iron.

3 hours lecture plus individualized laboratory instruction.

CER 102 AUDIO TAPE RECORDER/ PLAYER REPAIR (3)
Prerequisite(s): CER 100.

A course designed to make the student proficient in repairing audio tape recorder/player equipment. The student will learn magnetic media storage, sound amplification, tape drive systems, types of record and playback heads, microphone and ear phone apparatus used in recording and playback, and how to use diagnostic equipment, diagnostic and repair techniques, hand tools, soldering equipment and repair procedures to facilitate repairs.

3 hours lecture plus individualized laboratory instruction.

CER 104 TELEVISION THEORY AND REPAIR (4)
Prerequisite(s): CER 100.

A course designed to teach the student television receiver theory and the diagnostic techniques used to repair malfunctions with special emphasis on using test equipment, alignment procedures, and the safe use of maintenance tools, materials and supplies to facilitate repairs of television receivers.

4 hours lecture plus individualized laboratory instruction.

CER 200 VIDEO CASSETTE RECORDER REPAIR (4)
Prerequisite(s): CER 104.

A course designed to make the student proficient in video cassette recorder repair. The student will learn video and sound recording and playback using magnetic media, and how to troubleshoot defective circuits using materials, supplies and diagnostic procedures with emphasis on test equipment and alignment procedures to facilitate repairs.

4 hours lecture plus individualized laboratory instruction.

CER 202 COMPACT DISC PLAYER REPAIR (3)
Prerequisite(s): CER 102.

A course designed to make the student proficient in compact disc player repair. The student will learn sound recording and playback using optical laser technology, and how to troubleshoot and repair defective equipment by safely using maintenance tools, gauges, materials and supplies, with emphasis on test equipment and alignment procedures to facilitate repairs.

3 hours lecture and individualized laboratory instruction.

CER 204 MICROWAVE OVEN REPAIR (4)
Prerequisite(s): General Electronics Technician Certificate.

A course designed to make the student proficient in microwave oven repair. The student will learn to schedule maintenance, allot maintenance task hours, and the cost-efficient and safe use of maintenance tools, gauges, materials and supplies with emphasis on test equipment and alignment procedures to facilitate repairs.

4 hours lecture plus individualized laboratory instruction.

CER 205 POWER AMPLIFIER REPAIR (3)
Prerequisite(s): CER 100

A course designed to teach the student advanced power amplifier theory such as integrated amplifiers, integrated stereo systems, graphic equalizers and high power amplifiers. The student will learn the diagnostic techniques used to repair malfunctions with special emphasis on test equipment use, alignment procedures, and the safe use of maintenance tools, materials and supplies to facilitate repairs.

3 hours lecture and individualized laboratory instruction.

CER 206 ADVANCED TELEVISION REPAIR (4)
Prerequisite(s): CER 104.

A course designed to teach the student advanced television receiver theory picture-in-picture, projection and high definition televisions. The student will learn the diagnostic techniques used to repair malfunctions with special emphasis on test equipment, alignment procedures, and the safe use of maintenance tools, materials and supplies to facilitate repairs.

4 hours lecture and individualized laboratory instruction.

CER 224 FIELD EXPERIENCE IN CONSUMER ELECTRONICS REPAIR (1-6)
Prerequisite(s): Sophomore standing in a declared major or prior approval of Cooperative Education Program Coordinator.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Consumer Electronics Repair. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester. NOTE: Lower- and upper-division Cooperative Education courses may be combined but cannot exceed 16 credits.

Cooperative Education

CED 120 SEMINAR: JOB SEARCH TECHNIQUES (1)
Prerequisite(s): None.

A course to assist students in acquiring knowledge and basic employment skills including job-hunting techniques, job applications, résumés, and interviewing. Identical to CPD 120.

1 hour lecture.

CED 124 WORK EXPERIENCE IN COOPERATIVE EDUCATION (1-4)
Prerequisite(s): Prior approval of Cooperative Education Program Coordinator or Faculty Advisor.

A supervised cooperative work experience in Cooperative Education allowing students to apply entry-level skills gained in the classroom in a real world-of-work situation. Variable credit is available by special arrangement. May be taken four times for a maximum of 16 credit hours.

CED 224 FIELD EXPERIENCE IN COOPERATIVE EDUCATION (1-6)
Prerequisite(s): Sophomore standing in a declared major and prior approval of Cooperative Education Program Coordinator.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in the student's chosen occupation. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

Corrections Training Academy

COR 109 PRISONERS' RIGHTS (1)
Prerequisite(s): None.

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.

COR 113 CRISIS INTERVENTION (1)
Prerequisite(s): None.

A practical study of conflict-resolution techniques including assertive communication, force, safety procedures and referrals. Emphasis upon appropriate use by police and correctional officers. (Credit awarded for successful completion of the Arizona Correctional Officer Training Academy.)

1 hour lecture.

COR 118 COMMUNICATIONS IN CRIMINAL JUSTICE (1)
Prerequisite(s): None.

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.

COR 119 FIREARMS (1)
Prerequisite(s): None.

A practical approach to the moral aspects, legal provisions, safety precautions and restrictions covering the use of firearms and the firing of the sidearm and shotgun. (Restricted to Law Enforcement Personnel.)

1 hour lecture.

COR 121 RANGEMASTER CERTIFICATION (3)
Prerequisite(s): None.

Designed to certify Arizona Department of Corrections Security staff as rangemasters, and to prepare the rangemaster to operate a shooting range and teach formal classes. (Restricted to Law Enforcement Personnel.)

3 hours lecture.

COR 192 CRITICAL ISSUES IN PENOLOGY (.5-1)
Prerequisite(s): None.

A revolving seminar/forum emphasizing current areas of critical concern to corrections personnel. May be repeated for Cochise College credit.

.5-1 hour lecture.

CPD 118 EMPLOYMENT WORKSHOP (4)
Prerequisite(s): None.

A practical introduction to and analysis of the means to achieve self sufficiency by obtaining employment. Emphasizes the identification of employment opportunities; the ability to identify and explore career opportunities; and the development of effective job search, communication, interviewing and stress-management techniques. Offered on a pass/fail basis.

4 hours lecture (This class meets for ten days, seven hours per day.)

CPD 119 SEMINAR: CAREER PLANNING (2)
Prerequisite(s): None.

A course to assist students in acquiring the information and skills necessary for effective career planning and decision making.

2 hours lecture.

CPD 120 SEMINAR: JOB SEARCH TECHNIQUES (1)
Prerequisite(s): None.

A course to assist students in acquiring knowledge and basic employment skills including job-hunting techniques, job applications, résumés, and interviewing. Identical to CED 120.

1 hour lecture.

CPD 121 CAREER AND LIFE PLANNING (3)
Prerequisite(s): None.

An exploration of career opportunities to assist students in deciding on and planning for their chosen careers.

3 hours lecture.

CPD 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the instructor and appropriate dean.

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 associate dean prior to initiation of the study. May be repeated for credit.

Custodial Maintenance

CMS 101 INTRODUCTION TO CUSTODIAL MAINTENANCE (3)
Prerequisite(s): None.

History and importance of custodial services; the basic mathematics necessary in the industry; trends in the industry; current custodial opportunities locally, regionally, and nationally; and job-seeking skills to enhance employability.

3 hours lecture; 1 hour laboratory.

CMS 110 CUSTODIAL CHEMICALS, USAGE AND SAFETY (3)
Prerequisite(s): CMS 101 or permission of instructor.

Hands-on practical introduction to the types of cleaning chemicals, their proper use, and safety, including the OSHA Hazard Communication standard. Covers the basic chemistry of cleaning chemicals, then explains the correct use of detergents, soaps, solvents, disinfectants, and other cleaning chemicals. Explains how chemicals are packaged, labeled, mixed and applied in order to make working with chemicals safer.

2 hours lecture; 3 hours laboratory.

CMS 120 FLOORS AND FLOOR-CARE EQUIPMENT (3)
Prerequisite(s): CMS 101 or permission of instructor.

A practical analysis of the methods, skills, chemicals, equipment, and tools used in the maintenance and care of resilient, natural hard, synthetic hard, wood and special flooring.

1 hour lecture; 4 hours laboratory.

CMS 130 MAINTAINING WALLS, WINDOWS, AND OTHER SURFACES (3)
Prerequisite(s): CMS 101 or permission of instructor.

A practical analysis of the methods, skills, chemicals, and tools used to clean and maintain wood, metal, painted surfaces, and fiberglass surfaces.

1 hour lecture; 4 hours laboratory.

CMS 140 CLEANING CARPET AND FABRIC (3)
Prerequisite(s): CMS 101 or permission of instructor.

A practical analysis of the methods and skills for the cleaning of carpet, upholstered furniture, draperies, and fabric wall coverings.

1 hour lecture; 5 hours laboratory.

CMS 150 REST ROOM CLEANING (3)
Prerequisite(s): CMS 101 or permission of instructor.

A practical analysis of the elements of routine rest room cleaning. Covers the specifics of cleaning rest room plumbing fixtures; describes the periodic tasks required to keep rest rooms in good condition; and stresses the importance of disinfecting rest rooms and how to perform this task safely.

1 hour lecture; 5 hours laboratory.

Drafting

DFT 100 BLUEPRINT INTERPRETATION AND BASIC DRAFTING (3)
Prerequisite(s): None.

Introductory course in blueprint reading and interpretation; basic drafting skills including lettering, sketching, orthographic projection, dimensioning, and pictorial drawing, related to mechanical and architectural requirements.

2 hours lecture; 4 hours laboratory.

DFT 112* TECHNICAL GRAPHICS I (3)
Prerequisite(s): None

Introductory course in technical drafting including orthographic and axonometric projection, geometric construction, sketching, lettering, dimensioning, section conventions, with emphasis on industrial drafting standards.

2 hours lecture; 4 hours laboratory.

DFT 113* TECHNICAL GRAPHICS II (3)
Prerequisite(s): DFT 112.

Study of auxiliary and oblique surfaces, intersections, detailing standards, fasteners, materials, and dimensioning with elements of descriptive geometry stressed.

2 hours lecture; 4 hours laboratory.

DFT 120* SPATIAL RELATIONSHIPS (3)
Prerequisite(s): DFT 112 or concurrent with.

Solution of points, lines and planes, single-curved, double-curved and warped surfaces. Emphasis upon mechanical, civil and mining engineering applications.

2 hours lecture; 4 hours laboratory.

DFT 150* COMPUTER-AIDED DRAFTING (3)
Prerequisite(s): DFT 112.

An introduction to the computer as a drafting tool. Multi-view, pictorial and electronic drawings will be completed using computer graphics techniques.

2 hours lecture; 4 hours laboratory.

DFT 170* ILLUSTRATION (3)
Prerequisite(s): DFT 112 or permission of instructor.

A study of illustration and rendering techniques used to describe three-dimensional objects with special emphasis placed on graphic construction and the depiction of shade, shadow, and texture to assist the student in graphic communication.

2 hours lecture; 4 hours laboratory.

DFT 201* TOPICS IN DRAFTING (4)
Prerequisite(s): DFT 112, 120.

A study of drafting related to industrial problems common to machine drafting and electro-mechanical drafting. Emphasis is placed on dimensioning standards, fabrication procedures, cable and wiring diagrams, and detailing.

3 hours lecture; 5 hours laboratory.

DFT 224 FIELD EXPERIENCE IN DRAFTING (1-6)
Prerequisite(s): A declared major in drafting. Permission and approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in drafting and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

DFT 231* PRODUCT DESIGN (3)
Prerequisite(s): DFT 112, 120 or concurrent with DFT 201.

A study of the design process as applied to industrial design problems. Included are elements of human factors engineering, mechanical design, and systems design as a means to designing industrial design products.

2 hours lecture; 4 hours laboratory.

DFT 232* DESIGN AND FABRICATION (3)
Prerequisite(s): DFT 150, 231.

An advanced study of design applied to feasibility determination and prototype construction. Included are elements of ergonomics, anthropometry, and systems design. Feasibility is explored through cost estimation and manufacturability inquiry.

2 hours lecture; 4 hours laboratory.

DFT 241* ENGINEERING DESIGN (4)
Prerequisite(s): DFT 112, 120, and 150.

A study of standardized tooling components including jigs, fixtures, and gauges with emphasis on design of the various tooling elements. Included is a study of automation for manufacturing applications.

3 hours lecture; 5 hours laboratory.

DFT 250* COMPUTER AIDED DRAFTING II (3)
Prerequisite(s): DFT 112, 150.

A continuation of DFT 150 at an advanced level to include three-dimensional construction, pictorial drawings, and complex two-dimensional working drawings. This course also includes an introduction to solid modeling and animation techniques.

2 hours lecture; 4 hours laboratory.

Economics

ECN 201 PRINCIPLES OF MACROECONOMICS (3)
Prerequisite(s): ENG 101.

A broad overview of 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.

ECN 202 PRINCIPLES OF MICROECONOMICS (3)
Prerequisite(s): ENG 101.

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.

ECN 221 INTERNATIONAL TRADE (3)
Prerequisite(s): None.

The purpose of this course is to survey the basics of international trade and finance and to examine the effects of various international economics policies on domestic and world welfare.

3 hours lecture.

ECN 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

Education

EDU 020 FUNDAMENTAL ACADEMIC SKILLS TRAINING (3)
Prerequisite(s): Placement by Army Education Center Counselor.

A review of basic skills for reading, spelling, grammar, composition and mathematics with emphasis on improving test-taking skills. Upon successful completion, students will be prepared to enter ENG 100 and MAT 072 or higher.

3 hours lecture.

EDU 021 PREPARING FOR ASVAB TEST TAKING (1)
Prerequisite(s): Placement by Army Education Center Counselor.

Course is designed to improve basic test-taking skills for the Armed Services Vocational Aptitude Battery (ASVAB) with emphasis on arithmetic reasoning, word knowledge and reading comprehension.

1 hour lecture.

EDU 193 SPECIAL TOPICS IN EDUCATION (1)
Prerequisite(s): None.

A forum/seminar emphasizing topics of current interest to public school and/or community college teachers, paraprofessionals and administrators. Seminars will focus on those topics having practical application for the improvement of classroom instruction and educational management.

1 hour lecture.

- 193A Effectively Dealing with Linguistic Diversity in the Classroom
- 193B Curriculum Development for a Culturally Diverse Student Population
- 193C Content-Specific Teaching Strategies for Bilingual and Limited English Proficiency Students
- 193D A Holistic Approach to Language and Literacy
- 193E Cooperative Learning
- 193F Effectively Managing the Educational Institution
- 193G Professional Development of Instructional Staff
- 193H Involving Parents and the Community in the Educational Process
- 193I Minimizing the Adverse Impact of Social Problems
- 193J Technology and Teaching

EDU 200 THE COMMUNITY COLLEGE (3)
Prerequisite(s): Instructor certification complete except for this course.

A study of the history, philosophy, role, objectives and educational functions of the community college with emphasis on organization, operation, curriculum and instruction at Cochise College in particular and Arizona community colleges in general.

3 hours lecture.

EDU 201 INTRODUCTION TO EDUCATION (3)
Prerequisite(s): ENG 101 or concurrent enrollment, 12.0 or higher grade level reading ability or Cochise College equivalent.

An overview of education, the education profession, educational institutions, and the education system within the American society. Includes the study of current educational issues, and of the role, responsibilities and qualifications of educators. Concurrent enrollment in EDU 224 (1-4 credits) required.

3 hours lecture.

EDU 222 INTRODUCTION TO SPECIAL EDUCATION (3)
Prerequisite(s): ENG 101, 12.0 or higher reading grade level or official Cochise College equivalent.

Recommended: EDU 201 and ENG 102 or concurrent enrollment.

The study of special education with emphasis on current educational practices and related educational theories; and on identification and characteristics of emotionally handicapped, learning disabled, mentally handicapped and gifted children. Includes a review of appropriate classroom and community-based approaches to accommodating the special education student.

3 hours lecture.

EDU 224 FIELD EXPERIENCE IN EDUCATIONAL INSTRUCTION (1-6)
Prerequisite(s): A declared major in Educational Instruction; approval of a Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised internship in a pre-school, elementary or secondary educational institution designed to provide hands-on classroom experience. Number of credits determined by the total hours to be spent at the job site in a given semester. May be taken four times for a maximum of 16 credits, with a maximum of 6 credits per semester.

EDU 226 CULTURAL DIVERSITY IN EDUCATION (3)
Prerequisite(s): ENG 101, 12.0 or higher reading grade level or official Cochise College equivalent.

Recommended: EDU 201 and ENG 102 or concurrent enrollment.

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 incompatabilities 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.

EDU 290 INSTRUCTOR SKILL DEVELOPMENT (3)
Prerequisite(s): None.

Designed to impart a wide range of teaching skills, concepts, and techniques applicable to adult learning situations. Topics covered include adult learning, training needs, research methodology, instructional objectives, program development, instructional methodology, and evaluation techniques. (Identical to AJS 290.)

3 hours lecture.

Electronics

ELT 100 ELECTRONICS FOUNDATIONS (3)
Prerequisite(s): MAT 082 or equivalent.

An introduction to electronic principles including DC and AC circuits, passive and active circuits, and applications that will give the student a general concept of the electronics field.

3 hours lecture.

ELT 101 BEGINNING DIGITAL ELECTRONICS (3)
Prerequisite(s): None.

A beginning course in digital electronics for students planning to enter the electronics field.

3 hours lecture.

ELT 105* INTRODUCTION TO DC CIRCUITS (3)
Prerequisite(s): ELT 110 or concurrent enrollment.

The analysis of direct current resistive circuits, emphasizing Ohm's Law, Kirchoff's Law, Thevenin's, Norton's and superposition theorems.

2 hours lecture; 3 hours laboratory.

ELT 106* INTRODUCTION TO AC CIRCUITS (4)
Prerequisite(s): ELT 105.

An introduction to alternating current passive circuits, and the application of trigonometry and vectors to circuit solutions.

2 hours lecture; 3 hours laboratory.

ELT 107* BASIC COMPUTER PROGRAMMING (3)
Prerequisite(s): MAT 122.

An introduction to computers and the BASIC language with emphasis on the concepts, writing and execution of computer programs, processing of data, and the development of algorithms for the computer solution to problem solving.

2 hours lecture; 3 hours laboratory.

ELT 110 MATH FOR ELECTRONICS (3)
Prerequisite(s): One year of high school algebra or equivalent.

A review of arithmetic and the study of algebraic principles necessary to analyze electronic circuitry and provide a firm background for advanced studies. Topics include fractions, decimals, fundamental concepts of algebra, scientific notation, graphing, linear equations and the solution of DC electric circuits.

3 hours lecture.

ELT 120 ADVANCED MATHEMATICS FOR ELECTRONICS (3)
Prerequisite(s): ELT 110 or equivalent.

Study of basic trigonometric relations to electronics with emphasis on network problems and analysis of alternating circuits.

3 hours lecture.

ELT 122* SEMICONDUCTORS AND TRANSISTORS (4)
Prerequisite(s): ELT 106 and ELT 110 or MAT 122.

A comprehensive study of semiconductor devices stressing the qualitative and quantitative analysis of semiconductor circuits with major emphasis on DC biasing, small signal analysis of diodes and transistors, load lines, approximate hybrid parameters, and multistage systems.

3 hours lecture; 3 hours laboratory.

ELT 125* ELECTRONIC CIRCUITS AND SYSTEMS (4)
Prerequisite(s): ELT 105, ELT 106 and concurrent enrollment in ELT 120 or equivalent.

A study of large signal diode and filter analysis, voltage and current regulations, with emphasis on the field effect transistor as an amplifier, the Miller effect, frequency response and feedback.

3 hours lecture; 3 hours laboratory.

ELT 224 FIELD EXPERIENCE IN ELECTRONICS (1-6)
Prerequisite(s): A declared major in electronics; and approval of a Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in electronics and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

ELT 231* PULSE CIRCUITS (4)
Prerequisite(s): ELT 122.

A study of waveforms, RC and RL networks, passive and active pulse circuitry, diode and transistor switching circuits, nonlinear waveshaping and multivibrators.

3 hours lecture; 3 hours laboratory.

ELT 233* DIGITAL CIRCUITS AND SYSTEMS (4)
Prerequisite(s): ELT 122.

A study of number systems, Boolean algebra, combinational and sequential logic, circuits and systems.

3 hours lecture; 3 hours laboratory.

ELT 243* MODERN ELECTRONIC DEVICES (4)
Prerequisite(s): ELT 122.

A study of the characteristics of differential and operational amplifiers, applications, and analysis of practical op amp circuits, photoconductive and photovoltaic devices, unijunction transistors, silicon controlled rectifiers, and selected materials covering other electronic devices.

3 hours lecture, 3 hours laboratory.

ELT 245* COMMUNICATIONS ELECTRONICS I (4)
Prerequisite(s): ELT 120, 122, 125.

The application of qualitative and quantitative theoretical concepts to practical communications circuits. AM and FM receiver systems, voltage and power amplifiers, feedback, oscillators, resonance, filters, coupling, frequency synthesizers and phaselock techniques are studied.

3 hours lecture, 3 hours laboratory.

ELT 247* COMMUNICATIONS ELECTRONICS II (4)
Prerequisite(s): ELT 245.

A continuation of Communications Electronics I, including AM transmitters, frequency modulation systems, transmission lines, antennas and propagation. Laboratory emphasis on the use of electronic test equipment in the analysis and adjustment of receivers and transmitters.

3 hours lecture, 3 hours laboratory.

ELT 265* MICROPROCESSORS AND MICROCOMPUTERS (4)
Prerequisite(s): ELT 233.

An introduction to the architecture of microprocessors and the organization, programming, interfacing, and control application of microcomputers.

3 hours lecture; 3 hours laboratory.

ELT 270* MICROCOMPUTER SYSTEMS (4)
Prerequisite(s): ELT 233 and concurrent enrollment in ELT 265.

Analysis of small computer systems. Computer organization and the hardware and software required for peripheral interfacing.

3 hours lecture; 3 hours laboratory.

Emergency Medical Technology

EMT 101 FIRST RESPONDER TRAINING (2)
Prerequisite(s): None.

A practical study of the role of the first responder as a provider of immediate emergency medical care, with emphasis upon evaluating accidents, patient assessment, CPR, emergency care for internal and external injuries, emergency childbirth, poisons and drugs, and the minimization of further injury and complications.

2 hours lecture; 1 hour laboratory.

EMT 174* EMERGENCY MEDICAL TECHNOLOGY (8)

Prerequisite(s): Student must meet the following requirements: 1) be at least 18 years of age at class start time; 2) possess a valid CPR card at the Health Care Provider Level from American Heart Association or American Red Cross; 3) read at least the 9th grade level; 4) have a negative TB test or chest x-ray within 6 months prior to class start date; 5) demonstrate immunity to Rubella by immunization record or titer results; 6) demonstrate immunity to Rubeola by immunization record or titer results.

Provides the student with preparation for vocational work as an ambulance attendant and is required by the Arizona Department of Health Services (ADHS) for certification. The course also prepares the students for industrial, OSHA and virtually any other occupational safety standards certification. Students wishing certification must complete the state-mandated hours of clinical experience in a hospital emergency room. The course covers basic knowledge of the symptoms of illness and injury, the concomitant procedures considered the responsibility of the Emergency Medical Technician (EMT), basic legal responsibilities, anatomy and physiology, triage, assessment, and life-support systems. Curriculum meets ADHS standards set in 1994. Program is certified by the state.

7 hours lecture; 3 hours laboratory.

EMT 176* EMERGENCY MEDICAL TRAINING REFRESHER (2)

Prerequisite(s): EMT 174.

A refresher course to maintain and update Emergency Medical Technician skills. May be repeated as required for recertification.

2 hours lecture; 1 hour laboratory.

EMT 201* PARAMEDICINE I (12)

Prerequisite(s): Minimum of one year EMT working with ambulance/fire or rescue organizations. Good physical condition. Ability to read at a minimum of 10th grade level. Negative TB test or chest x-ray within 6 months of class start date. Immunity against Rubella and Rubeola as proven by immunization record or titer.

Selection Process: Individuals who wish to enter the Paramedicine core classes must undergo written and practical examinations as well as an interview process. State guidelines are followed in these processes. See Program Description for details regarding selection process.

Paramedicine I is the first in a series of three courses which prepare the student to perform vocational work as a paramedic. This course provides the initial education required to achieve student readiness to sit for the State Certification Exam in Paramedicine as well as the National Registry Exam. Topics include illness, injury and treatment of the respiratory and cardiovascular systems. Ethical and legal considerations of practice are discussed as well as the roles and responsibilities of the EMT-Paramedic.

10 hours didactic; 6 hours skills laboratory and clinical rotation.

EMT 202* PARAMEDICINE II (14)

Prerequisite(s): EMT 201.

This course provides the second sequential step in achievement of student readiness to sit for the State Certification Exam in Paramedicine as well as the National Registry Exam. Emergency Medical techniques are presented and include illnesses and injuries and treatments of the central nervous system, endocrine system, and cardiovascular system. In addition, response to emergent situations regarding the expectant mother, the elderly, the substance abuser, and the pediatric patient are covered. Response to accidents resulting in trauma is taught.

10 hours didactic, 12 hours skills laboratory and clinical rotation.

EMT 203 PARAMEDICINE III (2)
Prerequisite(s): EMT 202.

This course provides the final clinical hours required to meet state requirements to sit for the State Certification Exam in Paramedicine as well as the National Registry Exam. The student will complete hours in rotations required by state mandate. These can be in vehicular rotations, emergency room rotations, pediatric trauma experiences in state metropolitan areas, etc.

2 hours (6 clinical and vehicular rotation).

English

ENG 001 STUDY SKILLS (1)
Prerequisite(s): None.

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, using the library and the microcomputer to study spelling and vocabulary.

1 hour lecture.

ENG 004 SPELLING IMPROVEMENT (1)
Prerequisite(s): None.

A review of spelling fundamentals helps freshmen conceptualize words used in various content fields as well as basic function words for college writing. A review of basic phonetics, common roots, silent consonants and vowel blends introduces strategies for learning to visualize English spelling. The one unit module can be included in the Reading Improvement Block or taught individually by student contract through the Student Development Center.

1 hour lecture.

ENG 010A ENGLISH FUNDAMENTALS I (3)
Prerequisite(s): A reading score equivalent to 5.8 minimum on a standardized reading exam and a writing sample placement test or instructor recommendation. Not designed for transfer.

Recommended: Keyboarding skills.

A whole language approach to learning with review of standard oral and written English and an emphasis on vocabulary building. Instructors will diagnose students' use of non-standard grammar usage, spelling and punctuation and assign exercises and tutorials appropriate to individual students.

3 hours lecture; 1 or 2 hours laboratory.

ENG 010B ENGLISH FUNDAMENTALS II (3)
Prerequisite(s): Completion of ENG 010A with a grade of C or better and a reading grade level equivalent to 5.8–9.0 as measured on a standardized reading test, or recommendation of the instructor. Designed for students requiring more practice in the fundamental skills of composition writing. Not designed for transfer.

Recommended: Keyboarding skills.

A review of standard oral and written English that continues the developmental sequence begun in ENG 010A focusing on spelling/vocabulary, grammar, usage, punctuation, studying a text and responding to text in writing of paragraphs and short essays. Appropriate exercises and tutorials may be assigned.

3 hours lecture; 1 or 2 hours laboratory.

ENG 011 BASIC GRAMMAR (1)
Prerequisite(s): None.

An introduction to English grammar terminology. This course will prepare students who plan to study a foreign language by introducing them to general grammatical terms and usage. In addition, this course will review basic terms for English speaking students to facilitate improved sentence structure and punctuation. This course is not designed for ESL students who do not already have a strong command of English.

1 hour lecture.

ENG 020 READING FUNDAMENTALS (5)
Prerequisite(s): None

A review of basic skills for college reading emphasizing content, vocabulary growth, improved rate of comprehension in various materials, review of phonetic rules applied to English spelling, dictionary and library use complementing general study skills.

5 hours lecture.

ENG 092 ENGLISH FOR OCCUPATIONS (1)
Prerequisite(s): Permission of instructor.

Intensive practice with English vocabulary and specialized terminology useful in the workplace.

2 hours laboratory

ENG 094 INTRODUCTION TO TRANSLATION AND INTERPRETATION (1)
Prerequisite(s): Concurrent enrollment in ESL 014 or permission of instructor.

An introduction to basic concepts and procedures useful in translation and interpretation between Spanish and English. Experience working with both general language and materials in the student's occupational specialty.

2 hours laboratory.

ENG 100 INTERMEDIATE WRITING (3)
Prerequisite(s): Completion of ENG 010 with a grade of C or better, or appropriate placement based on the diagnostic essay with a minimum reading grade level score of 9.0 on a standardized test.

Recommended: Typing or word processing skills strongly encouraged.

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; 1 or 2 hours laboratory.

ENG 101 COMPOSITION (3)
Prerequisite(s): ENG 100 with a grade of C or better, or placement on a diagnostic essay; a college reading grade level of 11.0 or its equivalent demonstrated on a standardized placement exam; computer skills needed.

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.

ENG 102 ENGLISH COMPOSITION (3)
Prerequisite(s): Completion of ENG 101 or its equivalent with a grade of C or higher, computer skills.

A continuation of ENG 101 with special emphasis on the techniques involved in writing argument, persuasion, and literary analysis.

3 hours lecture.

ENG 102H ENGLISH COMPOSITION (3)
Prerequisite(s): Completion of ENG 101 with a grade of A, recommendation of ENG 101 instructor, GPA of 3.5 or above, completion of 12 college credits.

A continuation of ENG 101 with special emphasis on the techniques involved in writing argument, persuasion and literary analysis.

3 hours lecture.

ENG 104 INTRODUCTION TO LITERATURE (3)
Prerequisite(s): ENG 102 or its equivalent or ENG 101 and permission of instructor.

A study of major literary genres: drama, poetry, fiction, and criticism. Emphasis on writing critically about literature.

3 hours lecture.

ENG 106 INTERMEDIATE WRITING FOR FOREIGN STUDENTS (3)
Prerequisite(s): Placement by the English Immersion staff based on a series of tests. The student will need a score of between 55-75 on the Michigan Test, 5-6.9 on the Nelson Reading Test, and 2+ to 3- on the writing sample.

Designed to improve the writing ability of foreign students. Includes a review of the mechanics of writing, punctuation, spelling and capitalization, vocabulary development exercises, reading, and intensive practice in writing at the sentence and paragraph levels.

3 hours lecture; 2 hours laboratory.

ENG 107 ENGLISH COMPOSITION FOR FOREIGN STUDENTS I (3)
Prerequisite(s): ENG 106 or ENG 100, or recommendation from placement testing.

College composition course for non-native speakers of English, with emphasis on writing about prose readings, summary and analysis, documentation, library research methods, and writing a research paper.

3 hours lecture; 2 hours laboratory.

ENG 108 ENGLISH COMPOSITION FOR FOREIGN STUDENTS II (3)
Prerequisite(s): ENG 107 or ENG 101.

A continuation of ENG 107 with emphasis on argumentation and persuasion and an introduction to the research paper for students whose native language is not English.

3 hours lecture.

ENG 109 WRITTEN COMMUNICATIONS AND REPORTS (3)
Prerequisite(s): ENG 101 or permission of instructor.

Development of the skills of effective written communications and reports with emphasis on clarity and accuracy. Assignments will be individualized by occupational discipline.

3 hours lecture.

ENG 111 GRAMMAR, USAGE AND PUNCTUATION (3)
Prerequisite(s): ENG 100 with a grade of C or better or placement in ENG 101 or permission of instructor. College-level reading required.

An in-depth study of the mechanics of English required for academic and workplace communication. Emphasis is placed on grammar, word usage, punctuation, spelling, conciseness and clarity in both spoken and written language. The rules and style recommendations covered are those that should prove helpful in the academic and/or business communities.

3 hours lecture; 1 hour laboratory.

ENG 112 CHILDREN'S LITERATURE (3)
Prerequisite(s): None

A survey of literary materials available for children from their very early years through their teens exploring the means through which children may enjoy literature, selection tools available for adults, use of reference materials and audio-visuals.

3 hours lecture.

ENG 115 THE GENEALOGY OF ENGLISH WORDS (3)
Prerequisite(s): None.

Designed to assist the student in increasing his command of modern English. Emphasis is primarily on words derived from Latin. Etymological meanings and modern meanings will be considered along with semantic and phonetic changes.

3 hours lecture.

ENG 116 GENEALOGY OF ENGLISH WORDS (3)
Prerequisite(s): None.

Designed to assist the student in increasing his command of modern English emphasizing words derived from Greek. Etymological meanings and modern meanings will be considered along with semantic and phonetic changes. ENG 115 is not a prerequisite(s) to 116.

3 hours lecture.

ENG 119 CREATIVE WRITING (3)
Prerequisite(s): ENG 102 or permission of instructor.

An introduction to creative writers and writing, using professional models of narrative prose, drama, fiction, and poetry, along with original student work to analyze and critique.

3 hours lecture.

ENG 167 BUSINESS COMMUNICATIONS (3)
Prerequisite(s): CIS 116 or equivalent proficiency and ENG 101 or ENG 111 or OAD 111 with a grade of C or better, or placement into ENG 101.

A study of business communications prepared in a business organization, including typical internal and external communications (letters, memos, proposals and reports). Emphasis will be on applying English fundamentals, usage, syntax and organization ideas as well as on using technology appropriately to conduct research and to create documents. This course will also stress listening and speaking skills. Identical to BUS 167 and OAD 167.

3 hours lecture.

ENG 179 APPLIED TECHNICAL WRITING (3)
Prerequisite(s): ENG 100 (C or better) or placement into ENG 101. College-level reading.

An applied skills course on writing clear, applied organizational reports and communications. Assignments will stress the processes and products for reporting technical information with emphasis on writing mechanics/syntax, forms/formats and technical style. Identical to CIS 179 and BUS 179.

3 hours lecture.

ENG 192 SPECIAL TOPICS IN LANGUAGE AND LITERATURE (.5-1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing linguistic development and change, regional literature, literary styles, folklore and related topics. Topics will vary in accordance with changes in student need and interest. Cochise College elective credit only unless otherwise designated in degree programs.

1/2-1 hour lecture.

ENG 192A Word Foraging
ENG 192B True Tales and Tall Tales of Southwestern Indians
ENG 192C High Speed Reading
ENG 192D Stories of the Old West
ENG 192E Satire, Irony and Humor
ENG 192F Linguistic History of the English Language
ENG 192G Evolution of a Hero: Prince Hal to Hamlet
ENG 192H Books and People

ENG 203 ADVANCED COMPOSITION (3)
Prerequisite(s): ENG 102 or permission of instructor.

An introduction to writing critically about literature with analysis of various literary genres. Credit for ENG 104 will not be granted if the student has taken ENG 203.

3 hours lecture.

ENG 206 CRITICAL WRITING (3)
Prerequisite(s): ENG 101 and 102 or permission of instructor with placement test score of grade level 12.1 on Nelson-Denny Test.

A study of composition as an analytical, interpretative process requiring the student to make rational judgments based on valid criteria. For students who wish to pursue further composition and reading skills, to prepare for upper-division writing at the university level, or to improve critical-thinking skills.

3 hours lecture.

ENG 209 INTRODUCTION TO POETRY (3)
Prerequisite(s): ENG 102 or permission of instructor.

An exploration of selected traditional, modern, and contemporary world poetry.

3 hours lecture.

ENG 210 THE BIBLE AS LITERATURE (3)
Prerequisite(s): ENG 102 or permission of instructor.

A study of the Bible as a work of literature emphasizing historical development, types of literature, allusions, impact upon later writers and the literary expression of cultural values.

3 hours lecture.

ENG 219 ADVANCED CREATIVE WRITING (3)
Prerequisite(s): ENG 102, 119 or permission of instructor.

This is the second semester of a one-year creative writing sequence beginning with ENG 119 and will address advanced student projects in prose or poetry. Students will continue to read and analyze the best professional models in creative writing from around the world.

3 hours lecture.

ENG 220 BRITISH LITERATURE I (3)
Prerequisite(s): ENG 102.

A survey of the major British authors from the beginnings to the early eighteenth century.

3 hours lecture.

ENG 221 BRITISH LITERATURE II (3)
Prerequisite(s): ENG 102.

A survey of the major British authors from the eighteenth century to the present.

3 hours lecture.

ENG 222 INTRODUCTION TO SHAKESPEARE (3)
Prerequisite(s): ENG 102.

An exploration of selected Histories, Tragedies, and Problem Plays/Comedies by William Shakespeare.

3 hours lecture.

ENG 224 AMERICAN LITERATURE I (3)
Prerequisite(s): ENG 102 or permission of instructor.

A survey of major American authors from the colonial period to 1860. Works studied may include selections from Hawthorne, Poe, Melville, and Emerson.

3 hours lecture.

ENG 225 AMERICAN LITERATURE II (3)
Prerequisite(s): ENG 102.

A survey of selected works by major American authors from post Civil War to the present.

3 hours lecture.

ENG 226 WORLD LITERATURE I (3)
Prerequisite(s): ENG 102 or permission of instructor.

A study of some of the master works of world literature through the Renaissance. Works studied may include selections from Homer, the Greek tragic writers, Virgil, Dante, Chaucer, Cervantes and Shakespeare, as well as samplings from outside the western tradition.

3 hours lecture.

ENG 227 WORLD LITERATURE II (3)
Prerequisite(s): Six credits of freshman English or permission of instructor.

A study of eight major literary works from the Renaissance to the present, including selections of Voltaire, Goethe, Stendahl, Dickens, Dostoevsky, Turgenev, Flaubert, and Mann. ENG 226 is not a prerequisite(s) to ENG 227.

3 hours lecture.

ENG 228 MYTHOLOGY AND FOLKLORE (3)
Prerequisite(s): ENG 101 or permission of instructor.

A survey of beliefs, customs and symbols from Neolithic times to the present. Emphasis on Sumerian, Babylonian, Hebrew, Egyptian, Anatolian, Cretan, Greek, Roman, Celtic myths and legends. Belief systems and symbols traced through the ages to the present times.

3 hours lecture.

ENG 230 LITERATURE OF THE SOUTHWEST (3)
Prerequisite(s): ENG 102 or permission of instructor.

Introduction to the literature of the American Southwest from the earliest times to the twentieth century with emphasis on the environmental, historical, and cultural influences on subject, plot, character, themes, and genre.

3 hours lecture.

ENG 231 NATIVE AMERICAN LITERATURE (3)
Prerequisite(s): ENG 102 with grade of C or better, or permission of instructor.

Recommended: Reading grade level of 11.5.

Introduction to Native American literature, including oral traditions and stories, autobiographies, fiction, and poetry, with emphasis on the cultural and historical influences on Native themes and representations.

3 hours lecture.

ENG 255 INTRODUCTION TO THE ENGLISH LANGUAGE (3)
Prerequisite(s)s: Successful completion, with a grade of C or higher of two of the following three courses: ENG 101, ENG 102 or ENG 111. Reading grade of 11.5 on a standardized test.

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.

ENG 257 LITERARY MAGAZINE PRODUCTION (3)
Prerequisite(s): ENG 101 or permission of instructor.

Recommended: ENG 119

Production of the college literary and arts magazine. Includes application of promotion, editing, design, layout, and production techniques. May be taken more than once for credit. Identical to JRN 257.

3 hours lecture.

ENG 260 IRISH LITERATURE (3)
Prerequisite: ENG 101.

Recommended: ENG 102.

An exploration of selected traditional, modern, and contemporary Irish literary works.

3 hours lecture.

ENG 265 MAJOR AMERICAN WRITERS (3)
Prerequisite(s): ENG 102.

An exploration of selected works by major American authors from the last century to the present.

3 hours lecture.

ENG 273 WOMEN AND LITERATURE (3)
Prerequisite(s): ENG 102

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.

ENG 279* ADVANCED APPLIED TECHNICAL WRITING (3)
Prerequisite(s): CIS/ENG 179

An applied skill course on writing effective, clear, technical reports and communications with confidence, skill and flair. Emphasis on using appropriate processes and products for reporting technical information. Industry-standard writing mechanics/syntax, forms/formats and technical style are stressed. Identical to CIS 279.

3 hours lecture.

ENG 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

English As A Second Language

ESL 001 WORKPLACE ENGLISH I (3)
Prerequisite(s): Recommendation from placement test.

Beginning-level practice communicating in English with emphasis on those elements of language most useful in the workplace.

3 hours lecture.

ESL 002 WORKPLACE ENGLISH II (3)
Prerequisite(s): Recommendation from placement test and/or completion of ESL 001 with a grade of C or better within the preceding six months.

High-beginner/low-intermediate level practice communicating in English with emphasis on those elements of language most useful in the workplace.

3 hours lecture.

ESL 003 WORKPLACE ENGLISH III (3)
Prerequisite(s): Recommendation from placement test and/or completion of ESL 002 with a grade of C or better within the preceding six months.

Low-intermediate to intermediate practice communicating in English with emphasis on those elements of language most useful in the workplace.

3 hours lecture.

ESL 004 WORKPLACE ENGLISH IV (3)
Prerequisite(s): Recommendation from placement test and/or completion of ESL 003 with a grade of C or better within the preceding six months.

High-intermediate practice communicating in English with emphasis on those elements of language most useful in the workplace.

3 hours lecture.

ESL 009 ADULT BASIC READING FOR ESL (3)
Prerequisite(s): Recommendation from placement test.

An introduction to reading and writing English for non-literate, non-native speakers of English who need an Adult Basic Education approach to the alphabet, English phonetics, and how to read print and to form words into basic English sentences.

3 hours lecture.

ESL 010 ESL GRAMMAR I (3)
Prerequisite(s): Recommendation from placement test.

An introduction to basic English grammar for beginning/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.

ESL 012 ESL READING I (3)
Prerequisite(s): Recommendation from placement test.

An introduction to basic reading skills for beginning/high beginning students whose native language is not English, with emphasis on vocabulary development, comprehension, and structure.

3 hours lecture; 2 hours laboratory.

ESL 014 ESL WRITING I (3)
Prerequisite(s): Recommendation from placement test.

A beginning/high-beginning level writing course for students learning English as a second language designed to preview the writing process with emphasis on writing paragraphs on simple, controlled topics which require mainly isolated tense usage.

3 hours lecture; 2 hours laboratory.

ESL 016 ORAL COMMUNICATION I (3)
Prerequisite(s): Recommendation from placement test.

An introduction to oral communication skills in English for beginning/high-beginning students whose native language is not English, with emphasis on vocabulary, fundamentals of English pronunciation and development of basic listening and speaking skills.

3 hours lecture; 2 hours laboratory.

ESL 018 SUMMER ESL I (3-4)
Prerequisite(s): Recommendation from placement test.

This course is designed as a study of beginning grammar, vocabulary and listening comprehension with controlled conversation. Language laboratory reinforcement of aural/oral patterns is also provided.

3-4 hours lecture.

ESL 020 ESL GRAMMAR II (3)
Prerequisite(s): ESL 010 with a grade of C or better or recommendation from placement test.

A review of basic English grammar and an introduction to fundamental English grammar for high-beginning/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.

ESL 022 ESL READING II (3)
Prerequisite(s): Completion of ESL 012 with a grade of C or better or recommendation from placement test.

An introduction to basic reading skills and strategies for high-beginning/low-intermediate students whose native language is not English, with emphasis on vocabulary development, comprehension and structure.

3 hours lecture; 2 hours laboratory.

ESL 024 ESL WRITING II (3)
Prerequisite(s): Completion of ESL 014 with a grade of C or better or recommendation from placement test.

A high-beginning to low-intermediate writing course designed to introduce the writing process with emphasis on topic sentences, paragraph development, cognitive skills and logical organization.

3 hours lecture; 2 hours laboratory.

ESL 026 ORAL COMMUNICATION II (3)
Prerequisite(s): Completion of ESL 016 with a grade of C or better or recommendation from placement test.

A review and continuation of oral communication skills in English for high-beginning/low-intermediate students whose native language is not English, with emphasis on vocabulary, pronunciation, and development of basic listening and speaking skills.

3 hours lecture; 2 hours laboratory.

ESL 028 SUMMER ESL II (3-4)
Prerequisite(s): ESL 010 or ESL 018 or recommendation from placement testing.

This course is designed as a study of basic grammar, vocabulary and listening comprehension with controlled conversation. Language laboratory reinforcement of aural/oral patterns is also provided.

3-4 hours lecture.

ESL 030 ESL GRAMMAR III (3)
Prerequisite(s): ESL 020 with a grade of C or better or recommendation from placement test.

A review of fundamental and an introduction to more complex English grammar for low-intermediate/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.

ESL 032 ESL READING III (3)
Prerequisite(s): Completion of ESL 022 with a grade of C or better or recommendation from placement test.

A review of reading skills and strategies for low intermediate/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.

ESL 034 ESL WRITING III (3)
Prerequisite(s): Completion of ESL 024 with a grade of C or better or recommendation from placement test.

A low-intermediate level to intermediate level writing course for students learning English as a Second Language, designed to develop the writing process with emphasis on topic sentences, methods of multi-paragraph development, cognitive skills and logical organization.

3 hours lecture; 2 hours laboratory.

ESL 036 ORAL COMMUNICATION III (3)
Prerequisite(s): Completion of ESL 026 with a grade of C or better or recommendation from placement test.

A review and continuation of oral communication skills in English for low intermediate/intermediate students whose native language is not English, with emphasis on vocabulary, pronunciation, and development of listening and speaking skills.

3 hours lecture, 2 hours laboratory.

ESL 040 ESL GRAMMAR IV (3-4)
Prerequisite(s): ESL 030 with a grade of C or better or recommendation from placement test.

A review of basic and intermediate and an introduction to advanced English grammar for intermediate/high-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.

ESL 042 ESL READING IV (3)
Prerequisite(s): Completion of ESL 032 with a grade of C or better or recommendation from placement test.

A review of reading skills and strategies for intermediate/high intermediate students whose native language is not English, with emphasis on expanding their vocabulary, increasing comprehension, understanding structure and using basic study skills.

3 hours lecture; 2 hours laboratory.

ESL 044 ESL WRITING IV (3)
Prerequisite(s): Completion of ESL 034 with a grade of C or better or recommendation from placement test.

An intermediate to high-intermediate level writing course for students learning English as a Second Language, designed to review the writing process, develop coherent essays and increase vocabulary suitable for academic discourse.

3 hours lecture; 2 hours laboratory.

ESL 046 ORAL COMMUNICATION IV (3)
Prerequisite(s): Completion of ESL 036 with a grade of C or better or recommendation from placement test.

A review and continuation of oral communication skills in English for intermediate/high-intermediate students whose native language is not English, with emphasis on vocabulary, pronunciation, and development of academic listening and speaking skills in English.

3 hours lecture, 2 hours laboratory.

ESL 056 ORAL COMMUNICATION V (3)
Prerequisite(s): Recommendation from ESL oral placement testing or final oral assessment from previous semester.

A continuation of English oral communication skills for students whose native language is not English, this course addresses the development of skills needed to handle complex communicative tasks at the fifth-semester level. Extensive work on accent reduction and oral communication strategies for social and business purposes.

3 hours lecture; 2 hours laboratory.

ESL 066 ADVANCED ORAL COMMUNICATION (3)
Prerequisite(s): Recommendation from ESL oral placement testing or final oral assessment from previous semester.

Advanced oral communication skills for students whose native language is not English, this course addresses the development of skills needed to handle complex communicative tasks. Further work on accent reduction, oral communication strategies for a full range of social and business purposes, and extended oral discourse.

3 hours lecture; 2 hours laboratory.

ESL 070 ESL FOR PROFESSIONALS I (6)
Prerequisite(s): No previous English necessary; placement is determined by test.

An integrated-skills, content-based course designed for students who have little or no knowledge of English. Introduction to the sounds and intonation patterns of English, elementary vocabulary, and the structure of English as used in simple sentences.

ESL 072 ESL FOR PROFESSIONALS II (6)
Prerequisite(s): Completion of ESL 070; placement determined by standardized test.

A continuation of ESL 070; an integrated-skills, content-based course designed to give high-beginner level students practice using English. Covers grammar, reading, vocabulary, listening comprehension, pronunciation and intonation patterns. Activities build on skills developed in ESL 070.

ESL 074 ESL FOR PROFESSIONALS III (6)
Prerequisite(s): Completion of ESL 072 with a grade of C or better; placement may also be determined by standardized test.

A continuation of ESL 072; an integrated-skills course designed to give low-intermediate students practice using English. The course covers grammar, reading, vocabulary, listening comprehension, pronunciation and intonation patterns. Activities build on skills developed in ESL 072.

ESL 076 ESL FOR PROFESSIONALS IV (6)
Prerequisite(s): Completion of ESL 074 with a grade of C or better; placement may also be determined by standardized test.

A continuation of ESL 074; an integrated-skills, content-based course designed to give high-intermediate students practice using English. Covers grammar, reading, vocabulary, listening comprehension, pronunciation and intonation patterns. Activities build on skills developed in ESL 074.

ESL 090 UNDERSTANDING ENGLISH (1)
Prerequisite(s): Recommendation from placement test.

Beginning-level practice listening to English with emphasis on those elements of language most useful in the workplace.

2 hours laboratory.

ESL 091 PRONOUNCING ENGLISH (1)
Prerequisite(s): Recommendation from placement test or instructor assessment.

Introduction to the sounds, rhythm, stress patterns, and intonation of English, with emphasis on those aspects of the oral language which make it easier to understand and to be understood.

2 hours laboratory.

ESL 100 ACADEMIC SKILLS (3)
Prerequisite(s): Placement test.

A course designed to develop and integrate students' academic language proficiency and study skills through tasks, which simulate the American college classroom. Emphasis is on note-taking from lectures and texts, previewing and reviewing research, asking questions and participating in discussions. Recommended concurrent enrollment in COM 100.

3 hours lecture; 2 hours individualized instruction.

ESL 193 CURRENT TOPICS IN ESL (1)
Prerequisite(s): None.

A rotating forum/seminar on various English as a Second Language (ESL) skills or topics such as pronunciation and business or aviation ESL. Topics will vary in accordance with changes in student need and interest. May be repeated for Cochise College credit. Cochise College elective credit only unless otherwise designated in degree programs.

1 hour lecture.

193A	English Pronunciation
193B	English in Business Contexts
193C	Intercultural Communication
193D	American Idioms
193E	A Rapid Review of English Grammar
193F	Computer Nomenclature for ESL Students

Environmental Studies

EVS 192 SPECIAL TOPICS IN ENVIRONMENTAL STUDIES (.5)
Prerequisite(s): None.

A rotating forum/seminar emphasizing environmental topics of current interest to public and private sector organizations. Includes seminars based upon EPA and OSHA regulations.

1/2 hour lecture.

192A OSHA Hazmat and Emergency Response Refresher
192B Asbestos Awareness
192C Lead Awareness - In Paint, Soil, and Water
192D Confined Space Safety/Rescue
192E State Water/Wastewater Operator Certification
192F Respiratory Protection

EVS 193 SPECIAL TOPICS IN ENVIRONMENTAL STUDIES (1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing environmental topics of current interest to public and private sector organizations. Includes seminars based upon EPA and OSHA regulations.

1 hour lecture.

193A Environmental Law and Its Impact
193B Basic Wastewater Treatment
193C Safety Management for Health Care Professionals

Family & Consumer Sciences

FCS 184 CHILDHOOD DEVELOPMENT (3)
Prerequisite(s): ENG 101.

This course is designed to address growth, development, and socialization of the child within the family setting from conception to the middle school years. Includes childcare implications.

3 hours lecture.

Fire Science

FST 101 INTRODUCTION TO FIRE SCIENCE (3)
Prerequisite(s): None.

A study of the historical and scientific background of the fire protection field. Includes a review of the history and future role of fire protection; governmental, industrial, and private fire protection organizations; and employment/promotional opportunities presently available in the fire protection field. Modern methods in fire prevention and protection also will be explored.

3 hours lecture.

FST 103 HAZARDOUS MATERIALS FIRST RESPONDER (3)
Prerequisite(s): None.

Recommended: FST 101.

This course is designed for firefighters, emergency medical personnel and law enforcement personnel. This course will emphasize hazardous materials response and stabilization. The practical exercise of the course will be conducted at an outdoor site where the student will practice and demonstrate their individual proficiency in commanding a mock hazardous materials incident. This course meets the standards of National Fire Protection Association (NFPA) 472 and the Occupational Safety and Health Administration (OSHA).

3 hours lecture.

FST 106 FUNDAMENTALS OF FIRE PREVENTION (3)
Prerequisite(s): None.

A survey of the basic principles of fire prevention with special emphasis on fire detection and extinguishing systems and on the interpretation and enforcement of fire regulations. Includes the study of hazards associated with heating equipment and building design as well as chemicals and explosives.

3 hours lecture.

FST 110 FIRE FIGHTER I (6)
Prerequisite(s): None.

An introduction to the operations and individual skills involved in the extinguishment of fire. Completion of this course will prepare the student for certification as Firefighter I by the Office of the State Fire Marshall.

6 hours lecture.

FST 111 FIRE FIGHTER II (6)
Prerequisite(s): FST 110 or permission of the instructor.

A continuation of Fire Fighter I with emphasis on fire hydrants and pumps, use of ropes, ventilation, salvage, forcible entry tools, rescue techniques and record keeping in the fire service workplace. Completion of this course will qualify the student to take the Firefighter II certification exam through the State Fire Marshall's office.

6 hours lecture.

FST 112 EMERGENCY VEHICLE OPERATIONS (1)
Prerequisite(s): Valid driver's license, enrolled in a certified police academy or be sworn officer or certified EMS provider.

This course is designed for Emergency and Commercial vehicle operators. The course will emphasize the legal aspects of emergency vehicle operation, vehicle dynamics, vehicle maintenance, vehicle inspections and human dynamics. The practical exercise of the course will be conducted at an outdoor site where the student will practice then demonstrate individual proficiency in operating the type of vehicle appropriate for individual operation. The outdoor course will be set up in conformance with the recommended National Law Enforcement Drivers Training Guide and Federal Emergency Management Agency Training Guide. Identical to AJS 112.

1 hour lecture.

FST 120 FIRE SERVICE HYDRAULICS (3)
Prerequisite(s): FST 110, FST 111 or permission of the instructor.

A review of basic math, hydraulic laws and formulas as applied to the fire service with emphasis upon the application of formulas and mental calculations to hydraulic problems, water supply problems, underwriters requirements and pumpers.

3 hours lecture.

FST 193 SPECIAL TOPICS IN FIRE SCIENCE (1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing fire science topics of current interest to area fire departments and related public service agencies. Includes seminars based upon National Fire Academy field courses.

1 hour lecture.

193A Incident Command System
193B Fire Science Supervision: Increasing Personal Effectiveness
193C Fire Science Supervision: Increasing Team Effectiveness
193D Volunteer Fire Service Management
193E Firefighter Health and Safety
193F Firefighter Safety and Survival: The Company Officer's Responsibility

193G Public Fire Education Planning
193H Instructional Techniques for Company Officers
193I Basic Fire Prevention Inspections
193J Ventilation
193K Self-Contained Breathing Apparatus

FST 200 FIRE APPARATUS AND EQUIPMENT (3)
Prerequisite(s): FST 110 and FST 111 or permission of instructor.

A practical study of the selection, care, construction, operation and maintenance of fire department equipment. The basic principles of equipment, trouble-shooting, and testing will be investigated.

3 hours lecture.

FST 220 RESCUE PRACTICES (3)
Prerequisite(s): FST 110 and FST 111 or permission of instructor.

A practical study of life-saving practices pertaining to the fire company. Emphasis is placed on training for resuscitator squads, rescue equipment, the fire department's role in Civil Defense and other disasters, chemicals and diseases that affect breathing, and breathing apparatus.

3 hours lecture.

FST 224 FIELD EXPERIENCE IN FIRE SCIENCE TECHNOLOGY (1-6)
Prerequisite(s): A declared major in Fire Science Technology. Permission and approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in fire science technology and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

FST 240 FIRE FIGHTING TACTICS AND STRATEGY (3)
Prerequisite(s): FST 110 and FST 111 or permission of the instructor.

A practical study of the organization and use of manpower, equipment and apparatus in fire fighting with emphasis on practical methods of attacking, controlling and extinguishing various types of fires.

3 hours lecture.

FST 260 FIRE INVESTIGATION (3)
Prerequisite(s): Current employment with a fire department or law enforcement agency or permission of instructor.

A practical introduction to accidental, suspicious, and incendiary fire cause determination with special emphasis on arson and incendiarism as well as appropriate procedures for handling each situation.

3 hours lecture.

FST 265 SUPERVISORY TRAINING FOR FIREFIGHTERS (3)
Prerequisite(s): FST 110 and FST 111 or permission of the instructor.

A study of administrative methods and practices as applied to the fire service, including departmental organization, and personnel management. Emphasis is placed on employee-selection procedures, employee discipline, performance evaluations, elements of supervision, labor relations, fire service planning and relationships with other organizational credits.

3 hours lecture.

Food And Nutrition

FON 101 NUTRITION (3)
Prerequisite(s): None.

A study of the basic nutritional principles and their application to the normal diet, health and cultural patterns. Some emphasis will be placed upon diet modification in common health disorders, i.e., obesity, diabetes mellitus and cardiovascular disease.

3 hours lecture.

FON 201 APPLIED NUTRITION (3)
Prerequisite(s): FON 101 or equivalent, or permission of instructor.

A study of the principles of human nutrition and their application in health and illness.

3 hours lecture.

French

FRE 101 ELEMENTARY FRENCH (4)
Prerequisite(s): None.

For beginning students: conversation, comprehension of the spoken language, pronunciation, grammar, reading and composition.

4 hours lecture; 1 hour laboratory.

FRE 102 ELEMENTARY FRENCH (4)
Prerequisite(s): FRE 101 or permission of instructor based on demonstrated competence.

Continuation of FRE 101 with further development of conversation, grammar, reading and composition. Stress on language use and vocabulary development.

4 hours lecture; 1 hour laboratory.

FRE 201 INTERMEDIATE FRENCH (4)
Prerequisite(s): FRE 102 or three years of high school French with a grade of C or equivalent competency.

A review of grammar, pronunciation, and development of patterns of speech in French, with additional practice in reading, writing, speaking, and understanding the language. Supplemental readings and assignments to enrich the student's vocabulary.

4 hours lecture; 1 hour laboratory.

FRE 202 INTERMEDIATE FRENCH (4)
Prerequisite(s): FRE 201 or equivalent competency as demonstrated by placement examination.

A review of grammar, pronunciation, and development of patterns of speech in French, with additional practice in reading, writing, speaking, and understanding the language. Supplemental readings and assignments will enrich the student's vocabulary.

4 hours lecture; 1 hour laboratory.

General Electronics Technician

The following classes, GET 103, 104, 108, 123, and 240 were designed specifically for the Arizona Department of Corrections in Douglas.

GET 103 BASIC ELECTRONIC CIRCUITS AND DIAGNOSTICS (3)
Prerequisite(s): None.

A course designed to develop student proficiency in diagnosing basic electronic circuits, defective components, and in performing repair procedures for basic series, parallel and series/parallel circuits using appropriate supplies and test equipment to facilitate repairs.

3 hours lecture plus individualized laboratory instruction.

GET 104 DIRECT CURRENT CIRCUIT DIAGNOSTICS (3)
Prerequisite(s): GET 103.

A comprehensive course designed to make the student proficient in diagnosing complex direct current circuits and defective components, and in performing repair procedures for complex series, parallel, and series/parallel circuits using appropriate test equipment and supplies to facilitate repairs. Use schematic diagrams as a diagnostic tool. Learn how components are made and how to select the proper replacement or substitution part.

3 hours lecture plus individualized laboratory instruction.

GET 108 ALTERNATING CURRENT CIRCUIT DIAGNOSTICS (4)
Prerequisite(s): GET 104.

A comprehensive course designed to make the student proficient in diagnosing complex alternating current circuits, defective components, and in performing repair procedures for complex series, parallel, and series/parallel circuits using appropriate test equipment and supplies to facilitate repairs. Use schematic diagrams as a diagnostic tool. Learn how components are made and how to select the proper replacement or substitution part.

4 hours lecture plus individualized laboratory instruction.

GET 123 SEMICONDUCTOR DEVICE DIAGNOSTICS AND REPAIR (4)
Prerequisite(s): GET 108.

A comprehensive course designed to make the student proficient in diagnosing simple and complex semiconductor device circuits and defective components, and in performing repair procedures using appropriate test equipment and supplies. Use schematic diagrams as a diagnostic tool. Learn how components are made and how to select the proper replacement or substitution part.

4 hours lecture plus individualized laboratory instruction.

GET 240 ELECTRONIC SYSTEMS DIAGNOSTICS AND REPAIR (6)
Prerequisite(s): GET 123.

A comprehensive course designed to make the student proficient in diagnosing power supplies, amplifiers, oscillators, digital and microprocessor circuits, and in using schematic diagrams as diagnostic tools, and locating defective components, selecting proper replacement part, and in performing repair procedures using appropriate test equipment, tools and supplies, and in performing system checks to verify proper operation, and that repairs were successful.

4 hours lecture plus 4 hours of individualized laboratory instruction.

General Technology

GTC 001 HOME MAINTENANCE (2)
Prerequisite(s): None.

A "do it yourself" home maintenance course covering use of common hand and power tools for routine electrical, carpentry, and plumbing repairs.

1 hour lecture; 3 hours laboratory.

GTC 002 GENERAL TECHNICAL MATH I (1)
Prerequisite(s): Math placement test scores below requirements for successful completion of MAT 072 and low for successful completion of MAT 005.

A general technology arithmetic course in an open entry/open exit format emphasizing drill in computation skills and techniques. Includes basic operations with whole numbers and addition of fractions using terminology of different technologies. Completion of the GTC 002/003/004 sequence is equivalent to MAT 005.

1 hour lecture.

GTC 003 GENERAL TECHNICAL MATH II (1)
Prerequisite(s): GTC 002.

A general technology arithmetic course in an open entry/open exit format emphasizing drill in skills and techniques of computation. Includes basic operations with fractions and decimals using terminology of different technologies. Completion of the GTC 002/003/004 sequence is equivalent to MAT 005.

1 hour lecture.

GTC 004 GENERAL TECHNICAL MATH III (1)
Prerequisite(s): GTC 003.

A general technology arithmetic course in an open entry/open exit format emphasizing drill in skills and techniques of computation. Includes basic operations and applications of decimals, ratio, proportion, and percent using terminology of different technologies. Completion of the GTC 002/003/004 sequence is equivalent to MAT 005.

1 hour lecture.

GTC 005 READ-STUDY SKILLS (1)
Prerequisite(s): Referral from faculty or college counselor to Student Development Center Director concerning "a special needs student."

Tutorial for pre-vocational students functioning below grade level 8. A review of reading comprehension necessary to a vocational program. Required competencies include study strategies for textbooks, vocabulary, interpreting visuals, writing related to study assignments, and exams.

1 hour lecture.

GTC 006 WORD ID-SPELLING (1)
Prerequisite(s): Recommendation by a counselor or vocational program advisor to the Student Development Center Director for individualized instruction. The class may be repeated once for credit.

Introduction to basic decoding/spelling rules with application for adults functioning below grade level 7.0 on a standardized placement test indicating a need for phonetic/structural analysis.

1 hour lecture.

GTC 007 GENERAL TECHNICAL MATH IV (1)
Prerequisite(s): Indicated mathematics deficiency.

A general technology arithmetic course in an open entry/open exit format emphasizing drill in computational skills and techniques. Includes fundamental math operations with whole numbers, fractions, and prime factorization. Completion of the GTC 007/008/009 sequence is equivalent to MAT 072.

1 hour lecture.

GTC 008 GENERAL TECHNICAL MATH V (1)
Prerequisite(s): GTC 007.

A general technology arithmetic course in an open entry/open exit format emphasizing drill in computational skills and techniques. Includes basic operations with fractions, decimals, ratio, and proportion. Completion of the GTC 007/008/009 sequence is equivalent to MAT 072.

1 hour lecture.

GTC 009 GENERAL TECHNICAL MATH VI (1)
Prerequisite(s): GTC 008.

A vocationally oriented basic arithmetic course in an open entry/open exit format emphasizing drill in skills and techniques of computation. Includes operations with percentages and signed numbers. Also emphasized are conversions within and between English and metric systems of measurement. Completion of the GTC 007/008/009 sequence is equivalent to MAT 072.

1 hour lecture.

GTC 012* GENERAL AUTOMOTIVE MECHANICS (3)
Prerequisite(s): None.

Automotive maintenance and repair including tune-up, electrical systems, fuel systems, cooling systems, lubrication systems and oils, transmissions and clutches, brake systems and accessories, such as air conditioning.

2 hours lecture; 3 hours laboratory.

GTC 014* KNOW YOUR AUTOMOBILE (3)
Prerequisite(s): None.

A course to develop entry-level auto mechanic skills. This is classroom theory and supporting laboratory experience for basics of engine operation, powertrain operation, use of tools, care and selection of tires, use of jack, changing tires, lubrication system service, checking of all fluid levels, cooling system and minor service, use of repair manuals, brake system theory and minor service, repack wheel bearings, fuel system theory and very minor service, basics of electricity, basics of battery, starter and charging system theory, ignition system service, diagnosis: what to do if the car won't start, and selecting a used car.

3 hours lecture.

GTC 016* BASIC AUTO REFRIGERATION (3)
Prerequisite(s): None.

Basic application of theory of refrigeration and techniques of servicing automotive air conditioners.

1 hour lecture; 4 hours laboratory.

GTC 017* ADVANCED AUTOMOBILE REFRIGERATION (3)
Prerequisite(s): GTC 016 or permission of instructor.

Advanced techniques of testing, trouble-shooting and repair of automotive air conditioner.

1 hour lecture; 4 hours laboratory.

GTC 018* COMMERCIAL REFRIGERATION (3)
Prerequisite(s): GTC 016.

Theory, techniques and practices of commercial refrigeration and servicing of refrigerators, freezers, and commercial air conditioners.

1 hour lecture; 4 hours laboratory.

GTC 022 WATER AND WASTE WATER PLANT OPERATION (3)
Prerequisite(s): Admissibility to Cochise College.

A course designed to provide the student with the knowledge, skills, and techniques required to pass a State of Arizona Certification Examination or Class I or Class II or Waste Water Plant Operator.

2 hours lecture; 3 hours laboratory.

GTC 025 SOLAR ENERGY SYSTEMS (3)
Prerequisite(s): MAT 122 and knowledge of basic hand tools.

Design, installation and operation of residential solar energy systems. Basic solar heating and cooling theory and laboratory experience to develop student understanding of solar energy systems. Emphasis on selection of components and operation of the system.

2 hours lecture; 3 hours laboratory.

GTC 092 ENGLISH FOR OCCUPATIONS (1)
Prerequisite(s): Permission of instructor.

Intensive practice with English vocabulary and specialized terminology useful in the workplace.

2 hours laboratory.

GTC 100 TECHNICAL MATHEMATICS I (3)
Prerequisite(s): One semester of high school algebra or permission of instructor.

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.

GTC 101 TECHNICAL MATHEMATICS II (3)
Prerequisite(s): GTC 100 or permission of instructor.

A comprehensive study of trigonometry as applied to electronics and drafting industrial situations with an introduction to calculus.

3 hours lecture.

GTC 104 TECHNOLOGY CAREER SAMPLER (2)
Prerequisite(s): None.

An exploration of existing and emerging technologically advanced careers with a focus on the technology, processes, work environment and employment potential in each field. Includes direct hands-on activities as well as a study of the academic and skill requirements for entry-level employment and for advancement in each career. Careers explored may include, but are not limited to, any combination of the following: computer-aided drafting, machine technology, avionics, welding, aviation mechanics, building trades, computer service and repair, health technology and professions, fire science, and law enforcement. The course may be offered in a pass/fail content.

2 hours lecture.

GTC 105 MANUFACTURING MATERIALS AND PROCESSES (3)
Prerequisite(s): None.

The study of manufacturing materials, their characteristics and applications; manufacturing processes including machining, forming, welding and automated manufacturing techniques with emphasis on their relationship to drafting and design.

3 hours lecture.

GTC 110 MASONRY I (3)
Prerequisite(s): MAT 005.

An examination of the masonry profession with an emphasis upon the use of masonry tools and the techniques of laying brick and block.

2 hours lecture; 3 hours laboratory.

GTC 111 MASONRY II (3)
Prerequisite(s): GTC 110.

A continuation of Masonry I, with emphasis upon the decorative and design possibilities of brick and block and upon the development of a smooth style of work with different types and patterns of brick and block.

2 hours lecture; 3 hours laboratory.

GTC 112 MASONRY III (3)
Prerequisite(s): GTC 111.

A continuation of Masonry II concentrating on the design and construction of various types of fireplaces and on decorative stone-work, arches and tile.

2 hours lecture; 3 hours laboratory.

GTC 114 KNOW YOUR AUTOMOBILE (3)
Prerequisite(s): None.

Principles of basic automotive repair and maintenance. Essential concepts of buying an automobile to preventive maintenance will be covered.

2 hours lecture; 3 hours laboratory.

GTC 120 CONCRETE CONSTRUCTION AND FINISH (3)
Prerequisite(s): None.

A combination of step-by-step layout and finish techniques with the theory of practical concrete formulation.

2 hours lecture; 3 hours laboratory.

GTC 121 PAINTING: EXTERIOR AND INTERIOR (3)
Prerequisite(s): None.

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.

2 hours lecture; 4 hours laboratory.

GTC 122 AIR CONDITIONING MAINTENANCE (3)
Prerequisite(s): None.

A course to provide the student with proficiency in inspecting, trouble-shooting, repairing and maintaining air conditioning and evaporative cooling systems with an emphasis on scheduling of seasonal maintenance, start-up and shut-down procedures.

2 hours lecture; 4 hours laboratory.

GTC 123 ELECTRICAL MAINTENANCE AND REPAIR (3)
Prerequisite(s): None.

A course to provide the student with proficiency in maintaining trouble-shooting, and repairing existing residential and industrial circuitry and equipment. The student will install original circuitry in newly remodeled spaces or additions.

3 hours lecture.

GTC 124 CARPENTRY MAINTENANCE AND REPAIR (3)
Prerequisite(s): None.

A course to provide the student with proficiency in maintaining, repairing, replacing, and remodeling existing or new building components including floor coverings, wall coverings, and glazing.

3 hours lecture.

GTC 125 PLUMBING MAINTENANCE AND REPAIR (3)
Prerequisite(s): None.

A course to provide the student with proficiency in the maintaining, trouble-shooting, repairing, and replacing of liquid supply and waste removal or drainage systems.

3 hours lecture.

GTC 126 MAINTENANCE MANAGEMENT (3)
Prerequisite(s): None.

A course to provide the student with proficiency in scheduling maintenance, allotting maintenance task hours, and the cost efficient and safe use of maintenance tools and materials with an emphasis on the cost of preventive maintenance versus unscheduled maintenance.

3 hours lecture.

GTC 127 BLUEPRINT READING AND ESTIMATING (3)
Prerequisite(s): None.

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 maintenance techniques, and how to estimate material from architectural specifications.

3 hours lecture.

GTC 130 ESTIMATING CONSTRUCTION (3)
Prerequisite(s): GTC 100 and DFT 100.

Techniques and procedures of contract interpretation; material selection; and materials, labor and time estimation.

3 hours lecture.

GTC 131 PRINCIPLES OF TECHNOLOGY I (6)
Prerequisite(s): GTC 101.

An introductory course in applied science and associated mathematics to study how concepts such as force, work, rate, resistance and energy apply to mechanical, fluidic, electrical and thermal energy systems for those students preparing to enter high technology career fields.

3 hours lecture; 6 hours laboratory and/or individualized instruction.

GTC 132 PRINCIPLES OF TECHNOLOGY II (6)
Prerequisite(s): GTC 131.

An intermediate course in applied science and related mathematics to study how concepts such as power, force transformation, momentum, waves, vibrations and energy conversion apply to mechanical, fluidic, electrical and thermal energy systems for the student preparing to enter high technology career fields.

3 hours lecture; 6 hours laboratory and/or individualized instruction.

GTC 133 PRINCIPLES OF TECHNOLOGY III (6)
Prerequisite(s): GTC 132.

An advanced course in applied science and associated mathematics to study how concepts such as transducers, radiation, light, optics, and time constants apply to mechanical, fluidic, electrical and thermal energy systems for students preparing to enter high-technology career fields.

3 hours lecture; 6 hours laboratory and/or individualized instruction.

GTC 134 BUSINESS AND INDUSTRIAL CLEANING (3)
Prerequisite(s): None.

A course to provide the student with proficiency in business and industrial cleaning techniques and their practical application with a concern for safety. The student will identify various types of chemicals and equipment used in industrial and business cleaning and how to properly handle, store and safely use them.

2 hours lecture; 3 hours laboratory.

GTC 140 MACHINE TECHNOLOGY (3)
Prerequisite(s): None.

A course in basic machine shop operations; to include drilling, milling, grinding and lathe processes.

2 hours lecture; 3 hours laboratory.

GTC 206 ENGINEERING MATERIALS AND PROCESSES (4)
Prerequisite(s): GTC 105.

Materials, their structures, properties, fabrication characteristics and applications. Material forming, joining and finishing processes. Automation and quality control.

4 hours lecture.

GTC 224 FIELD EXPERIENCE IN MASONRY TECHNOLOGY (1-6)
Prerequisite(s): Sophomore standing in a declared major or prior approval of Cooperative Education Program Coordinator.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Masonry Technology. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

NOTE: Lower- and upper-division Cooperative Education courses may be combined but cannot exceed 16 credits.

GTC 225 FIELD EXPERIENCE IN BUSINESS & INDUSTRIAL CLEANING (1-6)
Prerequisite(s): Sophomore standing in a declared major or prior approval of Cooperative Education Program Coordinator.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Business & Industrial Cleaning. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

NOTE: Lower- and upper-division Cooperative Education courses may be combined but cannot exceed 16 credits.

GTC 226 FIELD EXPERIENCE IN BUILDING MAINTENANCE TECHNOLOGY (1-6)
Prerequisite(s): Sophomore standing in a declared major or prior approval of Cooperative Education Program Coordinator.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Building Maintenance Technology. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

NOTE: Lower- and upper-division Cooperative Education courses may be combined but cannot exceed 16 credits.

GTC 231* MANUFACTURING PROCESSES (4)
Prerequisite(s): GTC 105, GTC 206.

A course in both theoretical and practical experience related to the machining of ferrous and nonferrous metals. Designed to develop a basic understanding of machining operations related to drilling, milling, grinding and lathe processes.

3 hours lecture; 2 hours laboratory.

Geography

GEO 101* PHYSICAL GEOGRAPHY (4)
Prerequisite(s): None.

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.

GEO 102 CULTURAL GEOGRAPHY (3)
Prerequisite(s): None.

A study of the cultural regions of the world and the important world geographical characteristics.

3 hours lecture.

GEO 104 POLITICAL GEOGRAPHY (3)
Prerequisite(s): None.

A study of political phenomena in different locations in conjunction with the physical features of the earth's landscape.

3 hours lecture.

GEO 105 ECONOMIC GEOGRAPHY (3)
Prerequisite(s): None.

A survey of the world's economics, including subsistence economic activities, commercial gathering of animals and plants, commercial bioculture, mining, manufacturing, transportation and trade, and tertiary economic activities centering on basic economics and their relationship to the natural resources of the area involved and the relationship of the physical features: climate, soil, vegetation, and topography.

3 hours lecture.

GEO 121 WORLD REGIONAL GEOGRAPHY (3)
Prerequisite(s): ENG 101 or concurrent enrollment.

An exploration of major world geographical regions with emphasis upon human cultural adaptation to the physical habitat.

3 hours lecture.

Geology

GLG 101* INTRODUCTION TO GEOLOGY I (PHYSICAL) (4)
Prerequisite(s): None.

Principles of physical geology for both general-interest students and those who plan to major in geology. Includes material of interest on recent trends in earth sciences and environmental sciences.

3 hours lecture; 3 hours laboratory.

GLG 102* INTRODUCTION TO GEOLOGY II (HISTORICAL) (4)
Prerequisite(s): None.

Recommended: GLG 101.

Presents the most current model of the development of the surface of our planet and the life found upon it. For general-interest students and those majoring in geology, archaeology, or the biological sciences.

3 hours lecture; 3 hours laboratory.

GLG 110* ENVIRONMENTAL GEOLOGY (4)
Prerequisite(s): None.

Recommended: GLG 101.

An introduction to understanding geologic events and environmental issues and their impact on populations. The course will include hazardous geologic aggrading and degrading processes; soils and land use; air, water and waste pollution; mining practices; energy and fossil and nuclear fuels. Population, economic, ecological and bioethical issues are also covered.

3 hours lecture; 3 hours laboratory.

GLG 192 SPECIAL TOPICS IN GEOLOGY (.5-1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing geological topics of current regional significance; topics to vary in accordance with scientific advances and with changes in student needs and interests. May be repeated for Cochise College credit. Cochise College elective credit only unless otherwise designated in degree programs.

1/2-1 hour lecture.

GLG 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

German

GER 001 CONVERSATIONAL GERMAN (3)
Prerequisite(s): None.

Essentials of German conversation in everyday situations designed for students who intend to use the language for business, pleasure or travel. Transferable to a four-year institution only upon satisfactory performance on a proficiency examination.

3 hours lecture.

GER 101 ELEMENTARY GERMAN (4)
Prerequisite(s): None.

Comprehension of the spoken language, understandable pronunciation, recognition of basic grammar structures, ability to converse, read and write in simple sentences on topics related to personal and classroom experiences.

4 hours lecture; 1 hour laboratory.

GER 102 ELEMENTARY GERMAN (4)
Prerequisite(s): GER 101 or two years of high school German.

Comprehension of the spoken language, understandable pronunciation, recognition of basic grammar structures, ability to converse, read and write in simple sentences on topics related to personal and classroom experiences.

4 hours lecture; 1 hour laboratory.

GER 201 INTERMEDIATE GERMAN (4)
Prerequisite(s): GER 102 or ability to pass corresponding examination.

An intermediate course in speaking, writing, understanding and reading German. Integration and utilization of new structures, with emphasis on longer non-technical essays and analysis of short stories and socially pertinent texts.

4 hours lecture; 1 hour laboratory.

GER 202 INTERMEDIATE GERMAN (4)
Prerequisite(s): GER 201 or ability to pass corresponding examination.

A continuation of GER 201, with emphasis on understanding of the usage and structure in the language and familiarity with German culture. Students will read material in such fields as art, literature and technology. Students will also write and present brief term papers.

4 hours lecture; 1 hour laboratory.

Health and Physical Education

HPE 104 SCULPT AND STRETCH (1)
Prerequisite(s): None.

This course will introduce students to exercises and activities that will develop their muscular strength, muscular endurance and flexibility. It will also provide the student with breathing and relaxation techniques that promote wellness.

1 hour lecture; 1 hour laboratory.

HPE 105 LOW INTENSITY AEROBIC EXERCISE (1)
Prerequisite(s): None.

A practical introduction to low intensity aerobic exercise with emphasis upon the acquisition of basic skills and movements, as well as the improvement and maintenance of individual fitness. Recommended for the poorly conditioned, novice student.

1 hour lecture; 1 hour laboratory.

HPE 106 AEROBIC EXERCISE (1)
Prerequisite(s): None.

A practical introduction to 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.

HPE 107 AQUA AEROBICS (1)
Prerequisite(s): None.

Stretching and toning aerobic exercises conducted in a swimming pool, with emphasis upon cardiovascular fitness. Individual needs and limitations are considered, and each student progresses at his/her own rate. No swim skills necessary.

1 hour lecture; 1 hour laboratory.

HPE 110 BODY CONDITIONING (1)
Prerequisite(s): None.

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.

HPE 111 BODY DYNAMICS (1)
Prerequisite(s): None.

A practical introduction to the principles and concepts of physical fitness through the use of various exercise equipment and activities.

1 hour lecture; 1 hour laboratory.

HPE 112 WEIGHT TRAINING (1)
Prerequisite(s): None.

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.

HPE 113 ATHLETIC CONDITIONING (2)
Prerequisite(s): None.

A practical introduction to fitness activities conducive to the development of strength, flexibility, endurance and cardiovascular fitness. Designed to enhance athletic performance of the athlete.

1 hour lecture; 3 hours laboratory.

HPE 114 WEIGHT LIFTING FOR WOMEN (1)
Prerequisite(s): None.

The course will introduce female students to anaerobic activities related to the development of muscular strength, muscular endurance and flexibility. It will provide the female student with exercise techniques related to the development of overall body strength and the reduction of body fat.

1 hour lecture; 1 hour laboratory.

HPE 115* PERSONAL FITNESS I (2)
Prerequisite(s): None.

A practical introduction to the theory and skills of lifetime fitness with emphasis upon aerobic activities to maintain and/or improve the student's cardiorespiratory 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.

HPE 116* PERSONAL FITNESS II (1-2)
Prerequisite(s): HPE 115 or permission of instructor.

A continuation of the theory and skills of lifetime fitness introduced in HPE 115 Personal Fitness. Student fitness profiles are developed and utilized to determine an individualized exercise program in the Exercise Physiology Lab.

2-4 hours laboratory.

HPE 122 BEGINNING KARATE (1)
Prerequisite(s): None.

Introduction to basic karate with emphasis upon the underlying theory and practical application of beginning karate techniques.

1 hour lecture; 1 hour laboratory.

HPE 123 INTERMEDIATE KARATE (1)
Prerequisite(s): HPE 122 or permission of instructor.

A theoretical and practical study of intermediate karate skills with emphasis upon sparring and self-defense techniques. Elements of advanced techniques will provide a basis for continued study by the individual student.

1 hour lecture; 1 hour laboratory.

HPE 124 PRACTICAL SELF-DEFENSE (1)
Prerequisite(s): None.

An introduction to the art of self-defense with emphasis upon practical instruction in various self-defense techniques and their appropriate situational applications and the prevention of dangerous or compromising situations.

1 hour lecture; 1 hour laboratory.

HPE 125 HIKING (1)
Prerequisite(s): None.

An introduction to wilderness trail and off-trail hiking with emphasis on the care and handling of equipment, the use of maps, the care and protection of wilderness trails, the use of emergency first aid, and the importance of physical conditioning.

1 hour lecture; 1 hour laboratory.

HPE 126 BACKPACKING (1)
Prerequisite(s): HPE 125 or its equivalent or permission of instructor.

A study of back-country hiking and camping designed to develop skills in wilderness living and travel. Emphasis on developing a wilderness philosophy and an awareness of the individual's ability to live in the back country. Students must furnish boots, packs, sleeping bags and shelter.

1 hour lecture; 1 hour laboratory.

HPE 130 BEGINNING SWIMMING (1)
Prerequisite(s): None.

An introduction to the primary skills of swimming for the non-swimmer with emphasis upon water safety, basic strokes and developing the ability to swim thirty yards.

1 hour lecture; 1 hour laboratory.

HPE 131 INTERMEDIATE SWIMMING (1)
Prerequisite(s): HPE 130 or permission of instructor.

A practical study of swimming designed to improve skills in the four fundamental strokes: crawl, breast, back and side. Upon course completion, students will have the ability to swim continuously for five minutes on front, side, and back.

1 hour lecture; 1 hour laboratory.

HPE 132 ADVANCED SWIMMING AND WATER SPORTS (1)
Prerequisite(s): HPE 131 or permission of instructor.

A study of advanced swimming techniques, emphasizing variations on the four fundamental strokes, water sports, synchronized swimming and other aquatic activities.

1 hour lecture; 1 hour laboratory.

HPE 133 LIFE SAVING AND WATER SAFETY (1)
Prerequisite(s): HPE 131 or permission of instructor.

A practical study of life saving skills and water safety with emphasis upon water extrication/rescue, emergency first aid and cardiorespiratory resuscitation. American Red Cross Advanced Life Saving certificate available to successful course completors.

1 hour lecture; 1 hour laboratory.

HPE 134 WATER SAFETY INSTRUCTOR (2)
Prerequisite(s): Current Red Cross Advanced Life Saving Certification, competency in swimming strokes and lifesaving skills.

Development of swimming and life-saving instructional skills. Meets the requirements for American National Red Cross Water Safety Instructor Certification.

2 hours lecture; 1 hour laboratory.

HPE 135* OPEN WATER AND ADVANCE DIVER (3)
Prerequisite(s): Student must be an intermediate swimmer.

Identical to AJS 135. Open water diver provides the student with the knowledge and skills they need to safely gain experience in the SCUBA environment. The course is designed to take a student through a progression of skills in academic, pool, and open water (4 dives). The advanced diver portion of the class is designed to expand the diver's knowledge and skills through both academics and a progression of five open water dives. The advance diver starts with a general orientation and a simple navigation dive (60 ft. maximum) and progress to more advanced training dives. The four remaining dives are to be chosen from the following areas:

1. current/drift 60 ft. maximum
2. light salvage 60ft. maximum
3. boat 100 ft. maximum
4. night 60 ft. maximum
5. navigation 60 ft. maximum
6. wreck (simple) 100 ft. maximum
7. deep 100 ft. maximum
8. More difficult dives are to be conducted as dives 4 and 5.

2 hours lecture; 3 hours laboratory.

HPE 142 BASKETBALL (1)
Prerequisite(s): None.

A practical introduction to the basic skills, rules and strategies of recreational basketball to prepare the student for participation in a lifelong leisure activity.

1 hour lecture; 1 hour laboratory.

HPE 143* BEGINNING BOWLING (1)
Prerequisite(s): None.

A practical introduction to bowling with emphasis on the acquisition of basic skills and knowledge of bowling and on bowling as a lifelong leisure activity.

1 hour lecture; 1 hour laboratory.

HPE 144* INTERMEDIATE BOWLING (1)
Prerequisite(s): HPE 143 or permission of instructor.

A practical introduction to the advanced skills and knowledge of bowling with emphasis on the acquisition of a lifelong leisure activity.

1 hour lecture; 1 hour laboratory.

HPE 145* BEGINNING GOLF (1)
Prerequisite(s): None.

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.

HPE 146* INTERMEDIATE GOLF (1)
Prerequisite(s): HPE 145.

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.

HPE 148 BEGINNING RACQUETBALL (1)
Prerequisite(s): None.

A practical introduction to racquetball with emphasis upon the acquisition of the basic skills and knowledge necessary for participation in racquetball. The student shall also acquire an appreciation for the sport as a lifelong leisure activity.

1 hour lecture; 1 hour laboratory.

HPE 150 SOFTBALL (1)
Prerequisite(s): None.

A practical introduction designed to provide the student with the basic skills, rules and strategies necessary to participate in recreational softball as a lifelong leisure activity.

1 hour lecture; 1 hour laboratory.

HPE 151 BEGINNING TENNIS (1)
Prerequisite(s): None.

A practical introduction designed to provide the student with the basic skills, rules and strategies necessary to participate in recreational tennis as a lifelong leisure activity.

1 hour lecture; 1 hour laboratory.

HPE 152 INTERMEDIATE TENNIS (1)
Prerequisite(s): HPE 151.

A practical introduction designed to provide the student with the advanced skills and strategies necessary to participate in recreational tennis as a lifelong leisure activity.

1 hour lecture; 1 hour laboratory.

HPE 153 VOLLEYBALL (1)
Prerequisite(s): None.

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.

HPE 165 HANDGUN MARKSMANSHIP (1)
Prerequisite(s): None.

An activity course emphasizing firearms safety and care for handguns that supplements law enforcement education, physical education, and competition sports from collegiate to Olympic levels. Students may use their own handguns and ammunition.

1 hour lecture; 1 hour laboratory.

HPE 166 RIFLE MARKSMANSHIP (1)
Prerequisite(s): None.

An activity course emphasizing firearms safety and care for rifles that supplements law enforcement education, physical education, and competition sports from collegiate to Olympic levels. Students may use their own rifle and ammunition.

1 hour lecture; 1 hour laboratory.

HPE 170 VARSITY BASEBALL (1)
Prerequisite(s): None.

Designed to provide the intermediate/advanced athlete with the skills and strategies necessary to compete at the intercollegiate level.

1 hour lecture; 3 hours laboratory.

HPE 171 VARSITY MEN'S BASKETBALL (1)
Prerequisite(s): None.

Designed to provide the intermediate/advanced athlete with the skills and strategies necessary to compete in basketball at the intercollegiate level.

1 hour lecture; 3 hours laboratory.

HPE 172 VARSITY WOMEN'S BASKETBALL (1)
Prerequisite(s): None.

Designed to provide the intermediate/advanced athlete with the skills and strategies necessary to compete at the intercollegiate level.

1 hour lecture; 3 hours laboratory.

HPE 173 VARSITY VOLLEYBALL (1)
Prerequisite(s): None.

Designed to provide the intermediate/advanced athlete with the skills and strategies necessary to compete at the intercollegiate level.

1 hour lecture; 3 hours laboratory.

HPE 174 VARSITY WOMEN'S SOCCER (1)
Prerequisite(s): None.

Designed to provide advanced female soccer athlete the opportunity to develop skills and strategies necessary to compete at the intercollegiate level.

1 hour lecture; 3 hours laboratory.

HPE 175 CHEERLEADING (1)
Prerequisite(s): Permission of instructor and tryouts.

An applied study of cheerleading emphasizing individual and group physical exercises, stunts, dances, routines, and chants with demonstration of these skills at school rallies and games.

1 hour lecture; 1 hour laboratory.

HPE 179 LIFELONG WELLNESS (3)
Prerequisite(s): None.

A practical and theoretical introduction to current practices necessary for wellness and optimum health. The student will develop an individualized program of diet and exercise supervised by the instructor.

3 hours lecture.

HPE 180 ORIENTATION TO PHYSICAL EDUCATION (3)
Prerequisite(s): None.

A comprehensive introduction to the basic foundations of physical education and sport. Includes an examination of career preparation and opportunities.

3 hours lecture.

HPE 181 ORIENTATION TO RECREATION (3)
Prerequisite(s): None.

A comprehensive introduction to the basic foundations of recreation. An examination of career opportunities in the field of recreation.

3 hours lecture.

HPE 183 CARDIOPULMONARY RESUSCITATION AND ELEMENTS OF FIRST AID (.5)
Prerequisite(s): None.

A basic course in CPR and first aid for first responders. Upon completion of the course, the student will be certifiable by the American Heart Association in CPR.

1/2 hour lecture.

HPE 185 ELEMENTARY SCHOOL PHYSICAL EDUCATION (3)
Prerequisite(s): None.

A comprehensive overview of child development theories, general and specific physical education instructional procedures, and activity sequences.

3 hours lecture.

HPE 186 SCHOOL AND COMMUNITY HEALTH (3)
Prerequisite(s): None.

The basic plan of the school health program, health services, health instruction and healthful school environment. The role of the teacher in relation to the school health program and the community health program.

3 hours lecture.

HPE 187 PERSONAL HEALTH (3)
Prerequisite(s): None.

A survey of human adaptation emphasizing study of birth, growth and development, drugs, disease, life style, marriage and parenthood, quality life and death.

3 hours lecture.

HPE 188 FIRST AID AND CPR (1)
Prerequisite(s): None.

A study of first aid and cardiopulmonary resuscitation skills for first responders in an emergency. American Red Cross First Aid and CPR certification awarded upon successful course completion.

1 hour lecture.

HPE 189 FIRST AID AND SAFETY (3)
Prerequisite(s): None.

A study of first aid and cardiopulmonary resuscitation skills for first responders in an emergency. American Red Cross First Aid and CPR certification and the option to qualify for instructor status will be awarded upon successful course completion.

3 hours lecture.

HPE 190 SPORTS OFFICIATING (3)
Prerequisite(s): None.

An overview of officiating skills in several sports including baseball, basketball, football and volleyball. Emphasis upon the acquisition of skills and knowledge essential to serve as a coach and/or as an official with the Arizona Interscholastic Association.

3 hours lecture.

HPE 192 COACHING TEAM SPORTS (2)
Prerequisite(s): None.

An overview of coaching skills and theory with emphasis upon coaching team sports at the youth and secondary levels. Introduces the student to career and professional opportunities in the coaching field. Basic and intermediate skills inherent in several team sports (as selected by the instructor) will be introduced to the student.

2 hours lecture.

HPE 193 THEORY OF COACHING BASEBALL (3)
Prerequisite(s): None.

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.

HPE 194 THEORY OF COACHING BASKETBALL (3)
Prerequisite(s): None.

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.

HPE 195 THEORY OF COACHING VOLLEYBALL (3)
Prerequisite(s): None.

An overview of coaching skills and theory with emphasis upon coaching volleyball at the youth and secondary levels. Introduces the student to the aspects of coaching volleyball at the collegiate level.

3 hours lecture.

HPE 197 CARE & PREVENTION OF ATHLETIC INJURIES (3)
Prerequisite(s): None.

A theoretical and practical study of common athletic injuries including appraisal, treatment, prevention, psychological implications, and legal issues.

3 hours lecture.

HPE 224 FIELD EXPERIENCE IN RECREATION OCCUPATIONS (1-6)
Prerequisite(s): A declared area of emphasis in Recreation Occupations. Permission and approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in recreation occupations. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

HPE 250 INTRODUCTION TO PHYSICAL THERAPY (3)
Prerequisite(s): BIO 160 or 201 or 202 or permission of instructor.

A course in applied biomechanics and physiology designed to prepare the prospective physical educator (i.e., athletic trainer, physical therapist, physical educator) to identify and correctly describe disorders of body posture and movement. The use of exercise will be emphasized to correct postural and movement disorders. Referral to appropriate medical professionals will also be addressed. Additionally, the topic of physical therapy as an occupation, with an emphasis upon the requirements for entering the profession, will be included.

3 hours lecture.

HPE 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study.

Health Technology

HLT 109* NURSING ASSISTANT ONE (4)
Prerequisite(s):. MAT 072 or math placement score of 15 and 9th grade reading level

This course is approved by the Board of Nursing and meets OBRA requirements. It is designed to prepare the student for employment at the most basic level as a nursing assistant in long-term care. It also introduces students to acute care. The student will learn basic concepts of communication, patient safety, anatomy and physiology, nursing process, patient rights, legal and professional responsibilities, and specific patient care skills. The student will learn to recognize and meet basic physical, psychosocial, and cultural needs of patients. Special emphasis is placed on the needs of the geriatric patient.

2-3 hours lecture; 4 hours skills lab/clinical per week.

HLT 114* HOME HEALTH ASSISTANT (3)
Prerequisite(s): Nursing Assistant.

A course to prepare the nursing assistant to function in a home setting either performing specifically assigned tasks or giving complete care within the legal and ethical limits of the role. Adaptation of existing certified nursing assistant skills and those new skills such as food preparation, asepsis in the house and good communications skills necessary for giving safe care in the home are included. A certificate of completion will be awarded following satisfactory completion of this course

2 hours lecture; 3 hours laboratory.

HLT 120 INTRODUCTION TO COMMUNITY HEALTH ADVISOR (3)
Prerequisite(s): None.

Recommended: Students are encouraged to meet with a program advisor before enrolling in the CHA courses.

The first course of a 16 credit Community Health Advisor Certificate Program. It prepares the individual to provide outreach health prevention, advocacy, education, and referral services within prescribed neighborhoods. Competencies taught include community health and human services, communication, organization, and advocacy skills.

3 hours lecture.

HLT 121 COMMUNITY HEALTH ADVISOR PRACTICUM (6)
Prerequisite(s): HLT 120.

The second course of a 16 credit Community Health Advisor Certificate Program. Community Health Advisor skills are practiced and evaluated in community-based health and human service agencies/settings. Students complete 320 clock hours of direct service.

24 hours laboratory per week (4-6hour days for 6 weeks).

HLT 177 FIRST AID INSTRUCTOR TRAINING (3)
Prerequisite(s): (a) HPE 189, EMT 174, 176, or permission of instructor. (b) Certified in Advanced First Aid by American National Red Cross. (c) Or be certified as an EMT with the Arizona Department of Public Safety, Emergency Medical Services Division.

This American National Red Cross course, intended for persons certified in advanced first aid or emergency medical technology, will prepare students to instruct all phases of American National Red Cross first aid.

3 hours lecture.

HLT 219 BORDER HEALTH ISSUES (3)
Prerequisite(s): Second year of Nursing or Social Service Programs; Paramedicine student; or permission of instructor.

Recommended: SOC 101 and/or ANT 102; ENG 102.

Selected health issues pertaining to the U.S.-Mexico border region are surveyed including the epidemiology of certain communicable and chronic diseases; barriers to, and enabling factors for, the prevention and treatment of those diseases; environmental issues; utilization of health services across the border; historical, cultural, legal, and socio-economic factors; bilateral and binational cooperation. Guest speakers from various fields are invited to present their perspectives.

3 hours lecture.

HLT 225 MEDICAL ETHICS (3)
Prerequisite(s): ENG 101 or equivalent, college reading grade level.

An introduction to medical ethics with an emphasis on analysis and problem solving techniques within the medical/nursing arena. Medical ethical theories are explored. Ethical/legal case studies in a broad range of areas are considered.

3 hours lecture.

Hebrew

HEB 101 ELEMENTARY HEBREW (4)
Prerequisite(s): None.

Comprehension of the spoken language, proper pronunciation, usage of proper grammar, development of oral reading skills, composition and conversation.

4 hours lecture; 1 hour laboratory.

HEB 115 BIBLICAL HEBREW (3)
Prerequisite(s): None.

Reading and understanding Biblical Hebrew in order to comprehend both Old and New Testament texts in the original Hebrew. Students will also learn rudiments of modern Hebrew.

3 hours lecture.

History

HIS 110 HISTORY OF THE UNITED STATES 1607-1877 (3)
Prerequisite(s): None.

A study of the development of American characteristics and nationality from colonial beginnings through the period of Reconstruction, emphasizing the factors and forces which produced the Revolution, the Constitution, westward expansion, sectionalism and the Civil War.

3 hours lecture.

HIS 111 HISTORY OF THE UNITED STATES SINCE 1877 (3)
Prerequisite(s): None.

A study of the social, economic, and political forces that moved the United States through changing times from the post-Reconstruction era to the present, focusing on both domestic and foreign affairs in the country's last century of development.

3 hours lecture.

HIS 115 SURVEY OF THE AMERICAN WEST (3)
Prerequisite(s): None.

A study of the methods of penetration and the patterns of westward expansion and settlement with emphasis on the Southwest. Analysis and criticism of the conquest, exploitation and settlement of the last frontiers, including the contribution of minority groups in the American West.

3 hours lecture.

HIS 130 ARIZONA HISTORY (3)
Prerequisite(s): None.

The history of Arizona from the entrance of the Spaniards in 1539 to its emergence as a modern state in the Southwest.

3 hours lecture.

HIS 140 SURVEY OF WESTERN CIVILIZATION I (3)
Prerequisite(s): ENG 101.

Recommended:12.0 reading level or official Cochise College equivalent.

A study of major historical trends from the emergence of Western Civilization through the Early Middle Ages, with emphasis upon the cultural development of mankind and historical relationships.

3 hours lecture.

HIS 141 SURVEY OF WESTERN CIVILIZATION II (3)
Prerequisite(s): ENG 101.

Recommended: 12.0 reading level or official Cochise College equivalent.

A study of the 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 upon historical relationships.

3 hours lecture.

HIS 142 SURVEY OF WESTERN CIVILIZATION III (3)
Prerequisite(s): ENG 101.

Recommended: 12.0 reading level or official Cochise College equivalent.

A study of the major historical trends in Western Civilization from 1800 and Early Modern Civilization to the present, with emphasis on the cultural development of humankind and upon historical relationships.

3 hours lecture.

HIS 160 A HISTORY OF RUSSIA (3)
Prerequisite(s): ENG 101 with a grade of C or better or 11.5 grade reading or equivalent.

A survey of Russian history from Peter the Great to the present. The course includes a study of Russia's geography, ethnic minorities, economics and religions. The Russian Empire; the Romanov Dynasty; the Russian Revolution and Lenin; Stalin, the Cold War and Communism, as well as the Gorbachev and Yeltsin period, are covered in the course.

3 hours lecture.

HIS 192 SPECIAL TOPICS IN HISTORY (.5-1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing local, regional and international historical topics, which will vary with changes in student, needs and interests. May be repeated for Cochise College credit. Cochise College elective credit only unless otherwise designated in degree programs.

1/2 to 1 hour lecture.

HIS 192A The History of Rodeo
HIS 192B Ghost Towns of Cochise County
HIS 192C History of Transportation in Arizona
HIS 192D Arizona Place Names
HIS 192E Women and the West
HIS 192F John H. (Doc) Holliday
HIS 192G History of Tombstone during Arizona's Territorial Period
HIS 192H History of Cochise County
HIS 192I Coronado and the Spanish Legacy in the West
HIS 192J History of the American West as seen through the Writings of John Myers
HIS 192K The Real West (The Good, Bad and The Ugly)
HIS 192L The History of Southwestern Ranching
HIS 192M Military History of Fort Huachuca, Arizona
HIS 192N Islamic Civilization in World History
HIS 192O Family History (Genealogy)
HIS 192P History and Art of Heraldry
HIS 192Q Conflict in the Middle East

HIS 193 SPECIAL TOPICS IN HISTORY (1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing local, regional and international historical topics, which will vary with changes in student, needs and interests. May be repeated for Cochise College credit. Cochise College elective credit only unless otherwise designated in degree programs.

1 hour lecture.

HIS193A The History of Rodeo
HIS193B Ghost Towns of Cochise County
HIS193C History of Transportation in Arizona
HIS193D Arizona Place Names
HIS193E Women and the West
HIS193F John H. (Doc) Holliday
HIS193G History of Tombstone during Arizona's Territorial Period
HIS193H History of Cochise County
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HIS193N Islamic Civilization in World History
HIS193O Family History (Genealogy)
HIS193P History and Art of Heraldry
HIS193Q Conflict in the Middle East
HIS193R The Border: From Heroic Past to Present-day Controversies

HIS 229 HISTORY OF MEXICO I (3)
Prerequisite(s): None.

A study of political, economic, social, and cultural developments from pre-Columbian civilizations to the War for Independence.

3 hours lecture.

HIS 230 HISTORY OF MEXICO II (3)
Prerequisite(s): None.

A study of political, economic, social, and cultural developments from the War for Independence to modern times.

3 hours lecture.

Honors

HON 250 HONORS: INDIVIDUAL PROJECT (1-4)
Prerequisite(s): 12 credits completed at Cochise College, minimum GPA 3.5 or exception through petition of the Honors Committee.

A non-traditional project mutually agreed upon between student and mentor. Student must obtain an honors contract from the Honors Program Secretary/Treasurer.

1-4 hours lecture/laboratory.

Horticulture

The horticulture courses are designed for the Arizona Department of Corrections in Douglas.

HRT 101 BASIC HORTICULTURE (3)
Prerequisite(s): High School diploma, GED or instructor approval.

An examination of the horticulture industry, including the study of safety measures, terminology and tools with an emphasis on available occupational opportunities.

2 hours lecture; 3 hours laboratory.

HRT 110 LANDSCAPE PLANT MATERIAL (3)
Prerequisite(s): HRT 101.

Identification and utilization of plant materials used for landscaping purposes in the desert Southwest with emphasis on cultural requirements, soils and water-plant relationships.

2 hours lecture; 3 hours laboratory.

HRT 111 LANDSCAPE CONSTRUCTION AND MAINTENANCE (3)
Prerequisite(s): HRT 110.

A study of landscape materials, the planting and maintenance of commercial and residential landscapes, sprinkler systems and the use of concrete, brick and wood in landscape construction.

2 hours lecture; 3 hours laboratory.

HRT 115 GARDEN CROP PRODUCTION (3)
Prerequisite(s): HRT 110, 111, or permission of instructor.

A review of propagation, cultivation, and harvest of popular garden fruits and vegetables, from seedbed preparation to retail/wholesale distribution. Focus is on original production of high-demand products created from raw materials and labor.

1 hour lecture; 5 hours laboratory.

HRT 118 FLORICULTURE (3)
Prerequisite(s): HRT 110 or permission of instructor.

Hands-on introduction to creation of floral arrangements and a practical review of propagation, culture, and economic production of flower and foliage plants.

1 hour lecture; 5 hours laboratory.

HRT 120 PEST CONTROL (3)
Prerequisite(s): HRT 111.

A practical analysis of plant pest identification and control methods. Environmental protection agency regulations and pertinent federal laws will be covered.

2 hours lecture; 3 hours laboratory.

HRT 130 ORGANIC GARDENING (3)
Prerequisite(s): HRT 101.

Practical applications in the utilization of natural, organic methods of pest control and soil fertilization. Advantages and disadvantages of organic gardening routines will be examined.

1 hour lecture; 5 hours laboratory.

HRT 140 LANDSCAPE IRRIGATION SYSTEMS (3)
Prerequisite(s): HRT 111 or permission of instructor.

The course will develop skills in designing, installing, operating and maintaining traditional irrigation systems, emphasis on current developments to include sprinklers, bubblers, drip emitters, manual and automated systems.

3 hours lecture.

HRT 201 LANDSCAPE DESIGN (3)
Prerequisite(s): HRT 120.

The principles of landscape design focusing on the utilization of varied plant materials, environmental requirements, drawing and layout techniques and reading landscape blueprints.

3 hours lecture; 1 hour laboratory.

HRT 208 GREENHOUSE MANAGEMENT (3)
Prerequisite(s): HRT 110, 111 and 120.

Focus on actual problems and opportunities in daily activities as well as seasonal projects involved in greenhouse operation. Emphasis will include greenhouse construction, maintenance, environment control, and commercially-oriented production.

1 hour lecture; 5 hours laboratory.

HRT 216 LANDSCAPE ESTIMATING (3)
Prerequisite(s): HRT 111, 140, 201, or permission of instructor.

Emphasis on completed job estimates based on current labor costs and material prices. Various practical projects including landscape construction, installation, and maintenance contract bids will be developed.

1 hour lecture; 5 hours laboratory.

HRT 224 CERTIFIED NURSERY PROFESSIONAL (3)
Prerequisite(s): None.

A review of technical practices and knowledge necessary in the nursery/landscape industry as specified by the Arizona Nursery Association. Emphasis is on preparation for the examination leading to certification as a nursery professional.

2 hours lecture; 4 hours laboratory and directed study.

HRT 232 NATIVE PLANTS OF THE DESERT SOUTHWEST (3)
Prerequisite(s): HRT 101 or permission of the instructor.

This course researches the production and environmental needs of native Southwestern desert plants in conjunction with today's landscapes. Focus is on how to use native plants in a landscape properly.

1 hour lecture; 4 hours laboratory.

Hospitality Administration

HAD 100 INTRODUCTION TO THE HOSPITALITY INDUSTRY (3)
Prerequisite(s): None.

An introductory course of the hospitality industry which includes the hotel-restaurant-resort career, a review of the industry's history, career opportunities, training and motivation, labor relations and management principles as they relate to the hospitality industry.

3 hours lecture.

HAD 110 FOOD SERVICE MATH PRINCIPLES (3)
Prerequisite(s): None.

This course includes the advanced use of culinary weights and measures and conversions, principles of converting standard recipes, sales checks, using the cashier's worksheet, pricing menus, maintaining perpetual and physical inventories and budgeting.

3 hours lecture.

HAD 120 INTRODUCTION TO PROPERTY MANAGEMENT (3)
Prerequisite(s): None.

An introductory course to professional housekeeping and housekeeping administration, including maintenance and logistical supply, employee supervision and safety.

3 hours lecture.

HAD 204 FOOD SERVICE PURCHASING AND CONTROL (3)
Prerequisite(s): None.

Recommended: HAD 110.

The course includes the principles of selecting sources as well as quality and type of foods, and determining quantities to purchase. Fundamentals of receiving operations, quality and volume assurance. Includes planning, control system design, cost analysis and control of sales income and labor costs.

3 hours lecture.

HAD 205 NUTRITION IN FOOD SERVICE (3)
Prerequisite(s): None.

Principles of culinary nutrition. Includes scientific aspects, life-style impact on food consumption and production, and nutrition applications in food service.

3 hours lecture.

HAD 207 RESTAURANT SANITATION (3)
Prerequisite(s): None.

This course is an examination of techniques for controlling sanitation in the food service operations including ensuring product quality, and managing time and costs. Cochise County Food Handlers Certificate is the test given at midterm. Industry certifications available on request with payment for test administration.

3 hours lecture.

HAD 208 MEAT CUTTING FOR THE FOOD SERVICE INDUSTRY (2)
Prerequisite(s): None.

This course encompasses the butchering of meat for quantity food preparation including history, purchasing guidelines, government regulations, cuts, and usage for pork, lamb/veal, and beef. This course does not include a laboratory.

2 hours lecture.

HAD 210 GUEST SERVICES MANAGEMENT (3)
Prerequisite(s): HAD 100.

Front desk management and operations of a hotel, including bell service, clerking, cashier functions, guest reception, reservation systems, guest and building security, night audit and inter-organizational liaison.

3 hours lecture.

HAD 215 FOOD SERVICE SPECIALTY: CULINARY PREPARATION (3)
Prerequisite(s): Culinary arts course.

This course includes the preparation of cuisine specialties. Includes basic cooking principles, recipes, pre-preparation, stocks and sauces, vegetable cookery, starches, breakfast preparation, meat cookery, poultry, fish and shellfish, salads and salad dressings, sandwiches, presentation and garnishing, and bake shop production.

2 hours lecture; 2 hours laboratory.

HAD 216 FOOD SERVICE SPECIALTY: CULINARY PREPARATION II (2)
Prerequisite(s): HAD 215.

Recommended: HAD 207.

This course is a continuation of HAD 215. The course includes a review of the rules of good sanitation, modern kitchen equipment, cooking methods, art of seasoning, creating recipes, food cost, menu development, nutritional considerations, healthy alternatives, soups, family of sauces, meats, cooking methods, vegetable cookery, and potatoes and other starches.

1 hour lecture; 3 hours laboratory.

HRT 208 GREENHOUSE MANAGEMENT (3)
Prerequisite(s): HRT 110, 111 and 120.

Focus on actual problems and opportunities in daily activities as well as seasonal projects involved in greenhouse operation. Emphasis will include greenhouse construction, maintenance, environment control, and commercially-oriented production.

1 hour lecture; 5 hours laboratory.

HRT 216 LANDSCAPE ESTIMATING (3)
Prerequisite(s): HRT 111, 140, 201, or permission of instructor.

Emphasis on completed job estimates based on current labor costs and material prices. Various practical projects including landscape construction, installation, and maintenance contract bids will be developed.

1 hour lecture; 5 hours laboratory.

HRT 224 CERTIFIED NURSERY PROFESSIONAL (3)
Prerequisite(s): None.

A review of technical practices and knowledge necessary in the nursery/landscape industry as specified by the Arizona Nursery Association. Emphasis is on preparation for the examination leading to certification as a nursery professional.

2 hours lecture; 4 hours laboratory and directed study.

HRT 232 NATIVE PLANTS OF THE DESERT SOUTHWEST (3)
Prerequisite(s): HRT 101 or permission of the instructor.

This course researches the production and environmental needs of native Southwestern desert plants in conjunction with today's landscapes. Focus is on how to use native plants in a landscape properly.

1 hour lecture; 4 hours laboratory.

Hospitality Administration

HAD 100 INTRODUCTION TO THE HOSPITALITY INDUSTRY (3)
Prerequisite(s): None.

An introductory course of the hospitality industry which includes the hotel-restaurant-resort career, a review of the industry's history, career opportunities, training and motivation, labor relations and management principles as they relate to the hospitality industry.

3 hours lecture.

HAD 110 FOOD SERVICE MATH PRINCIPLES (3)
Prerequisite(s): None.

This course includes the advanced use of culinary weights and measures and conversions, principles of converting standard recipes, sales checks, using the cashier's worksheet, pricing menus, maintaining perpetual and physical inventories and budgeting.

3 hours lecture.

HAD 120 INTRODUCTION TO PROPERTY MANAGEMENT (3)
Prerequisite(s): None.

An introductory course to professional housekeeping and housekeeping administration, including maintenance and logistical supply, employee supervision and safety.

3 hours lecture.

HAD 204 FOOD SERVICE PURCHASING AND CONTROL (3)
Prerequisite(s): None.

Recommended: HAD 110.

The course includes the principles of selecting sources as well as quality and type of foods, and determining quantities to purchase. Fundamentals of receiving operations, quality and volume assurance. Includes planning, control system design, cost analysis and control of sales income and labor costs.

3 hours lecture.

HAD 205 NUTRITION IN FOOD SERVICE (3)
Prerequisite(s): None.

Principles of culinary nutrition. Includes scientific aspects, life-style impact on food consumption and production, and nutrition applications in food service.

3 hours lecture.

HAD 207 RESTAURANT SANITATION (3)
Prerequisite(s): None.

This course is an examination of techniques for controlling sanitation in the food service operations including ensuring product quality, and managing time and costs. Cochise County Food Handlers Certificate is the test given at midterm. Industry certifications available on request with payment for test administration.

3 hours lecture.

HAD 208 MEAT CUTTING FOR THE FOOD SERVICE INDUSTRY (2)
Prerequisite(s): None.

This course encompasses the butchering of meat for quantity food preparation including history, purchasing guidelines, government regulations, cuts, and usage for pork, lamb/veal, and beef. This course does not include a laboratory.

2 hours lecture.

HAD 210 GUEST SERVICES MANAGEMENT (3)
Prerequisite(s): HAD 100.

Front desk management and operations of a hotel, including bell service, clerking, cashier functions, guest reception, reservation systems, guest and building security, night audit and inter-organizational liaison.

3 hours lecture.

HAD 215 FOOD SERVICE SPECIALTY: CULINARY PREPARATION (3)
Prerequisite(s): Culinary arts course.

This course includes the preparation of cuisine specialties. Includes basic cooking principles, recipes, pre-preparation, stocks and sauces, vegetable cookery, starches, breakfast preparation, meat cookery, poultry, fish and shellfish, salads and salad dressings, sandwiches, presentation and garnishing, and bake shop production.

2 hours lecture; 2 hours laboratory.

HAD 216 FOOD SERVICE SPECIALTY: CULINARY PREPARATION II (2)
Prerequisite(s): HAD 215.

Recommended: HAD 207.

This course is a continuation of HAD 215. The course includes a review of the rules of good sanitation, modern kitchen equipment, cooking methods, art of seasoning, creating recipes, food cost, menu development, nutritional considerations, healthy alternatives, soups, family of sauces, meats, cooking methods, vegetable cookery, and potatoes and other starches.

1 hour lecture; 3 hours laboratory.

HAD 220 FOOD SERVICE SPECIALTY: BAKING (3)
Prerequisite(s): None.

Recommended: HAD 215 and HAD 240.

This course includes the essentials of baking including basic principles, ingredients, quick breads, yeast dough, syrups, creams, icings, and sauces, pastries, pies, cake mixing and decorating, cookies, custards, puddings and mousses, and display pieces.

2 hours lecture; 2 hours laboratory.

HAD 221 FOOD SERVICE SPECIALTY: BAKING II (2)
Prerequisite(s): HAD 220.

This course is a continuation of HAD 220. It includes advanced baking principles, baking process, muffins and biscuits, yeast doughs, stages of cooking sugar, pastry cream, meringues, icings, pie doughs, puff pastry, éclair paste, phyllo dough, pie production, cakes, cookies and their characteristics, and soufflés.

1 hour lecture; 3 hours laboratory.

HAD 224 FIELD EXPERIENCE IN HOSPITALITY ADMINISTRATION (1-6)
Prerequisite(s): A declared major in Hospitality Administration. Permission and approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in hospitality administration and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

HAD 225 FOOD SERVICE SPECIALTY: GARDE-MANGER (3)
Prerequisite(s): None.

Recommended: HAD 215 and HAD 240.

This course encompasses the creation and storage of salads, sandwiches, and appetizers. Includes purchasing practices, food platter layout and presentation, cooking methods, salads and dressings, poultry, seafood, meats, show pieces, and canapés and hor d' oevres.

2 hours lecture; 2 hours laboratory.

HAD 226 FOOD SERVICE SPECIALTY: GARDE-MANGER II (2)
Prerequisite(s): HAD 225.

This course is a continuation of HAD 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.

1 hour lecture; 3 hours laboratory.

HAD 235 HOSPITALITY LAW (3)
Prerequisite(s): HAD 100 and HAD 120.

Common law and its application to the hospitality industry, including basic contracts, administrative law and government regulations and legal concerns resulting from the innkeeper-guest relationship and the establishment and operation of a place of public accommodation. The impact of the legal environment and process on the day to day aspects of the hospitality industry, including preventative measures to limit or eliminate liability and litigation.

3 hours lecture.

HAD 240 COMMERCIAL FOOD PREPARATION THEORY (3)
Prerequisite(s): None.

A course outlining the basic principles of food selection and purchase, storage, menu planning, preparation, service, kitchen organization and sanitation in commercial food preparation.

3 hours lecture.

HAD 241* ADVANCED COMMERCIAL FOOD PREPARATION AND LAB (4)
Prerequisite(s): HAD 240.

Basic principles, procedures, operations and techniques in quantity commercial food preparation and service, including planning, storage, cooking equipment, sanitation and service.

2 hours lecture; 8 hours laboratory.

HAD 242 DINING SERVICE MANAGEMENT (3)
Prerequisite(s): None.

Recommended: HAD 240.

This course includes 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, basics of generic and varietal wines, wine and food affinities, bar service, sanitation and safety, and review/performance appraisals. The course does not include mixology or wine tasting.

2 hours lecture; 3 hours laboratory.

HAD 250 HOSPITALITY FINANCIAL MANAGEMENT (3)
Prerequisite(s): BUS 201.

A study of financial statement analysis, management of assets, ratio analysis, analytical techniques and investment decision making as they apply to the hospitality industry.

3 hours lecture; 2 hours laboratory.

HAD 270* HOSPITALITY AUTOMATION (3)
Prerequisite(s): HAD 210.

An exploration and application of computer technology to front desk operations, including reservations, guest accounting and manager's reports.

3 hours lecture.

HAD 280 ADVANCED TECHNIQUES IN GOURMET FOOD PREPARATION (3)
Prerequisite(s): HAD 226 or concurrent enrollment.

Recommended: HAD 110.

This course encompasses the preparation of haute cuisine, including proper flavorings, spirits, garnishes and flambé in gourmet food preparation.

2 hours lecture; 3 hours laboratory.

Humanities

HUM 093 CULTURAL CONTEXT: CASE STUDIES (1)
Prerequisite(s): Concurrent enrollment in ESL 014 or permission of instructor.

Introduction to the social norms, cultural values and assumptions underlying workplace behavior with emphasis on case studies and practical application.

2 hours laboratory.

HUM 100 AMERICAN CULTURE (3)
Prerequisite(s): Concurrent placement in ENG 100, or 106 or higher, or permission of instructor.

A course for students from non-English-speaking cultures and for others who wish to increase their awareness of American cultural values. Students will receive and practice key concepts about contemporary American social behavior and values.

3 hours lecture.

HUM 101 HUMANITIES IN CONTEMPORARY LIFE (3)
Prerequisite(s): None.

A study of contemporary thought, literature, art and music as they occur in mass media: journalism, motion pictures, and television. Students will be required to attend assigned concerts, plays, motion pictures, art exhibits, and will be required to submit written critical reports.

3 hours lecture.

HUM 104 HERITAGE FROM MEXICO (3)
Prerequisite(s): None.

A study of the various facets of culture and their historical settings which have contributed to the traditions, life style and uniqueness of Mexicans and Americans of Mexican heritage both past and present.

3 hours lecture.

HUM 105 BALLET FOLKLÓRICO (2)
Prerequisite(s): None.

An introduction to the study and performance of Ballet Folklórico with emphasis upon basic dance steps, dances from different regions of Mexico, and group performances. Includes an overview of the history and cultural heritage of Ballet Folklórico. May be taught in a bilingual English/Spanish format. May be offered on a Pass/Fail basis.

1 hour lecture; 3 hours rehearsal/performance.

HUM 110 INTRODUCTION TO FILM AND VIDEO (3)
Prerequisite(s): None.

A study of film and video as art forms and as media for the expression of ideas and an introduction to the principles of film criticism.

3 hours lecture.

HUM 115 CULTURAL HERITAGE OF THE SOUTHWEST: INDIAN, HISPANIC, NORTH AMERICAN (3)
Prerequisite(s): None.

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.

HUM 167 CULTURAL VALUES IN THE BORDERLANDS WORKPLACE (3)
Prerequisite(s): Completion of ENG 101 with a grade of C or better; concurrent enrollment in HUM 101 or HUM 104 preferred.

An overview of cultural patterns, values, beliefs and customs prevalent in business and industry on the United States/Mexico border, with emphasis on practical application.

3 hours lecture.

HUM 192 SPECIAL TOPICS IN THE HUMANITIES (.5-1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing connections among literature, philosophy and the arts. Topics will vary in accordance with changes in student need and interest. Cochise College elective credit only unless otherwise designated in degree programs.

1/2 to 1 hour lecture.

HUM 205 MAJOR ANCIENT CULTURES (3)
Prerequisite(s): ENG 102 with a grade of C or better or permission of instructor.

Art, architecture, literature, music and ideas in the Western World from Ancient times to the Middle Ages, with emphasis on people's relationship to their gods or God.

3 hours lecture.

HUM 206 EUROPEAN CULTURE (3)
Prerequisite(s): ENG 102 with a grade or C or better or permission of instructor.

Art, architecture, literature, music and philosophy from the Middle Ages to the Industrial Revolution with emphasis on the development of humanism and science.

3 hours lecture.

HUM 207 THE MODERN WORLD (3)
Prerequisite(s): ENG 102.

A global view of art, literature, music, philosophy, and ideas from the eighteenth century to the present time.

3 hours lecture.

HUM 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

Completion of a research problem, or an outlined course of study, under the direction of a faculty member with a contract for the individual study agreed upon by the student, the instructor and the associate dean prior to initiation of the study. May be repeated for credit.

Intercultural Studies

ICS 193 SPECIAL TOPICS IN INTERCULTURAL STUDIES (1)
Prerequisite(s): High school level reading ability in English or Spanish, and some speaking knowledge of both English and Spanish preferred

A rotating forum/seminar on a variety of topics of interest to individuals who wish to learn more about the values and interactions of Spanish-speaking and English-speaking people and their cultural foundation. Topics will vary in accordance with changes in student need and interest.

1 hour lecture.

Journalism

JRN 101 INTRODUCTION TO MASS COMMUNICATIONS (3)
Prerequisite(s): Completion of ENG 101 or permission of instructor.

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, syndication, books, movies, computer/digital and other media. Identical to MED 101.

3 hours lecture.

JRN 102 WRITING FOR PUBLICATIONS (3)
Prerequisite(s): Completion of ENG 101 or permission of instructor.

Recommended: Computer Literacy.

Entry-level course in media arts/communications or journalism. Students will be introduced to news writing, editing, assignments and deadlines. Identical to MED 102.

3 hours lecture.

JRN 103 NEWS REPORTING (3)
Prerequisite(s): JRN/MED 102 or permission of instructor.

A course in writing and editing news and feature articles. Special emphasis on news gathering and reporting of real-life situations. Class will supply articles for the journalism workshop newsletter or college newspaper. Identical to MED 103.

2 hours lecture; 2 hours laboratory.

JRN 201* STUDENT NEWSPAPER (3)
Prerequisite(s): JRN/MED 102 or JRN/MED 207, CIS 285 or permission of instructor.

A guided workshop for publication of a student-based college newspaper, emphasizing techniques for editing, layout, headline and caption writing, photo/art assignment and selection, and computer production techniques. May be repeated twice for Cochise College degree credit. Identical to MED 201.

2 hours lecture; 4 hours laboratory.

JRN 207* INTRODUCTION TO DESKTOP PUBLISHING (3)
Prerequisite(s): Typing, word processing or computer experience helpful.

Principles and practice of creating printed materials combining text and graphics using major desktop publishing programs, with emphasis on the practical aspects of production. Identical to CIS 285 and MED 207.

3 hours lecture.

JRN 224 FIELD EXPERIENCE IN COMMUNICATION & MEDIA TECHNOLOGY (1-6)
Prerequisite(s): A declared major in Communication and Media Technology. Permission and approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in communication and media technology and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

JRN 257 LITERARY MAGAZINE PRODUCTIONS (3)
Prerequisite(s): ENG 101 or permission of instructor.

Recommended: ENG 119 and CIS 285/JRN 207/MED 207

Production of the college literary and arts magazine. Includes application of promotion, editing, design, layout, and production techniques. May be taken more than once for credit. Identical to ENG 257.

3 hours lecture.

JRN 287* COMPUTERIZED PHOTOGRAPHY I (3)
Prerequisite(s): None.

An introduction to digital photography and the electronic darkroom. A blending of traditional film-based picture-taking techniques with computer-aided photo manipulation. Photo lab and computer lab will both be used. Emphasis on scanning and on-screen photo-manipulation software. Identical to MED 287.

3 hours lecture/discussion/demonstration with practical experimentation.

JRN 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

Korean

KOR 115 CONVERSATIONAL KOREAN I (3)
Prerequisite(s)s: None.

An introduction to beginning-level Korean, including its basic structures and Hangul (Korean script). Designed for students who wish to use Korean for business, pleasure, or travel, with some emphasis on traditions, culture and customs. May be used for elective credit toward an AA degree. Emphasis is on speaking, reading and writing.

3 hours lecture.

KOR 116 CONVERSATIONAL KOREAN II (3)
Prerequisite(s)s: KOR 115.

Continuation of conversational KOR 115 using similar methods and format. Essentials of Korean for conversational situations coupled with some reading skills to enable the reading of signs, etc., with a continuing emphasis on customs, traditions and culture. Designed for students who wish to use Korean for business, pleasure or travel. May be used for elective credit toward and AA degree. Emphasis is on speaking, reading and writing.

3 hours lecture.

Latin

LAT 101 ELEMENTARY LATIN (4)
Prerequisite(s): None.

A study of grammar and vocabulary of Latin and of ancient authors with emphasis on the etymological indebtedness of English to Latin.

4 hours lecture.

LAT 102 ELEMENTARY LATIN (4)
Prerequisite(s): LAT 101.

A study of grammar and vocabulary of Latin and of ancient authors; a continuation of LAT 101.

4 hours lecture.

LAT 201 INTERMEDIATE LATIN I (4)
Prerequisite(s): LAT 102 or equivalent; or at least two years of high school Latin.

Review of Latin language through selected readings from the prose of the Golden Age (80 BC - AD 14) and Silver Age (AD 15 - 138) of Latin literature (e.g., Cicero, Caesar, Seneca, Tacitus, et al.).

4 hours lecture/recitation.

LAT 202 INTERMEDIATE LATIN II (4)
Prerequisite(s)s: LAT 201 or equivalent; or at least three years of high school Latin, with permission of instructor.

Review of Latin language through selected readings from the poetry of the Golden Age (80 BC - AD 14) and the Silver Age (AD 15 - 138) of Latin literature (e.g., Catullus, Virgil, Horace, Martial, Juvenal).

4 hours lecture/recitation.

Linguistics

LIN 101 INTRODUCTION TO LINGUISTICS (3)
Prerequisite(s)s: ENG 101 or 107. Previous foreign language experience or permission of instructor.

Survey of linguistic concepts and methods; communication among animals; physiology of human speech; elementary phonology, morphology, syntax and semantics; language variation, borrowing and change; language and the brain; language and thought.

3 hours lecture.

LIN 180 EFFECTIVE MESSAGES (3)
Prerequisite(s)s: ENG 167 and SPA 267 or equivalent proficiency as determined by the instructor on the basis of prescribed placement tests.

Theory and practice of encoding and decoding electronically transmitted messages: telegraph or Telex, telephone or radio, television. Consideration of teleconferencing included. Communications strategies to reduce interference and ambiguity in messages; techniques to increase comprehension. Taught in English and Spanish.

2 hours lecture; 3 hours laboratory.

LIN 290 FUNDAMENTALS OF TRANSLATION AND INTERPRETATION (3)
Prerequisite(s)s: ENG 167 and SPA 267 or permission of instructor based on prescribed proficiency tests; concurrent enrollment in LIN 180 preferred.

An introduction to translation and interpretation theory and practice. Emphasis on application; translation of representative texts chosen from general and commercial contexts; interpretation of representative discourse chosen from a variety of social and business contexts. Familiarity with professional translation and interpretation practices, ethics and technology. Identical to SPA 290.

3 hours lecture.

Management

MGT 101 INTRODUCTION TO MANAGEMENT SKILLS (2)

Prerequisite(s): Sponsorship by a private or non-profit sector employer or approval of the Coordinator of the Center for Professional Development.

A practical introduction to private and non-profit sector management for first-line supervisors or potential supervisors. Focus is on communication techniques, delegation of authority, quality management, performance evaluation, discipline, and employee orientation. May be offered in a pass/fail grading format. Identical to PAD 101.

MGT 101 - MGT 103 is offered as a single program and may not be taken individually or out of sequence.

2 hours lecture.

MGT 102 THE MANAGER AND SYSTEMS RELATIONSHIPS (2)

Prerequisite(s): MGT 101.

A practical study of the manager as a member of an organization with emphasis upon the processes and procedures necessary for managerial competence. Topics include management practices, employee motivation, organizational communications, budgetary systems and management, equal employment opportunity, and employee-management relations. May be offered in a pass/fail grading format. Identical to PAD 102.

MGT 101-103 is offered as a single program and may not be taken individually, or out of sequence.

2 hours lecture.

MGT 103 THE MANAGER AND THE WORKGROUP (2)

Prerequisite(s): MGT 102.

A practical analysis of the manager as a group/team leader, focusing on group dynamics, behavioral analysis, group problem solving and decision making, change management, conflict management, and group interaction. May be offered in a Pass/Fail grading format. Identical to PAD 103.

MGT 101-103 is offered as a single program and may not be taken individually, or out of sequence.

2 hours lecture.

MGT 201 LEADERSHIP SKILLS FOR MANAGERS (3)

Prerequisite(s): Sponsorship by a private or non-profit sector employer, and success completion of MGT 101-103 or PAD 101-103 or possession of the equivalent level of training as certified by the CPD Coordinator.

A practical, in-depth study of private and non-profit sector management techniques focusing on leadership, ethics, management in a political environment, management of fiscal resources and organizational planning. Also includes the study of marketing fundamentals, marketing strategy, and linking marketing with organizational goals. MGT 201 is offered as part of a management certificate program and may not be taken as an individual course or out of sequence. May be offered in a Pass/Fail grading format.

3 hours lecture.

MGT 202 EFFECTIVE DECISION MAKING (3)
Prerequisite(s): MGT 201.

A practical, in-depth study of private sector management techniques focusing on effective decision making, conflict management, performance evaluation and achieving organizational goals through teamwork. MGT 202 is offered as part of a management certificate program and may not be taken individually or out of sequence.

3 hours lecture.

MGT 203 SUCCESSFUL PROJECT MANAGEMENT (3)
Prerequisite(s): MGT 202.

A practical, in-depth study of private and non-profit sector management techniques focusing on project management, managing and achieving organizational goals and effectively managing organizational change. MGT 203 is offered as part of a management certificate program and may not be taken individually, or out of sequence.

3 hours lecture.

Mathematics

MAT 005 DEVELOPMENTAL MATHEMATICS (3)
Prerequisite(s): Math placement test scores below requirements for successful completion of MAT 072.

MAT 005 is a course in basic mathematics. Math pre-test and student inventory responses are used to place students. Topics of instruction include addition, subtraction, multiplication, division of whole numbers, functions, decimals and percentage applications.

3 hours lecture.

MAT 011 CONQUERING MATH ANXIETY (1)
Prerequisite(s): None

Recommended: Reading 8.0 grade level.

A study in the causes and treatments of Math Anxiety, study skills, education, anxiety reduction techniques.

1 hour lecture.

MAT 072 FUNDAMENTAL MATHEMATICS (3)
Prerequisite(s): Indicated mathematics deficiency.

A study of basic arithmetic concepts with drill in skills and techniques of computation. Includes fundamental operations with whole numbers, fractions and decimals, percent, units of measure, geometry, scientific notation, ratio and proportion, averages, basic operations with signed numbers and solving simple algebraic equations.

3 hours lecture.

MAT 082 ELEMENTARY ALGEBRA (3)
Prerequisite(s): MAT 072 with a grade of C or better or acceptable score in placement examination.

An introduction to the basic algebra normally included in a first-year high school algebra course. Includes fundamental axioms and operations applied to rational numbers, laws of integral exponents, solutions of equations, polynomials and factoring, systems of equations, graphing equations and inequalities, rational expressions, radicals and quadratic equations and applications.

3 hours lecture.

MAT 122 INTERMEDIATE ALGEBRA (3)
Prerequisite(s): MAT 082 with a grade of C or better or an appropriate placement score or one year of high school algebra.

A continuation of algebra concepts which parallels the content generally included in a second-year high school algebra course: real number system, linear equations, absolute value and inequalities, functions, basic analytical geometry, systems of equations, polynomials, exponents, radicals and quadratic equations. May or may not transfer for credit to four-year universities.

3 hours lecture.

MAT 125 MATHEMATICS FOR ELEMENTARY EDUCATION MAJORS I (3)
Prerequisite(s): MAT 122 or equivalent.

The objective of this course is to provide an understanding of problem solving, sets and functions, numeration systems, whole numbers, integers, rational numbers, decimals, and number theory.

3 hours lecture.

MAT 126 MATHEMATICS FOR ELEMENTARY EDUCATION MAJORS II (3)
Prerequisite(s): MAT 125 or equivalent.

The objective of this course is to provide an understanding of probability, statistics, introductory geometrics, problem solving and LOGO turtle graphics (optional).

3 hours lecture.

MAT 151 COLLEGE ALGEBRA (4)
Prerequisite(s): MAT 122 with a grade of C or better or two years of high school algebra.

A logical development of the real number system, field axioms as applied to algebra, sets and set notation, inequalities and absolute value, polynomial functions and their graphs, determinants and matrices, inverse functions, logarithmic and exponential functions, complex numbers, sequences, binomial theorem, and mathematical induction.

4 hours lecture.

MAT 167 ELEMENTS OF STATISTICS (3)
Prerequisite(s): MAT 151 or equivalent or permission of instructor.

Basic concepts of descriptive and inferential statistics with applications in business and economics, the natural sciences, and the social and behavioral sciences. Methods of data collection, sampling techniques, experimental design, probability distributions, hypothesis testing, regression and correlation, various parametric and non-parametric statistical tests.

3 hours lecture.

MAT 172 FINITE MATHEMATICS (3)
Prerequisite(s): Satisfactory completion of MAT 151 or permission of instructor.

An introduction to finite mathematics, with applications including: linear equations to supply and demand functions, systems of linear equations with applications to optimization, systems of linear inequalities with application matrices, linear programming and the simplex method, and mathematics of finance.

3 hours lecture.

MAT 182 PLANE TRIGONOMETRY (3)
Prerequisite(s): MAT 151 or permission of instructor.

An analytical approach to trigonometry based upon the unit circle concept: trigonometric functions, identities, conditional equations, radian measure graphs, logarithms, solution of right and oblique triangles, inverse trigonometric functions and trigonometric form of complex numbers.

3 hours lecture.

MAT 187 PRECALCULUS (5)
Prerequisite(s): MAT 122

Topics from college-level algebra and trigonometry essential to the study of calculus and analytic geometry. Includes algebraic, exponential, logarithmic, trigonometric, and inverse trigonometric functions, complex numbers, linear and nonlinear systems of equations and inequalities, and sequences and series.

5 hours lecture.

MAT 188 COMPUTER SKILLS FOR MATHEMATICS W/ APPLICATIONS (3)
Prerequisite(s): MAT 151 or MAT 187 or concurrent.

This course is an informative "hands-on" introduction to computers covering applications both basic and advanced. Basic skills are graphing, solving equations and a system of equations numerically, rates of change of functions, linear regression, linear extrapolation and iteration. Advanced topics are presented in simple but non-trivial ways that show connections to basic skills. Topics may include falling bodies, spring motions, planetary motions, harmonic analysis of data, signal processing, spectral analysis, finite differences, Laplace's equation, dynamical systems, cellular automata. This course is appropriate for students with little or no background in computers who may be required to have some proficiency in computers for other math or science courses. This course is designed for math students, educators, or others with a general interest in computers who want to broaden their understanding of math and science.

3 hours lecture.

MAT 212 CALCULUS FOR BUSINESS (3)
Prerequisite(s): MAT 151 or equivalent with a grade of C or better.

Elementary topics in analytic geometry, and differential and integral calculus with business applications.

3 hours lecture.

MAT 220 CALCULUS I (5)
Prerequisite(s): MAT 151 and MAT 182 or MAT 187 or four years of high school mathematics or permission of instructor.

An integrated study in which analytic geometry is used to develop, understand, and apply calculus concepts. Includes absolute value and inequality, relations and functions, graphs, limits and continuity, definition and application of the derivative, antiderivative and definite integral.

5 hours lecture

MAT 227 DISCRETE MATH (3)
Prerequisite(s): MAT 151 or equivalent. Strongly recommend completion of MAT 220.

The objective of this course is to provide an understanding of formal logic, proofs, induction, recursion, sets, counting, permutations and combinations, relations, functions, matrices, graphs, trees, Boolean algebra, and logic networks.

3 hours lecture.

MAT 231 CALCULUS II (4)
Prerequisite(s): MAT 220 with a grade of C or better.

A continuation of MAT 220. Includes techniques of differentiation and integration of transcendental functions, and an introduction to infinite series. Also covers topics in analytic geometry, parametric equations, and polar coordinates.

4 hours lecture.

MAT 241 CALCULUS III (4)
Prerequisite(s): MAT 231 with grade of C or better.

A continuation of MAT 231 to conclude the three-semester calculus sequence. Topics include vectors, vector-valued functions, partial differentiating, and multiple integration.

4 hours lecture.

MAT 252 INTRODUCTION TO LINEAR ALGEBRA (3)
Prerequisite(s): MAT 231.

Matrices and systems of linear equations, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors, and applications.

For math majors, physics majors, pre-engineering, and computer science majors.

3 hours lecture.

MAT 262 DIFFERENTIAL EQUATIONS (3)
Prerequisite(s): MAT 231 with a grade of C or better.

Ordinary differential equations with applications including linear equations, nonlinear and separable equations, homogeneous equations, power series solutions, Euler equations, LaPlace transforms (optional) and numerical methods (optional).

3 hours lecture.

MAT 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

Media

MED 101 INTRODUCTION TO MASS COMMUNICATIONS (3)
Prerequisite(s): ENG 101 or permission of instructor.

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, syndication, books, movies, computer/digital, and other media. Identical to JRN 101.

3 hours lecture.

MED 102 WRITING FOR PUBLICATIONS (3)
Prerequisite(s): ENG 101 or permission of instructor.

Entry level course in media arts/communications or journalism. Students will be introduced to news writing, editing, assignments and deadlines. Identical to JRN 102.

2 hours lecture; 2 hours laboratory.

MED 103 NEWS REPORTING (3)
Prerequisite(s): MED/JRN 102 or permission of instructor.

A course in writing and editing news and feature articles. Special emphasis on news gathering and reporting of real-life situations. Class will supply articles for the journalism workshop newsletter or college newspaper. Identical to JRN 103.

2 hours lecture; 2 hours laboratory.

MED 125* INTRODUCTION TO VIDEO PRODUCTION (3)
Prerequisite(s): Placement in ENG 101 or permission of instructor.

An introduction to the elements of video production. Includes operation of video, audio, lighting, and other resources. Emphasis is placed on theory and practical applications used in video production.

3 hours lecture.

MED 130* INTRODUCTION TO TV, RADIO, AND FILM PRODUCTION (3)
Prerequisite(s): None.

An introduction to the elements of television, radio, and film production. Includes operation of video, audio, lighting, sound, and other resources. Emphasis is placed on theory and practical applications used in all aspects of production.

3 hours lecture and studio.

MED 192* SPECIAL TOPICS IN MEDIA (1-3)
Prerequisite(s): None.

A rotating forum/seminar emphasizing a variety of areas in media, including but not limited to, television, radio, film, electronic media, newspapers, magazines, and books. Topics will vary in accordance with changes in student need and interest. Cochise College elective credit only, unless otherwise designated in degree programs.

1-3 hours lecture.

MED 201* STUDENT NEWSPAPER (3)
Prerequisite(s): JRN/MED 102 or JRN/MED 207/CIS 285 or permission of instructor.

A guided workshop for the publication of a student-based college newspaper, emphasizing techniques for editing, layout, headline and caption writing, photo/art assignment and selection, and computer production techniques. May be repeated twice for Cochise College degree credit. Identical to JRN 201.

2 hours lecture; 4 hours laboratory.

MED 207* INTRODUCTION TO DESKTOP PUBLISHING (3)
Prerequisite(s): Typing, word processing, or computer experience helpful.

Principles and practice of creating printed materials combining text and graphics using major desktop publishing programs, with emphasis on the practical aspects of production. Identical to CIS 285 and JRN 207.

3 hours lecture.

MED 209* COMPUTER ILLUSTRATION & DESIGN (3)
Prerequisite(s): None, but prior computer experience is recommended.

Principles and practices of design and applications of computer graphics using Correl Draw and Windows Paintbrush. Emphasis on the practical aspects of production.

3 hours lecture.

MED 265* BEGINNING COMMERCIAL DESIGN (3)
Prerequisite(s): ART 103 or permission of instructor. (Art majors must have prerequisite.)

Recommended: (For non-art majors.)

An introduction to the basic elements and principles of commercial design and the techniques of advertising layout. This includes their practical applications with the tools and materials used in the field of advertising. Identical to ART 265.

2 hours lecture; 4 hours studio.

MED 285* BEGINNING PHOTOGRAPHY (3)
Prerequisite(s): None.

An introduction to the use and function of the camera and black-and-white darkroom technique. Students must have access to a fully adjustable 35mm camera. Identical to ART 285.

2 hours lecture; 4 hours studio.

MED 286* INTERMEDIATE PHOTOGRAPHY (3)
Prerequisite(s): ART/MED 285 or permission of instructor. (Art majors must have prerequisite.)

Recommended: (For non-art majors.)

An intermediate course in photography for students who understand the basics of black-and-white film exposure, development, and printing. Emphasis on photojournalism, art photography, portraiture, and landscapes. Students must have access to a fully adjustable 35mm camera. Identical to ART 286.

2 hours lecture; 4 hours laboratory.

MED 287* COMPUTERIZED PHOTOGRAPHY I (3)
Prerequisite(s): None.

An introduction to digital photography and the electronic darkroom. A blending of traditional film-based picture-taking techniques with computer-aided photo manipulation. Photo lab and computer lab will both be used. Emphasis on scanning and on-screen photo-manipulation software. Identical to JRN 287.

3 hours lecture/discussion/demonstration with practical experimentation.

Motor Transportation Technology

MTT 101* MOTOR TRANSPORT BASIC (4)
Prerequisite(s): Satisfactory completion of physical examination and truck driver license applications, minimum age 21 years.

A beginning course preparing the student to understand the role of motor transportation industry and to prepare for the Arizona State License and Department of Transportation's certification examinations. Initial development of basic skills and techniques required to control the tractor-trailer transport vehicle.

2 hours lecture; 4 hours laboratory.

MTT 102* OVER THE ROAD OPERATIONS (5)
Prerequisite(s): Satisfactory completion of MTT 101.

Students will study and operate in the highway traffic environment to develop vehicle handling skills, safe and efficient operating practices, perceptual skills necessary to recognize potential hazards, and manipulative skills needed to handle a vehicle in an emergency. A study and practice of defensive driving techniques, accident prevention in heavy vehicle operation, and the use of energy efficient driving techniques.

3 hours lecture; 5 hours laboratory.

MTT 103* VEHICLE MAINTENANCE AND INSPECTION (1.5)
Prerequisite(s): MTT 101 or concurrent enrollment.

This course provides the student with knowledge and skills required to keep a tractor-trailer rig in safe and efficient operating condition.

1 hour lecture; .5 hour laboratory.

MTT 104* FREIGHT AND TRUCK OPERATIONS (5.5)
Prerequisite(s): MTT 101 or concurrent enrollment.

A course designed to cover non-driving activities which must be performed by tractor-trailer drivers. Students will perform these auxiliary activities to assure safety to the driver, the vehicle, cargo, and other road users. Development of knowledge and skills to assist the student in securing desired employment, understanding the importance of health maintenance practices and industrial safety procedures, effectively communicating in verbal and written forms, and positively interacting with fellow employees, customers, and the general public.

3.5 hours lecture; 4 hours laboratory.

MTT 105* COMMERCIAL DRIVER LICENSE (2)
Prerequisite(s): At least 21 years of age and eligible to apply for a Commercial Driver License (CDL) or at least 18 years of age and eligible for a restricted CDL for in-state driving.

Designed to train third party examiners in the conduct of CDL test administration procedures. Through implementation of the Arizona Department of Transportation (ADOT) Motor Vehicle Division (MVD) approved training program, the course will prepare the examiner in accordance with the guidelines and criteria established by the Arizona Association of Motor Vehicle Administrators (AAMVA).

1 hour lecture; 2 hours laboratory.

MTT 224 FIELD EXPERIENCE IN MOTOR TRANSPORTATION TECHNOLOGY (1-6)
Prerequisite(s): Successful completion of MTT 101, 102, 103, and 104. Permission and approval of a Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in motor transportation technology and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 units in a given semester.

Motorcycle Safety Education

MSE 101 MOTORCYCLE RIDERS COURSE I: RIDING & STREET SKILLS (1)
Prerequisite(s): Access to an insured, licensed motorcycle, which is able to pass a recognized safety inspection. Approved, instructor specified rider apparel.

An introduction to motorcycle safety and operation, utilizing a coordinated program of classroom instruction and range exercises. Includes a review of controls; mechanicals; and riding in a straight line, on curves and in corners. Emphasis on rider safety and on the identification and minimization of common risks. Motorcycle Safety Foundation certification and waiver from ADOT-MVD motorcycle knowledge and skills test awarded for successful completion.

1 hour lecture and demonstration.

Music

MUS 100 FUNDAMENTALS OF MUSIC NOTATION (3)
Prerequisite(s): None.

An introduction to the fundamental structures of music including rhythm, note reading, scales, intervals, chords, and beginning composition.

3 hours lecture

MUS 101 INTRODUCTION TO MUSIC (3)
Prerequisite(s): None.

An introduction to the elements, form and design of music, illustrated with recordings of important musical literature from various periods of music history with an emphasis on the Medieval, Renaissance and Baroque periods of music history.

3 hours lecture.

MUS 102 INTRODUCTION TO MUSIC (3)
Prerequisite(s): None.

An introduction to the elements, form and design of music, illustrated with recordings of important musical literature from various periods of music history, with an emphasis on the classical, romantic, and twentieth-century periods of music history.

3 hours lecture.

MUS 103 VOICE-CLASS INSTRUCTION (1)
Prerequisite(s): None.

The study of basic foundations of vocal techniques, i.e., breath control, tonal support, tone production, vocal projection and diction.

1 hour lecture/laboratory.

MUS 104 VOICE-CLASS INSTRUCTION (1)
Prerequisite(s): MUS 103.

An intermediate study of basic foundations of vocal techniques, i.e., breath control, tonal support, tone production, vocal projection and diction.

1 hour lecture/laboratory.

MUS 105* THEATRE DANCE (1)
Prerequisite(s): None.

Study and practice in stage movement and choreography for theatrical production designed for students in musical theatre productions. Meets one day a week for three hours. (Not intended for transfer credit.)

3 hours rehearsal/performance.

MUS 108 MARIACHI (2)
Prerequisite(s): Basic skill in singing or in playing the guitar, guitarron, trumpet, violin or vihueta.

A performing art class which is a practical introduction to the study and performance of Mariachi. Includes a study of the history and cultural heritage of Mariachi, with an emphasis upon the refinement of basic vocal and instrumental skills and the ability to perform musically as a group. May be offered on a pass/fail basis.

1 hour lecture; 3 hours rehearsal/performance.

MUS 109 ORCHESTRA (1)
Prerequisite(s): Permission of instructor.

Study and performance of orchestral musical literature from various periods of musical composition. May be repeated for credit.

2 hours rehearsal/performance.

MUS 110 CHORUS (1)
Prerequisite(s): Audition.

Study and performance of outstanding choral literature from various periods of musical composition. May be repeated for credit.

3 hours rehearsal/performance.

MUS 111 BAND (1)
Prerequisite(s): Audition or permission of instructor.

Study and performance of instrumental music from various periods of musical composition.

2 hours rehearsal/performance.

MUS 112 INSTRUMENTAL CLASS INSTRUCTION (1)
Prerequisite(s): None.

An introduction to and development of basic instrumental skills, note reading, coordination, rhythm, and sight reading. May be repeated for credit.

1 hour lecture/laboratory.

MUS 112A Piano
MUS 112B Brass
MUS 112C Woodwind
MUS 112D Percussion
MUS 112E String
MUS 112F Guitar

MUS 113* INSTRUMENT-INDIVIDUAL INSTRUCTION (1-2)
Prerequisite(s): Audition or permission of instructor.

A semester-long systematic study in technique and repertoire of an instrument of the students choice. May be repeated for credit.

1/2 hour per week per credit.

MUS 113A Piano
MUS 113B Brass
MUS 113C Woodwind
MUS 113D Percussion
MUS 113E Strings
MUS 113F Guitar

MUS 115* VOICE-INDIVIDUAL INSTRUCTION (1-2)
Prerequisite(s): Audition or permission of instructor.

A semester-long study of basic foundations of vocal techniques and preparation of vocal literature. May be repeated for credit.

1/2 hour lesson per week per credit.

MUS 130 KEYBOARD HARMONY (1)
Prerequisite(s): Some experience in musical performance, either singing or playing a musical instrument and a knowledge of scales, key signatures, triads, and intervals.

Special work on the application of musical theory to the keyboard emphasizing exercises in scales, chords, and especially harmonic progression to provide the student with a functional knowledge of the keyboard for further study of music or as a vehicle of classroom demonstration.

2 hours lecture/rehearsal.

MUS 132 MUSIC THEORY (3)
Prerequisite(s): Completion of MUS 100 or permission of instructor.

A study of the construction of music including scales, intervals, transposition, analysis and figured bass symbols, types of cadences and non-harmonic tones, and melodic organization.

3 hours lecture.

MUS 133 MUSIC THEORY (3)
Prerequisite(s): MUS 132 or permission of instructor.

A continuation of MUS 132, including voice-leading, seventh chords, modulation types, secondary dominants and leading tone chords, and binary and ternary forms.

3 hours lecture.

MUS 134 AURAL SKILLS (1)
Prerequisite(s): None.

Aural skills are a progressive series of exercises in sight singing, rhythmic dictation, and melodic dictation. This course is required for students registering for MUS 132.

1 hour lecture.

MUS 112 INSTRUMENTAL CLASS INSTRUCTION (1)
Prerequisite(s): None.

An introduction to and development of basic instrumental skills, note reading, coordination, rhythm, and sight reading. May be repeated for credit.

1 hour lecture/laboratory.

MUS 112A Piano
MUS 112B Brass
MUS 112C Woodwind
MUS 112D Percussion
MUS 112E String
MUS 112F Guitar

MUS 113* INSTRUMENT-INDIVIDUAL INSTRUCTION (1-2)
Prerequisite(s): Audition or permission of instructor.

A semester-long systematic study in technique and repertoire of an instrument of the students choice. May be repeated for credit.

1/2 hour per week per credit.

MUS 113A Piano
MUS 113B Brass
MUS 113C Woodwind
MUS 113D Percussion
MUS 113E Strings
MUS 113F Guitar

MUS 115* VOICE-INDIVIDUAL INSTRUCTION (1-2)
Prerequisite(s): Audition or permission of instructor.

A semester-long study of basic foundations of vocal techniques and preparation of vocal literature. May be repeated for credit.

1/2 hour lesson per week per credit.

MUS 130 KEYBOARD HARMONY (1)
Prerequisite(s): Some experience in musical performance, either singing or playing a musical instrument and a knowledge of scales, key signatures, triads, and intervals.

Special work on the application of musical theory to the keyboard emphasizing exercises in scales, chords, and especially harmonic progression to provide the student with a functional knowledge of the keyboard for further study of music or as a vehicle of classroom demonstration.

2 hours lecture/rehearsal.

MUS 132 MUSIC THEORY (3)
Prerequisite(s): Completion of MUS 100 or permission of instructor.

A study of the construction of music including scales, intervals, transposition, analysis and figured bass symbols, types of cadences and non-harmonic tones, and melodic organization.

3 hours lecture.

MUS 133 MUSIC THEORY (3)
Prerequisite(s): MUS 132 or permission of instructor.

A continuation of MUS 132, including voice-leading, seventh chords, modulation types, secondary dominants and leading tone chords, and binary and ternary forms.

3 hours lecture.

MUS 134 AURAL SKILLS (1)
Prerequisite(s): None.

Aural skills are a progressive series of exercises in sight singing, rhythmic dictation, and melodic dictation. This course is required for students registering for MUS 132.

1 hour lecture.

MUS 135 AURAL SKILLS (1)
Prerequisite(s): MUS 134.

A continuation of MUS 134. Aural skills are a progressive series of exercises in sight singing, rhythmic dictation, and melodic dictation. This course is required for students registering for MUS 133.

1 hour lecture.

MUS 192 SPECIAL TOPICS IN MUSIC (1)
Prerequisite(s): None.

Basic instruction; introduction and development of basic skills, breathing, diction, tone, rhythm, sight singing, repertory songs in English and foreign languages; practical training in singing with and/or without specialization; practical instruction in singing different styles of music from different genres. Basic instruction in singing in harmony; working with a conductor, and singing with other voice parts.

1 hour lecture.

MUS 201 ENSEMBLE (1)
Prerequisite(s): Audition.

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. Course may be repeated for credit.

2 hours rehearsal/performance.

MUS 201A Voice Ensemble
MUS 201B Brass Ensemble
MUS 201C Woodwind Ensemble
MUS 201D Percussion Ensemble
MUS 201E String Ensemble
MUS 201F Guitar Ensemble
MUS 201G Jazz Ensemble

MUS 210 MUSIC THEATRE WORKSHOP (1-3)
Prerequisite(s): Audition or permission of instructor.

Participation in a college musical or operatic production either in a performance capacity or as production crew.

3-10 hours rehearsal/laboratory/performances.

MUS 230 ART SONG REPERTORY I (1)
Prerequisite(s): Two semesters of voice instruction and permission of instructor.

Class performance of representative selections from the standard vocal repertory. Art songs in German, Italian, French and English will be sung as well as other vocal literature.

1 hour lecture; 1 hour studio.

MUS 231 ART SONG REPERTORY II (1)
Prerequisite(s): Two semesters of voice instruction and permission of instructor.

Class performance of representative selections from the standard vocal repertory. Art songs in German, Italian, French and English will be sung as well as other vocal literature.

1 hour lecture; 1 hour studio.

MUS 232 MUSIC THEORY (3)
Prerequisite(s): MUS 132 & 133.

Continuation of MUS 132 and 133, dealing with music from the late Medieval period through the early 19th century art music in chronological order. Major forms are analyzed both melodically and harmonically.

3 hours lecture.

MUS 233 MUSIC THEORY (3)
Prerequisite(s): MUS 232.

Continuation of MUS 132 and 133, dealing with art music from the 19th and early 20th centuries. Major forms are analyzed both melodically and harmonically.

3 hours lecture.

MUS 260 MUSIC FUNDAMENTALS THROUGH EXPERIENCE (3)
Prerequisite(s): None.

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 with laboratory.

Networking

NET 101 A+ CERTIFICATION (2)
Prerequisite(s): None, Exposure to DOS, Windows 3.1, Windows 95 and Mac OS is beneficial.

A+ certification is an industry-recognized credential, which validates that the holder has achieved a level of competence that is accepted, valued, and in some cases, demanded by the microcomputer industry. This course is designed to help students pass the A+ Certification Tests as quickly and easily as possible.

32 contact hours.

NET 201 803 ADMINISTERING MICROSOFT NT 4.0 (2)
Prerequisite(s): Substantial knowledge of the Microsoft Windows 95 or Windows NT 4.0 interface, including the ability to: use Windows Explorer, start applications, size and position windows, and switch between applications and tasks. Knowledge of basic computer hardware components, including: computer memory, hard disks, central processing unit (CPU), communication and printer ports, display adapters, and pointing devices. Knowledge of major networking concepts, including: client, server, local area network (LAN), wide area network (WAN), network adapter card, driver, protocol, and network operating system.

This course provides students with the knowledge and skills necessary to perform post-installation and day-to-day administration tasks in a single-domain or multiple-domain NT network. It also provides the prerequisite knowledge and skills required for NET 202.

32 contact hours.

NET 202 922 SUPPORTING NT 4.0 CORE TECHNOLOGIES (2.5)
Prerequisite(s): NET 201, or equivalent knowledge such as: working knowledge of the Microsoft Windows 95 interface, customizing the Start menu, configuring the desktop, using Control Panel, moving and sizing windows, and switching between applications and tasks. Student should also have an understanding of the following: the Microsoft MS-DOS operating system, memory, hard disks, types of central processing units (CPUs), communication ports, printer ports, display adapters, and pointing devices, experience supporting networks or end users in the workplace or through instructor-led class experience.

This course provides the core foundation for supporting Microsoft NT 4.0 operating system. Students will learn the skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Windows NT Server and Workstation 4.0. The knowledge gained through a combination of courses NET 201 and NET 202 prepares students for two Microsoft exams: #70-073 Implementing and Supporting Microsoft NT Workstation 4.0 and #70-067 Implementing and Supporting Microsoft NT Server 4.0.

40 contact hours.

NET 203 X578 NETWORKING ESSENTIALS (2.5)
Prerequisite(s): NET 201 and NET 202. Working knowledge of software and hardware on a PC to include the understanding of software installation and the creation and editing of AUTOEXEC.BAT and CONFIG.SYS files. NET 203 will not substitute for CIS 150.

Provides students with the background necessary to understand local area networks in Microsoft courses on workstations and networking. Serves as a general introduction for students who need a foundation in current networking technology for local area networks, wide-area networks and the Internet.

40 contact hours.

NET 204 1303 MASTERING MICROSOFT VISUAL BASIC 6.0 FUNDAMENTALS (2.5)
Prerequisite(s): Solid knowledge of Object Oriented programming concepts.

This course teaches programmers the skills necessary to create Microsoft Visual Basic programming system desktop applications and satisfies the Visual Basic prerequisites for course NET 205.

40 contact hours.

NET 205 1013 MASTERING MICROSOFT VISUAL BASIC 6.0 DEVELOPMENT (2.5)
Prerequisite(s): NET 204, or a good working knowledge of the Microsoft Visual Basic programming system. Potential students should be able to accomplish the following tasks before taking this training:

- Create an application with multiple forms
- Write a function procedure and a sub procedure
- Declare variables and use conditional statements
- Describe the use of the controls in the toolbox
- Add a simple menu interface to an application
- Retrieve and validate information from a user
- Add a custom control to a project
- Describe properties, methods, and objects
- Add run-time error handling to an application
- Run the application and use debug mode
- Create an EXE file from the project files
- Design and use a relational database
- Use SQL syntax to create database queries

This course will teach Microsoft Visual Basic programmers how to create database applications using components.

40 contact hours.

NET 206 1016 MASTERING ENTERPRISE DEVELOPMENT USING MICROSOFT VISUAL BASIC 6.0 (2.5)
Prerequisite(s): NET 205 or equivalent knowledge. Know how to build and debug a simple Visual Basic-based application, invoke and control an Automation server, such as Microsoft Excel or Microsoft Word, from a Visual Basic-based application, create COM components using Visual Basic and invoke them from a client application, use ActiveX Data Objects to open a database and work with record sets, understand and use basic syntax for SQL.

This course will teach Microsoft Visual Basic programmers, who currently build desktop applications and access corporate databases, the basics of how to build three-tier client/server solutions. Upon completion of the course, students will be able to use the Application Architecture Model from the Microsoft Solutions Framework to organize applications into user, business, and data services. Students will also learn to implement business and data services in a Microsoft SQL server database through the use of stored procedures.

40 contact hours.

NET 207 1298 DESIGNING DISTRIBUTED APPLICATION DESIGN USING MICROSOFT VISUAL STUDIO (1.5)
Prerequisite(s): NET 204, and NET 205.

This course assumes that the student has a minimum of beginning/intermediate programming skills such as understanding basic programming terms and concepts and building and debugging simple single-user desktop applications.

Building custom software applications for today's complex business world requires a solid, well-rounded education in program design. This course teaches students to analyze the scope of a project before writing the first line of code. Security requirements, performance requirements, existing applications and data, scalability issues, data storage, and other critical development considerations will be discussed during this hands-on course.

24 contact hours.

Nursing

NUR 120 TRANSITION NA/PN (2)
Prerequisite(s): Concurrent enrollment in NUR 123.

This course provides the challenging, transferring or re-entering Nursing student with an understanding of the philosophy, policies and procedures of the Nursing Program. The course emphasizes the theory base and use of patient care planning, nursing documentation of care, and therapeutic use of self.

2 hours lecture.

NUR 121 MEDICATION MATH (1)
Prerequisite(s): Admission to Nursing Program

Recommended: MAT 122.

The accurate calculation of drug dosages is an essential skill in nursing. This course will give the student the skills necessary to calculate drug dosages, convert numbers from one measurement system to another, and measure accurately in the devices (tools, implements, equipment, etc.) used for medication administration. Experience and techniques are provided for calculation of oral and parenteral drug dosages for adults and children, and in the calculation of intravenous flow rates.

1 hour lecture; 1 hour laboratory.

NUR 122* NURSING I (8)
Prerequisite(s): Admission to the Cochise College Nursing Program.

A course designed to help the student acquire nursing concepts and skills toward eventual functioning as an Associate Degree Nurse. Areas, which are included in this course, are the roles and interactions of nurses, health care systems and other health care professionals, the nursing process, communications. and development theories, all of which assist the beginning nursing student in recognizing and meeting the basic physiological and cultural needs of persons of all ages.

4 hours lecture; 12 hours laboratory.

NUR 123* NURSING II (10)
Prerequisite(s): NUR 121, 122, BIO 201, ENG 101.

A course designed to help the student utilize the knowledge of an individuals needs/problems throughout the lifespan focusing on the planning of nursing interventions with an increasing knowledge of nursing assessments and emphasizing acquisition of nursing concepts and skills toward practical nursing or eventual assumption of the role of the Associate Degree Nurse.

6 hours lecture; 12 hours laboratory.

NUR 201* LPN INTRAVENOUS MEDICATION (3)
Prerequisite(s): Must be an LPN (Licensed Practical Nurse) who is employed or a GPN (Graduate Practical Nurse) who will be licensed and employed before completion of the course.

Course will prepare the LPN to administer selected premixed intravenous medications and solutions to pre-existing peripheral lines and peripheral wells by teaching the necessary theory and skills. This module is not designed to teach administration of total parenternal nutrition (TPN); blood or blood products; antineoplastic drugs; investigative or research medications; or direct IV push medications except flushes, drugs which require close RN monitoring, assessment, or interpretation of data, or titration. This course is approved by the Arizona State Board of Nursing. The employing agency is responsible for clinical supervision of the LPN in the expanded role.

3 hours lecture and skills laboratory.

NUR 203 UPDATE ON PHARMACOLOGY (3)
Prerequisite(s): License for administration of medications or one semester of nurses (LPN/RN) training.

This course, aimed at RNs, LPNs and students in those fields, will review basic pharmacology by specific organ systems and body functions. Current medications will be presented and reviewed for actions, interactions, and reactions. Decision making and references in medication usage will be explored.

3 hours lecture.

NUR 220 TRANSITION LPN/RN (1)
Prerequisites: Acceptance into - NUR 232, or concurrent in NUR 232.

This course will provide the challenging, transferring or re-entering Nursing student with an understanding of the philosophy, policies and procedures of the Nursing Program. The emphasis will be on the theory base and use of patient care planning, nursing documentation of care, and therapeutic use of self.

1 hour lecture.

NUR 224 FIELD EXPERIENCE IN NURSING (1-6)
Prerequisite(s): A declared major in Nursing. Permission and approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Nursing and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 units in a given semester.

NUR 232-233* NURSING III-IV (9-9)
Prerequisite(s): For NUR 232 - NUR 121, 122, 123, BIO 201-202, ENG 101, PSY 101.

For NUR 233 - All of the above plus SOC 101, NUR 232 and one controlled elective.

These courses are based on nursing practice at the Associate Degree Nurse level associated with common physical and psychosocial health needs/problems throughout the lifespan. The body's response to stressors, nursing interventions relative to common health needs/problems, and alterations in growth and development are presented. Within these areas, nursing care to be explained will include the use of a framework which promotes effective communication, understanding philosophies of human development, and the intervention and evaluation.

5 hours lecture; 12 hours laboratory.

Office Administration

OAD 101* COMPUTER KEYBOARDING (3)
Prerequisite(s): None.

Specifically designed for (but not limited to) students with no prior knowledge of touch typing or prior computer experience. Skill development on keyboarding and data entry techniques will be utilized to develop speed and accuracy.

3 hours lecture.

OAD 102* ELEMENTARY DOCUMENT PREPARATION (3)
Prerequisite(s): OAD 101 or permission of instructor. Must key 25 WPM.

Continuing development of keyboarding and techniques needed to master letter styles, tabulations, forms and manuscripts through individualized units of work with an expected outcome of 40 GWPM for three minutes.

3 hours lecture; 1 hour laboratory.

OAD 103* INTERMEDIATE DOCUMENT PREPARATION (3)
Prerequisite(s): OAD 102 with a grade of C or better or permission of instructor. Must key 30 WPM.

Continuation of Elementary Document Preparation. Includes further development of letters, tables, manuscripts, and speed. Expected accuracy drills of 50 WPM for five minutes.

3 hours lecture; 1 hour laboratory.

OAD 104 BUSINESS MATHEMATICS (3)
Prerequisite(s): MAT 072.

This course examines the fundamentals of business mathematics and the use of the number language to communicate in the business world. Identical to BUS 104.

3 hours lecture.

OAD 111 BUSINESS ENGLISH (3)
Prerequisite(s): ENG 100 (C or better) or placement in ENG 101. College-level reading.

An in-depth study of the mechanics of English and punctuation required in the workplace for effective communication. Emphasis is placed on grammar, word usage, conciseness, clarity, punctuation and spelling. The rules and recommendations covered are those that should prove most helpful in the business community.

3 hours lecture.

OAD 116* LEARN TO USE MICROCOMPUTERS (3)
Prerequisite(s): None.

A concentrated study of computerized office applications for occupational or instructional use. This lecture-based, hands-on approach leads the student step by step through the various stages of the application being presented. Students acquire entry-level job skills with word processing, database and spreadsheet software.

3 hours lecture.

OAD 146 INTRODUCTION TO ACCOUNTING (3)
Prerequisite(s): BUS 104 or higher level math course.

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. Identical to BUS 146.

3 hours lecture; 1 hour laboratory.

OAD 150 YOUR PROFESSIONAL IMAGE (3)
Prerequisite(s): None.

A study of topics and preparation of a portfolio designed to help prepare individuals to project a professional image in their chosen profession.

3 hours lecture.

OAD 161 WRITING WITHIN ORGANIZATIONS (2)
Prerequisite(s): None.

The study of organizational writing to include its purposes, strategies, and processes. Emphasis on the production of clear, concise, and accurate communications ranging in form from simple to complex memos, short reports, long reports, proposals, feasibility studies and evaluation reports.

2 hours lecture.

OAD 167 BUSINESS COMMUNICATIONS (3)
Prerequisite(s): CIS 116 or equivalent proficiency and ENG 101 or ENG/OAD 111 with a grade of C or better, or placement into ENG 101.

A study of business communications prepared in a business organization, including typical internal and external communications (letters, memos, proposals and reports). Emphasis will be on applying English fundamentals, usage, syntax and organization ideas as well as on using technology appropriately to conduct research and to create documents. This course will also stress listening and speaking skills. Identical to BUS 167 and ENG 167.

3 hours lecture.

OAD 180* COMPUTERIZED ACCOUNTING (3)
Prerequisite(s): BUS 146 or OAD 146.

Course includes the use of automated accounting software to complete general ledger, accounts payable, accounts receivable and payroll reports.

3 hours lecture.

OAD 193* CURRENT OFFICE APPLICATIONS (1)
Prerequisite(s): None.

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/laboratory.

OAD 193A	Elementary Keyboarding
OAD 193B	Intermediate Keyboarding
OAD 193C	Advanced Keyboarding
OAD 193D	Beginning Data Entry
OAD 193E	Intermediate Data Entry
OAD 193F	Advanced Data Entry
OAD 193G	MS-DOS I
OAD 193H	MS-DOS II
OAD 193I	MS-DOS III
OAD 193J	Typing Review I
OAD 193K	Typing Review II
OAD 193L	Typing Review III
OAD 193M	WordPerfect I
OAD 193N	WordPerfect II
OAD 193O	WordPerfect III
OAD 193Q	Printmaster
OAD 193R	Introduction to Computers I
OAD 193S	Introduction to Computers II
OAD 193T	Introduction to Computers III
OAD 193U	Beginning E Mail
OAD 193V	Word for Windows I
OAD 193W	Word for Windows II
OAD 193X	Word for Windows III
OAD 193Z	Windows - Quick Start
OAD A193	Bookkeeping on Computers I
OAD B193	Bookkeeping on Computers II

OAD C193 Bookkeeping on Computers III
OAD D193 Records Management I
OAD E193 Records Management II
OAD F193 Records Management III
OAD G193 Computerized Accounting I
OAD H193 Computerized Accounting II
OAD I193 Computerized Accounting III
OAD J193 Developing Proofreading Skills I
OAD K193 Developing Proofreading Skills II
OAD L193 Developing Proofreading Skills III
OAD M193 Notetaking I
OAD N193 Notetaking II
OAD O193 Notetaking III

OAD 201* ADVANCED DOCUMENT PREPARATION (3)
Prerequisite(s): OAD 103 with a grade of C or permission of instructor. Must key 40 WPM.

A study of advanced document preparation skills needed to become proficient at typing business letters, printed forms, manuscripts, minutes and tabulation problems in the employment field through the use of individualized units of work with an expected outcome of 60 wpm for 5 minutes.

3 hours lecture.

OAD 202* PROFESSIONAL DOCUMENT PREPARATION (3)
Prerequisite(s): OAD 201 with a grade of C or permission of instructor.

A comprehensive study of professional document preparation techniques using the computer and a variety of document preparation software. Students will explore production skills used in today's offices including specialized documents, sophisticated business letters, manuscripts, tabulations, and various forms.

3 hours lecture.

OAD 204* SHORTHAND I (3)
Prerequisite(s): None.

An intensive study of Alpha Hand speedwriting in order to develop proficiency in taking notes rapidly and easily for personal or vocational use.

3 hours lecture; 1 hour laboratory.

OAD 205* SHORTHAND II (3)
Prerequisite(s): OAD 204 or equivalent, or permission of instructor, and a minimum speed of 70 WPM.

A comprehensive study of Alpha Hand, a speedwriting system, to develop spelling, punctuation, and speed building skills for vocational transcription.

3 hours lecture; 1 hour laboratory.

OAD 206* RECORDS MANAGEMENT (3)
Prerequisite(s): OAD 116 or CIS 116, sophomore standing with permission of instructor.

A study of the principles and procedures of actual filing and practices in the basic systems through the use of established management systems.

3 hours lecture.

OAD 207 PRINCIPLES OF OFFICE ADMINISTRATION (3)
Prerequisite(s): OAD 116 or CIS 116, OAD 111, or permission of instructor.

An analysis of functions of office departments, their organization and administration; management principles and functions; problem solving using critical-thinking techniques; interpersonal skills; employee selection, training and promotion of office employees; quality and quantity of office production. This course is designed for prospective office supervisors, training directors, and executive secretaries.

3 hours lecture.

OAD 209 BUSINESS SPEECH COMMUNICATIONS (3)
Prerequisite(s): None.

A study of the principles of business speech communications, integrating nonverbal skills, vocabulary building, business persuasion, presentations, one-to-one communications, machine dictation, and group communications.

3 hours lecture.

OAD 210* AUTOMATED OFFICE PROCEDURES (3)
Prerequisite(s): Concurrent enrollment or prior completion of OAD 102, 103, 213 and OAD 111 or ENG 111 or permission of instructor.

An introduction to the basic skills, responsibilities, and duties of office workers. These include utilizing mathematical skills on calculating machines, and document-processing skills with both transcription equipment and the microcomputer. Practice sets are available in specialized areas: legal, medical, and executive.

3 hours lecture.

OAD 211* AUTOMATED OFFICE PRACTICE (3)
Prerequisite(s): OAD 210, ENG 111 or permission of instructor.

Practice in using transcription equipment, preparing business letters, news releases, and reports. Workflow procedures and standards, and personal grooming techniques will also be reviewed using practice sets in specialized areas: executive, medical, and legal.

3 hours lecture.

OAD 212* TRANSCRIPTION/ TERMINOLOGY (3)
Prerequisite(s): ENG 111 and OAD 213.

A study of complex terminology encountered in medical records, legal documents, or technical business documents with emphasis on machine transcription. Practice sets in medical records, legal documents, or technical documents will be utilized.

3 hours lecture.

OAD 213* WORD PROCESSING (3)
Prerequisites: OAD 101 or Keyboarding Skills with 25 WPM, OAD 116 or CIS 116 or permission of instructor.

A study of the major aspects of word processing, including concepts, systems and equipment with instruction in using text-editing equipment.

3 hours lecture; 1 hour laboratory.

OAD 214* ADVANCED WORD PROCESSING (3)
Prerequisite(s): OAD 213.

An advanced study of the major aspects of word processing, including concepts, systems and equipment with instruction in using word processing equipment and special entry/editing techniques.

3 hours lecture; 1 hour laboratory.

OAD 215* ADVANCED MEDICAL TRANSCRIPTION/TERMINOLOGY (3)
Prerequisite(s): OAD 213 and OAD 212.

A further study of medical terminology encountered in medical records and medical office machine transcription. Practice sets in medical records will be utilized.

3 hours lecture.

OAD 216* COMPUTERIZED OFFICE MANAGEMENT (3)
Prerequisite(s): None.

A study of computerized office applications including correspondence, mailings, focused reports, desktop publishing, inventory, budgets, graphical representation of data, business presentations, and software management. Techniques will be taught on the microcomputer. The course is designed to prepare the individual for a better-than-entry-level position.

3 hours lecture; 1 hour laboratory.

OAD 217* ADVANCED COMPUTERIZED OFFICE MANAGEMENT (3)
Prerequisite(s): OAD 216.

A concentrated study of electronic records management for occupational or personal use. This lecture-based, hands-on approach leads the student through various electronic records management programs, systems, technologies, equipment and methods.

3 hours lecture; 1 hour laboratory.

OAD 220 INTRODUCTION TO PARALEGALISM (3)
Prerequisite(s): OAD 213, CIS 179, OAD 104, or permission of instructor.

A study of law office procedures, legal procedures, basic document preparation, legal ethics, and an introduction to the legal system.

3 hours lecture.

OAD 221 LEGAL ASSISTANT I (3)
Prerequisite(s): OAD 220.

The above may be waived by permission of the instructor or department head.

A study of legal writing, legal analysis, interviewing, non-verbal communications, human relations, legal terminology, legal ethics, general law, the American legal system, and judicial remedies.

3 hours lecture.

OAD 222 LEGAL ASSISTANT II (3)
Prerequisite(s): OAD 221.

The above may be waived by permission of the instructor or department head.

A study of the areas of law and the basic documents required in initiating contested and noncontested actions and finalizing default actions.

3 hours lecture.

OAD 223 BASIC LEGAL RESEARCH (3)
Prerequisite(s): CIS 179, OAD 213 and OAD 222.

The above may be waived with permission of the instructor or department head.

A continuing study of legal writing and analysis; a review of the organizational structure of the American court system; study of case reporting systems and other legal research tools; finding and verifying validity of case opinions; case citation; and electronic research.

3 hours lecture.

OAD 224 FIELD EXPERIENCE IN OFFICE TECHNOLOGY (1-6)
Prerequisite(s): A declared major in Office Technology. Permission and approval of Cooperative Education Program Coordinator.

Recommended: Sophomore standing

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in office technology and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 units in a given semester.

OAD 225 PARALEGAL THEORY AND ANALYSIS (3)

Prerequisite(s): OAD 220, OAD 221, OAD 222, and OAD 223 or proof of registration for the CLA or PACE examinations. Student must demonstrate ability in performing word processing, business math, technical writing and college-level reading.

A review of law office procedures, legal procedures, basic document preparation, ethics, the legal system and seminars and mock testing in the following areas of law: general law; administrative law; bankruptcy; contract law; criminal law; business organizations; estate and probate; civil litigation; and real estate law. The culmination of this class is a 6 hour certification examination for the Certificate of Paralegal Studies issued by Cochise College.

3 hours lecture.

OAD 226 FIELD EXPERIENCE IN MEDICAL TRANSCRIPTION (1-6)

Prerequisite(s): OAD 212. Permission and approval of a Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in medical transcription/terminology and medical records. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

OAD 227 FIELD EXPERIENCE IN LEGAL PROCEDURES (1-6)

Prerequisite(s): OAD 222. Permission and approval of a Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish course objectives for law office procedures and document preparation. Variable credit (1-6) is available by special arrangement. May be taken four times for maximum of 16 credit hours, no more than 6 credits in a given semester.

OAD 268* TECHNICAL PRESENTATIONS (3)

Prerequisite(s): CIS 181 or permission of instructor.

A study of the principles of effective communication skills integrating the latest electronic technology in order to prepare and deliver state-of-the-art business and technical presentations.

3 hours lecture.

OAD 293* ADVANCED CURRENT OFFICE APPLICATIONS (1)
Prerequisite(s): Permission of Division Advisor.

One-unit modules designed for personal/professional improvement. Principles and practice of various computer applications, each session directed toward skills mastery of a particular instance of microcomputer applications software with emphasis on the effective use of the software under study.

1 hour lecture/laboratory.

OAD 293A WordPerfect 5.1 IV
OAD 293B Advanced WordPerfect Applications I
OAD 293C Advanced WordPerfect Applications II
OAD 293D Advanced WordPerfect Applications III
OAD 293E Machine Transcription/Terminology
OAD 293F Legal Terminology
OAD 293G Legal Transcription
OAD 293H Medical Terminology
OAD 293I Medical Transcription
OAD 293J Legal Applications for Secretaries
OAD 293K Medical Applications for Secretaries
OAD 293L Executive Document Preparation 1
OAD 293M Executive Document Preparation 2
OAD 293N Executive Document Preparation 3
OAD 293O MultiMate IV

Office Machine Repair

The following courses, OMR 100, OMR 102, OMR 104, OMR 106, OMR 200, OMR 202, OMR 204, OMR 205, OMR 206, OMR 207 and OMR 208 were designed specifically for the Arizona Department of Corrections in Douglas.

OMR 100 IBM SELECTRIC I & II REPAIR (4)
Prerequisite(s): General Electronic Technician Certificate.

A course designed to provide the student with proficiency in the repair and maintenance of the IBM Selectric typewriter. The student will learn the mechanical theory of operation of all components of the typewriter, and how to clean, service, relubricate and perform preventive maintenance inspections. The student will learn how to use hand tools, specialized gauges, materials, parts and supplies in performing service procedures; with emphasis on the cost effectiveness of preventive maintenance as opposed to unscheduled maintenance.

4 hours lecture plus individualized laboratory instruction.

OMR 102 ELECTRONIC CALCULATOR REPAIR (3)
Prerequisite(s): OMR 100.

A course designed to make the student proficient in electronic calculator repair. The student will learn the electronic and mechanical theory of operation of all components of the calculator, and how to clean, service, relubricate and perform preventive maintenance inspections. Students will learn how to use hand tools, specialized gauges and test equipment, materials, parts and supplies in performing service procedures; and how to schedule maintenance and allot maintenance task hours, with emphasis on the cost effectiveness of preventive maintenance instead of unscheduled maintenance.

3 hours lecture plus individualized laboratory instruction.

OMR 104 ELECTRONIC TYPEWRITER REPAIR (3)
Prerequisite(s): OMR 100.

A course designed to make the student proficient in electronic typewriter repair. The student will learn the electronic and mechanical theory of operation, and how to troubleshoot and repair by safely using maintenance tools, test equipment, special gauges, materials and supplies, and learn how to schedule maintenance and allot maintenance task hours, with emphasis on the cost effectiveness of preventive maintenance versus unscheduled maintenance.

3 hours lecture plus individualized laboratory instruction.

OMR 106 DICTATING MACHINE REPAIR (3)
Prerequisite(s): OMR 100.

A course designed to make the student proficient in dictating machine repair. The student will learn the electronic and mechanical theory of operation, and how to troubleshoot and repair by safely using maintenance tools, gauges, materials, and supplies and how to schedule maintenance and allot maintenance task hours, with emphasis on the cost effectiveness of preventive maintenance versus unscheduled maintenance.

3 hours lecture plus individualized laboratory instruction.

OMR 200 ELECTRONIC MEMORY TYPEWRITER REPAIR (4)
Prerequisite(s): OMR 104.

A course designed to make the student proficient in electronic memory typewriter repair. The student will learn the electronic and mechanical theory of operation, and how to troubleshoot and repair by safely using maintenance tools, test equipment, specialized gauges, materials and supplies, and how to schedule maintenance and allot maintenance task hours, with emphasis on the cost effectiveness of preventive maintenance as opposed to unscheduled maintenance.

4 hours lecture plus individualized laboratory instruction.

OMR 202 BASIC PHOTOCOPIER REPAIR (4)
Prerequisite(s): OMR 100.

A course designed to make the student proficient in basic photocopier repair. The student will learn the electronic and mechanical theory of operation, and how to troubleshoot and repair by safely using maintenance tools, test equipment, gauges, materials and supplies, and how to schedule maintenance and allot maintenance task hours, with emphasis on the cost effectiveness of preventive maintenance as opposed to unscheduled maintenance.

4 hours lecture plus individualized laboratory instruction.

OMR 204 ADVANCED PHOTOCOPIER REPAIR (4)
Prerequisite(s): OMR 202.

A course designed to make the student proficient in advanced photocopier repair. The student will learn the electronic and mechanical theory of operation, and how to troubleshoot and repair by safely using maintenance tools, test equipment, gauges, materials and supplies, and how to schedule maintenance and allot maintenance task hours, with emphasis on the cost effectiveness of preventive maintenance as opposed to unscheduled maintenance.

4 hours lecture plus individualized laboratory instruction.

OMR 205 BASIC MICROCOMPUTER REPAIR (3)
Prerequisite(s): OMR 200.

A course designed to develop student proficiency in basic microcomputer repair. The student will learn to diagnose system defects using logical sequence of operation charts, and how to replace defective system components by the safe use of maintenance tools, materials and supplies, with emphasis on special computer test programs and equipment, and how to schedule maintenance and allot maintenance task hours to effect microcomputer system repairs.

3 hours lecture plus individualized laboratory instruction.

OMR 206 ADVANCED MICROCOMPUTER REPAIR (4)
Prerequisite(s): OMR 205.

A course designed to make the student proficient in advanced microcomputer repair. The student will learn the electronic theory of operation of each circuit board, and how to use specialized test equipment, diagnostic programs, and repair procedures to facilitate board level repairs, and how to safely use maintenance tools, gauges, materials, parts and supplies, with emphasis on how to schedule maintenance and allot maintenance hours in performing repairs of the microcomputer.

4 hours lecture plus individualized laboratory instruction.

OMR 207 MICROCOMPUTER PERIPHERAL EQUIPMENT REPAIR (4)
Prerequisite(s): OMR 206.

A course designed to make the student proficient in microcomputer peripheral equipment repair. The student will learn the mechanical, electronic and logical theory of operation for each type of peripheral equipment, and the troubleshooting and repair techniques used to perform board level repairs, with emphasis on special diagnostic programs and test equipment, and how to schedule maintenance and allot maintenance task hours to facilitate board level repairs.

4 hours lecture plus individualized laboratory instruction.

OMR 208 ADVANCED TROUBLESHOOTING AND SHOP OPERATIONS (4)
Prerequisite(s): OMR 204, OMR 207.

A course designed to place the student in a functioning shop operation to concentrate on repair and servicing of electromechanical business machines or microcomputers. Students will be responsible for receiving defective machines, scheduling repairs, ordering spare parts, servicing or repairing defective equipment, recording service or repair on history record, completing repair order forms, and scheduling return of the business machine, microcomputer, or microcomputer peripheral to their original location, simulating real world operations.

1 hour lecture plus 3 hours of individualized laboratory instruction.

OMR 224 FIELD EXPERIENCE IN BUSINESS MACHINE REPAIR (1-6)
Prerequisite(s): Sophomore standing in a declared major or prior approval of Cooperative Education Program Coordinator.

A supervised Cooperative Education work experience involving the combined effort of educators and employer to accomplish career objectives in Business Machine Repair. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

NOTE: Lower- and upper-division Cooperative Education courses may be combined but cannot exceed 16 credits.

Philosophy

PHI 111 INTRODUCTION TO PHILOSOPHY (3)
Prerequisite(s): ENG 101, reading level of 12.0 or better, or permission of instructor.

An introduction to the history, key figures, and major branches of philosophy. Critical reading of selected classical and contemporary texts and analysis of their connections to the individual, society and to other bodies of knowledge; practice in oral argumentation through participation in class discussions; writing of critical/analytical essays grounded in readings and class discussions.

3 hours lecture.

PHI 113 INTRODUCTION TO LOGIC AND LANGUAGE (3)
Prerequisite(s): ENG 020 or equivalency and ENG 101 or equivalency.

Elementary study of formal logic, symbolic logic, logical fallacies, induction, argument and language.

3 hours lecture.

PHI 130 ETHICS (3)
Prerequisite(s): ENG 101, reading level of 12.0 or better or permission of instructor.

Recommended: Sophomore standing.

An introduction to moral philosophy with emphasis on philosophical analysis of contemporary issues.

3 hours lecture.

PHI 140 DEATH, DYING, LOSS AND SURVIVAL (3)
Prerequisite(s): None.

This class introduces students to the experience of others on the topics of death, loss, and survival. It will offer new ways to think about death, in general, as well as one's own death, and those of loved ones. It will also include a metaphysical approach to the question of life after death.

3 hours lecture.

PHI 201 PHILOSOPHIES OF THE EAST (3)
Prerequisite(s): Completion of ENG 101 or permission of instructor.

Recommended: Computer literacy.

Hinduism, Buddhism, Taoism, and Confucianism with emphasis on their roles in the modern world.

3 hours lecture.

PHI 202 PHILOSOPHY OF RELIGION (3)
Prerequisite(s): ENG 101 and sophomore standing.

Introduction to the nature of religion, nature and existence of God and major religious tenets of Western thought.

3 hours lecture

PHI 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study.

May be repeated for credit.

Physics

PHY 111* GENERAL PHYSICS I (4)
Prerequisite(s): MAT 122 or equivalent.

Introduction to the general principles of physics in the area of classical mechanics. Special emphasis is placed on algebra in solving word problems.

3 hours lecture; 3 hours laboratory.

PHY 112* GENERAL PHYSICS II (4)
Prerequisite(s): PHY 111.

Introduction to the general principles of physics in the areas of thermodynamics, waves, sound, light, electricity, magnetism, atomic structure, and radioactivity.

3 hours lecture; 3 hours laboratory.

PHY 230* PHYSICS WITH CALCULUS I (4)
Prerequisite(s): MAT 220.

Coverage of the same areas as PHY 111(classical mechanics) but in greater depth by the use of calculus. For engineering students and others who require physics with calculus.

4 hours lecture; 2 hours laboratory.

PHY 231* PHYSICS WITH CALCULUS II (4)
Prerequisite(s): MAT 220, PHY 230.

Coverage of the same areas as PHY 112 (thermodynamics, waves, sound, light, electricity, magnetism, atom structure, and radioactivity) but in greater depth by the use of calculus. For engineering students and others who require physics with calculus.

4 hours lecture; 2 hours laboratory.

PHY 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study.

May be repeated for credit.

Political Science

POS 100 INTRODUCTION TO POLITICAL SCIENCE (3)
Prerequisite(s): None.

A comprehensive introductory study of the nature and practice of politics, focusing mainly on significant political principles and institutions as they relate to American and foreign governments.

3 hours lecture.

POS 110 AMERICAN NATIONAL GOVERNMENT (3)
Prerequisite(s): ENG 100 or concurrent enrollment, 12.0 or higher grade level reading ability or Cochise College equivalent.

Recommended: ENG 101 or concurrent enrollment.

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.

POS 220 FEDERAL AND ARIZONA CONSTITUTION (3)
Prerequisite(s): Sophomore standing. Completion of ENG 101 or 107, and 12.0 or higher grade reading ability.

Recommended: ENG 102 or 108, POS 100.

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.

POS 221 ARIZONA CONSTITUTION (1)
Prerequisite(s): Sophomore standing. Completion of ENG 101 or 107, and 12.0 or higher grade reading level ability.

Recommended: ENG 102 or 108, POS 100.

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.

POS 230 WORLD POLITICS (3)
Prerequisite(s): POS 110 or permission of instructor.

A study of the international political system and nation-state relations, including the development of the international system, the Cold War, state power, the pursuit of national objectives, and the analysis of current international problems.

3 hours lecture.

POS 240 COMPARATIVE POLITICS (3)
Prerequisite(s): POS 100 or 110 or permission of instructor.

Introduction to the study of comparative politics with emphasis on the comparison of political systems, movements, ideologies and economic development.

3 hours lecture.

POS 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

Power Plant Operations

PPO 101 POWER PLANT OPERATION I (5)
Prerequisite(s): Current employment by an electrical power generating plant or permission of instructor. MAT 082 or concurrent enrollment.

A practical introduction to major systems and components of modern electrical power plants, the general responsibilities of a plant operator and plant safety. Additional topics include basic charts and graphs, mathematical calculations and formulas associated with plant operation.

4 hours lecture; 3 hours laboratory.

PPO 111 MAINTENANCE & MECHANICAL I (5)
Prerequisite(s): PPO 101 or permission of instructor.

A practical introduction to maintenance practices employing hand, cutting, power and measurement tools. Also includes the study of forklift operating principles and basic rigging practices.

4 hours lecture; 3 hours laboratory.

PPO 112 MAINTENANCE & MECHANICAL II (5)
Prerequisite(s): PPO 111 or permission of instructor.

A practical introduction to major power plant equipment including valves, steam traps, thermal insulation and heat exchangers. The student will learn how to perform maintenance procedures and demonstrate an understanding of their operation.

4 hours lecture; 3 hours laboratory.

PPO 113 MAINTENANCE & MECHANICAL III (5)
Prerequisite(s): PPO 112 or permission of instructor.

Further study of the maintenance and mechanical functions of electrical-power generating plant equipment with emphasis on bearings, pumps and alignment.

4 hours lecture; 3 hours laboratory.

PPO 114 BASIC ELECTRICITY (2)
Prerequisite(s): PPO 101 or permission of instructor.

An introduction to basic electrical theory, the main components of a power plant's electrical systems, and various control and protective devices. Specific attention is directed to how voltage is produced and the relationship between voltage and current.

2 hours lecture.

PPO 121 INSTRUMENTATION & CONTROL I (5)
Prerequisite(s): PPO 101 or permission of instructor.

A study of power plant operations with emphasis on basic process control systems, pressure gauges, calibration, liquid level and fluid flow measurement and plant safety. Also includes applied mathematics and graph preparation.

4 hours lecture; 3 hours laboratory.

PPO 122 INSTRUMENTATION & CONTROL II (5)
Prerequisite(s): PPO 121 or permission of instructor.

A practical introduction to the operation and functions of major systems and components of pneumatic controller systems and associated equipment. Additional topics include general responsibilities of the plant operator and technician for troubleshooting, testing, calibration and recordkeeping.

4 hours lecture; 3 hours laboratory.

PPO 123 INSTRUMENTATION & CONTROL III (5)
Prerequisite(s): PPO 122 or permission of instructor.

A practical introduction to the operation and function of pneumatic control equipment with emphasis on calibration, tuning methods and troubleshooting. Includes a review of hazardous substances and general safety procedures.

4 hours lecture; 3 hours laboratory.

PPO 131 ELECTRICAL MAINTENANCE I (5)
Prerequisite(s): PPO 101 or permission of instructor.

A practical introduction to fundamental electrical concepts, including alternating current, circuits and electromagnetic induction. The uses of electrical test equipment, diagram interpretation and safety procedures are also covered.

4 hours lecture; 3 hours laboratory.

PPO 132 ELECTRICAL MAINTENANCE II (5)
Prerequisite(s): PPO 131 or permission of instructor.

A further study of electrical concepts with emphasis on transformer theory, AC motor maintenance, conduit installation, troubleshooting AC systems, switches and fuses, and the care and upkeep of batteries.

4 hours lecture; 3 hours laboratory.

PPO 133 ELECTRICAL MAINTENANCE III (5)
Prerequisite(s): PPO 132 or permission of instructor.

A study of the basic principles of DC motors, troubleshooting techniques, synchronous motor and controller maintenance, maintenance of circuit breakers and switchgears, and principles of high voltage operation.

4 hours lecture; 3 hours laboratory.

PPO 141 PRINCIPLES OF POWER GENERATION I (5)
Prerequisite(s): PPO 101 or permission of instructor.

A practical introduction to electrical power generation with emphasis upon energy conservation, pressure, heat, steam and fluid flow as well as piping, pumps, compressors and heat exchangers. Also includes an introduction to power generating efficiency.

4 hours lecture; 3 hours laboratory.

PPO 142 PRINCIPLES OF POWER GENERATION II (5)
Prerequisite(s): PPO 141 or permission of instructor.

An introduction to the major operating systems of an electrical-power generating plant, including electrical, instrumentation, steam and feedwater systems. Also includes a review of basic electrical theory and principles of instrumentation.

4 hours lecture; 3 hours laboratory.

PPO 143 PRINCIPLES OF POWER GENERATION III (5)
Prerequisite(s): PPO 142 or permission of instructor.

An introduction to the basic principles of water chemistry, fossil fuels and boiler operations as well as the related systems and equipment most commonly used in an electrical-power generating facility.

4 hours lecture; 3 hours laboratory.

PPO 211 MAINTENANCE & MECHANICAL IV (5)
Prerequisite(s): PPO 113 or permission of instructor.

Advanced study of the maintenance, mechanical functions and repair of electrical-power-plant generating equipment with emphasis on compressors, boilers, advanced rigging, refractors and sootblowers.

4 hours lecture; 3 hours laboratory.

PPO 212 MAINTENANCE & MECHANICAL V (5)
Prerequisite(s): PPO 211 or permission of instructor.

Advanced study of electrical-power generating plant maintenance procedures with emphasis on safety valves, resurfacing techniques, arc welding, basic metallurgy and gears.

4 hours lecture; 3 hours laboratory.

PPO 221 ELECTRONICS I (5)
Prerequisite(s): PPO 123 or permission of instructor.

A practical introduction to basic electronic principles and their application to power plant operations. Includes DC and AC circuits, Ohm's Law, series and parallel circuits, and transformers, as well as passive and active circuits and their applications.

4 hours lecture; 3 hours laboratory.

PPO 222 ELECTRONICS II (5)
Prerequisite(s): PPO 221 or permission of the instructor.

A study of semiconductors and vacuum tube devices with emphasis on the use of electronic test equipment for analyzing circuit performance.

4 hours lecture; 3 hours laboratory.

PPO 223 ELECTRONICS III (5)
Prerequisite(s): PPO 222 or permission of instructor.

Advanced study of powerplant electronics with emphasis on transistor oscillators, operational amplifiers, electronic control equipment; power supplies and circuit board repair.

4 hours lecture; 3 hours laboratory.

PPO 224 FIELD EXPERIENCE IN POWER PLANT OPERATIONS (1-6)
Prerequisite(s): Sophomore standing in a declared major and prior approval of Cooperative Education Program Coordinator.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Power Plant Operations. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

NOTE: Lower- and upper- division Cooperative Education courses may be combined but cannot exceed 16 credits.

PPO 231 ELECTRICAL MAINTENANCE IV (5)
Prerequisite(s): PPO 133 or permission of instructor.

An advanced study of electrical equipment maintenance with emphasis on motor operators; design, construction, and operation of high-voltage cables and conductors; and operating principles of AC and DC generators. Includes a review of basic electrical theory, circuits and transformers.

4 hours lecture; 3 hours laboratory.

PPO 232 ELECTRICAL MAINTENANCE V (5)
Prerequisite(s): PPO 231 or permission of the instructor.

A study of semiconductors and vacuum tube devices with emphasis on transistor circuits, circuit board repair and the use of electronic test equipment to test circuit performance.

4 hours lecture; 3 hours laboratory.

PPO 233 ELECTRICAL MAINTENANCE VI (5)
Prerequisite(s): PPO 232 or permission of instructor.

Advanced study of applied electronics with emphasis on operational amplifiers, electronic control systems, specialized electronic devices and plant safety.

4 hours lecture; 3 hours laboratory.

PPO 241 PRINCIPLES OF POWER GENERATION IV (5)
Prerequisite(s): PPO 143 or permission of instructor.

The study of water treatment systems, water and air pollution control, and steam turbines in the power plant setting. Emphasis on theory, underlying scientific principles and operational processes.

4 hours lecture; 3 hours laboratory.

PPO 242 PRINCIPLES OF POWER GENERATION V (5)
Prerequisite(s): PPO 241 or permission of instructor.

Advanced study of electrical power generation to include process control systems, principles and operation of generators, three-phase power, transformers and station service systems. Includes a review of electrical system functions, components and diagrams.

4 hours lecture; 3 hours laboratory.

PPO 243 PRINCIPLES OF POWER GENERATION VI (5)
Prerequisite(s): PPO 242 or permission of instructor.

A practical analysis of equipment, systems and processes that prevent equipment damage and minimize equipment failure. Includes advanced study of gas turbines, diesel engines and plant safety.

4 hours lecture; 3 hours laboratory.

PPO 290 SAFETY (2)
Prerequisite(s): PPO 101 or permission of instructor.

Advanced study of safety procedures in modern electrical-power generating plants with emphasis upon hazardous substances, fire and personal safety.

1 hour lecture; 3 hours laboratory.

Professional Flight Technology

PFT 100 INTRODUCTION TO AVIATION (3)
Prerequisite(s): None.

This course will serve as an overview of aviation careers, including the training process, qualification requirements, job duties, Federal Aviation Regulations, aerodynamics and navigation.

3 hours lecture.

PFT 101 STAGE ONE GROUND SCHOOL (5)
Prerequisite(s): None.

A comprehensive course leading to completion of the FAA Private Pilot Certificate knowledge requirements and preparation for introduction to Commercial Pilot certification requirements.

5 hours lecture.

PFT 102 PRIVATE PILOT PRACTICUM (1)
Prerequisite(s): PFT 101 or equivalent.

This course serves as a review of the knowledge areas required in the Private Pilot Practical Test Standards.

1 hour lecture.

PFT 103 PRIVATE PILOT REVIEW (1)
Prerequisite(s): FAA written exam passed, and FAA Private Pilot Airplane experience requirements met by the FAA.

Review of all items listed in the Private Pilot Airplane Single Engine Land Test Standards to prepare for Private Pilot Certification.

1 hour individualized instruction.

PFT 111 SOLO FLIGHT PREPARATION (3.5)
Prerequisite(s): PFT 101.

A course designed to prepare the student to complete the FAA pre-solo flight and knowledge requirements.

3.5 hours lecture and individualized instruction.

PFT 112 CROSS-COUNTRY NAVIGATION (1.5)
Prerequisite(s): PFT 120.

A course designed to prepare the student to complete the FAA pre-solo cross-country flight and knowledge requirements.

1.5 hours lecture and individualized instruction.

PFT 113 PRIVATE PILOT CERTIFICATION COMPLETION (1)
Prerequisite(s): PFT 111, 112 or equivalent.

A course designed to provide students who meet FAA solo and solo cross country requirements with a means to complete the flight skill and knowledge requirements for FAA Private Pilot Certification.

1 hour lecture and individualized instruction.

PFT 120 AVIATION METEOROLOGY (5)
Prerequisite(s): None.

A comprehensive study of Aviation Meteorology.

5 hours lecture.

PFT 121 STAGE TWO COMMERCIAL PILOT FLIGHT COURSE (3)
Prerequisite(s): Completion of PFT 111, 112, 113 with a grade of C or better or possession of a Private Pilot Certificate.

An introduction to commercial pilot flight maneuvers, and completion of one-half of the solo cross-country requirements for Commercial Pilot Certification.

1.5 hours lecture; 4.5 hours laboratory.

PFT 122 METEOROLOGY II (1)
Prerequisite(s): PFT 101 or permission of instructor.

A continuation of the study of aviation weather theory introduced in PFT 101 includes an in-depth study of weather elements, weather hazards, and aviation weather reports and forecasts.

1 hour lecture.

PFT 130 STAGE THREE GROUND SCHOOL (5)
Prerequisite(s): Completion of PFT 120 with a grade of C or better or possession of a Private Pilot Certificate.

A comprehensive course leading to completion of the FAA requirements for a Commercial Pilot Certification.

5 hours lecture.

PFT 131 STAGE THREE COMMERCIAL PILOT FLIGHT COURSE (3)
Prerequisite(s): Completion of PFT 111, 112, 113, with a grade of C or better or possession of a Private Pilot Certificate.

A continuation of the development of the requirements for the Commercial Pilot Certificate.

1.5 hours lecture; 4.5 hours laboratory.

PFT 170 UNMANNED AERIAL VEHICLE (UAV) BASIC COURSE (4)
Prerequisite(s): None.

PFT 170 Unmanned Aerial Vehicle (UAV) Basic Course provides an overview and introduction to unmanned aerial vehicle operations and maintenance. A practical study of UAV maintenance with emphasis upon system components, performance criteria, diagnosis and inspection techniques, communications equipment, and operational safety. Enrollment is limited to TRW employees and the Department of Defense.

4 hours lecture.

PFT 171 UNMANNED AERIAL VEHICLE (UAV) OPERATOR COMMON (18)
Prerequisite(s): PFT 170.

This course provides the knowledge and skills necessary to safely operate the UAV system. A practical study of unmanned aerial vehicle maintenance with emphasis upon system components, performance criteria, diagnosis and inspection techniques, communications equipment, and operational safety. Enrollment is limited to TRW employees and the Department of Defense.

8 hours lecture; 31 hours laboratory.

PFT 172 UNMANNED AERIAL VEHICLE (UAV) EXTERNAL PILOT (14)
Prerequisite(s): PFT 170.

This course provides the knowledge and skills needed to safely operate the UAV aircraft. A practical study of unmanned aerial vehicle maintenance with emphasis upon system components, performance criteria, diagnosis and inspection techniques, communications equipment, and operational safety. Enrollment is limited to TRW employees and the Department of Defense.

1 hour lecture; 38 hours laboratory.

PFT 200 INTRODUCTION TO AVIATION OPERATIONS MANAGEMENT (3)
Prerequisite(s): None.

An introduction to basic management principles as they apply to aviation-oriented businesses.

3 hours lecture.

PFT 204 STAGE IV COMMERCIAL PILOT GROUND SCHOOL (5)
Prerequisite(s): Completion of PFT 101, 102, 103 Ground Schools.

Completion of the knowledge requirements to obtain certification as an Instrument Pilot.

5 hours lecture.

PFT 206 AIRCRAFT SYSTEMS (4)
Prerequisite(s): PFT 101 or equivalent or permission of instructor.

An in-depth study of aircraft systems, to include components, functions, construction, operating theory and practice; applied physics and electrical principles; and systems problem-solving techniques for pilots.

4 hours lecture.

PFT 210 MULTI-ENGINE CLASS RATING GROUND SCHOOL (1)
Prerequisite(s): Five hours solo in a complex airplane.

A comprehensive course leading to completion of the knowledge level requirements for a Multi-Engine Land Airplane Class Rating.

1 hour lecture.

PFT 211 MULTI-ENGINE CLASS RATING FLIGHT COURSE (1)
Prerequisite(s): Five hours solo in a complex airplane. Concurrent enrollment or prior completion of PFT 210.

A comprehensive course leading to completion of the FAA requirements for a Multi-Engine Land Airplane Class Rating.

1 hour lecture and individualized instruction.

PFT 214 INSTRUMENT FLIGHT NAVIGATION AND AIR TRAFFIC CONTROL PROCEDURES (3.5)
Prerequisite(s): PFT 204.

A course designed to prepare the student to meet the FAA instrument flight navigation and air traffic control procedures requirements.

3.5 hours lecture and individualized instruction.

PFT 215 INSTRUMENT FLIGHT CROSS-COUNTRY PROCEDURES AND PRACTICAL TEST PREPARATION (1.5)
Prerequisite(s): PFT 214.

A course designed to prepare the student with instrument flight navigation skills to complete the FAA practical test certification requirements.

1.5 hours lecture and individualized instruction.

PFT 216 INSTRUMENT PILOT PRACTICUM (1)
Prerequisite(s): PFT 204 or equivalent.

A review of all required areas enumerated in the Instrument Rating Practical Test Standards issued by the FAA.

1 hour lecture.

PFT 217 INSTRUMENT PILOT REVIEW (1)
Prerequisite(s): FAA written exam passed and FAA Instrument Pilot Airplane experience requirement met.

Review of all items listed in the Instrument Pilot Airplane Single Engine Land Test Standards to prepare for Instrument Pilot Certification.

1 hour lecture and individualized instruction.

PFT 218 STAGE V COMMERCIAL PILOT COMPLETION COURSE (1)
Prerequisite(s): Completion of PFT 215.

This course will enable the student to complete the flight skill level requirements for the flight portion of the FAA Commercial Pilot Practical Test.

1 hour lecture and individualized instruction.

PFT 219 COMMERCIAL PILOT PRACTICUM (1)
Prerequisite(s): PFT 121, 130 or equivalent.

A review of the material enumerated in the Commercial Pilot Single Engine Land Practical Test Standards.

1 hour lecture.

PFT 220 COMMERCIAL PILOT REVIEW (1)
Prerequisite(s): FAA written exam passed, and FAA Commercial Pilot Airplane experience requirements met.

Review of all items listed in the appropriate Commercial Pilot Airplane Land Test Standards to prepare for Commercial Pilot Certification.

1 hour lecture and individualized instruction.

PFT 230 FLIGHT INSTRUCTOR FUNDAMENTALS OF INSTRUCTION (3)
Prerequisite(s): PFT 130 and PFT 204 or permission from the instructor.

A study of the basic principles and processes of learning and teaching as it relates to the task of conveying aeronautical knowledge and skills to students.

3 hours lecture.

PFT 231 FLIGHT INSTRUCTOR AIRPLANE GROUND SCHOOL (5)
Prerequisite(s): Completion of PFT 130, PFT 204.

A comprehensive course leading to completion of the ground school requirements for an FAA Flight Instructor Airplane Certification.

5 hours lecture.

PFT 232 FLIGHT INSTRUCTOR AIRPLANE FLIGHT COURSE (3)
Prerequisite(s): Possession of a Commercial Pilot airplane certificate with an Instrument Rating. Concurrent enrollment or prior completion of PFT 231.

A comprehensive course leading to completion of the FAA requirements for a Flight Instructor Airplane Certification.

3 hours lecture and individualized instruction.

PFT 233 FLIGHT INSTRUCTOR AIRPLANE REVIEW (1)
Prerequisite(s): FAA written exam passed and FAA Flight Instructor Airplane experience requirements met by the student.

Review of all test items for the Flight Instructor Airplane Certification test as outlined in the Practical Test Standards published by the FAA.

1 hour lecture and individualized instruction.

PFT 234 FLIGHT INSTRUCTOR PRACTICUM (2.5)
Prerequisite(s): PFT 230 and 231 or equivalent.

A review of the knowledge areas enumerated in the Flight Instructor Airplane Single Engine Land Practical Test Standards.

2.5 hours lecture.

PFT 237 INTRODUCTION TO AVIATION RISK MANAGEMENT & INSURANCE (3)
Prerequisite(s): None.

An introductory analysis of aviation risk management and insurance functions; concept and analysis of risk; insurability and risk retention; and analysis and use of insurance contracts as they apply to aviation property, liability, and employee exposure. This course is designed for prospective employees and supervisors in aviation-related businesses.

3 hours lecture.

PFT 240 MULTI-ENGINE AIRPLANE INSTRUCTOR GROUND SCHOOL COURSE (2)
Prerequisite(s): Possession of a Flight Instructor Airplane Certificate and Multi-Engine Land Airplane Rating.

A comprehensive course leading to completion of the FAA requirements for a Multi-Engine Flight Instructor Certificate.

2 hours lecture.

PFT 241 MULTI-ENGINE AIRPLANE INSTRUCTOR FLIGHT COURSE (2)
Prerequisite(s): Flight Instructor Certification and a Multi-Engine Airplane Rating. Completion of PFT 240.

A comprehensive course designed to complete the requirements for an FAA Multi-Engine Instructor Certificate.

1 hour lecture; 3 hours laboratory.

PFT 243 PILOT-IN-COMMAND, TAILWHEEL AIRPLANE (.5)
Prerequisite(s): Private Pilot Certificate.

Provide individualized instruction to the holder of a pilot certificate in the procedures and operations required by Federal Aviation Regulation 61.31(d)(2) to be pilot-in-command of a tailwheel airplane.

1/2 hour individualized instruction and laboratory.

PFT 245 AIR TRANSPORTATION (3)
Prerequisite(s): None.

A survey of the development and operation of the air transportation system, including air carrier regulation, deregulation, economics, and organization.

3 hours lecture.

PFT 247 AVIATION LAW (3)
Prerequisite(s): Sophomore standing or permission of instructor.

An introduction to the legal environment of aviation, including operation of the United States Constitution relating to aviation matters, the Warsaw Convention, legal definitions, worker's compensation, liability to others, and crimes as they relate to aviation and aircraft.

3 hours lecture.

PFT 250 FLIGHT INSTRUCTOR INSTRUMENT AIRPLANE GROUND SCHOOL (3)
Prerequisite(s): Possession of an Airplane Flight Instructor Certificate and Instrument Rating.

A comprehensive course leading to completion of the requirements for FAA certification as a Flight Instructor Instrument Airplane.

3 hours lecture.

PFT 251 FLIGHT INSTRUCTOR INSTRUMENT AIRPLANE FLIGHT COURSE (3)
Prerequisite(s): Possession of an Airplane Flight Instructor Certificate and Instrument Rating. Concurrent enrollment or prior completion of PFT 250.

A comprehensive course leading to completion of the FAA requirements for an Instrument Flight Instructor Airplane Rating.

3 hours lecture and individualized instruction.

PFT 260 AIRLINE TRANSPORT PILOT GROUND SCHOOL (3)
Prerequisite(s): Possession of a Commercial Pilot Airplane Certificate with an Instrument Rating.

A comprehensive course leading to completion of the FAA requirements for an Airline Transport Pilot Certification.

3 hours lecture.

PFT 261 AIRLINE TRANSPORT PILOT FLIGHT (1)
Prerequisite(s): Possession of a Commercial Pilot Airplane Certificate with an Instrument Rating.

A comprehensive course leading to completion of the FAA requirements for an Airline Transport Pilot Certification.

1 hour lecture and individualized instruction.

PFT 294 FIELD EXPERIENCE IN PROFESSIONAL FLIGHT TECHNOLOGY (1-6)
Prerequisite(s): A declared major in Professional Flight Technology. Permission and approval of a Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised cooperative education work experience involving the combined efforts of educators and employers to accomplish career objectives in Professional Flight Technology and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 units in a given semester.

NOTE: Lower and upper division cooperative education courses may be combined but cannot exceed 16 units.

Psychology

PSY 010 PROBLEM-SOLVING SKILLS DEVELOPMENT (3)
Prerequisite(s): Referral by Developmental Studies Department.

A self-paced individualized course designed to develop independent problem-solving skills. Students are exposed to information needed for problem conceptualization and are required to understand rules and their applications in problem solution. Students also develop attitudes needed for problem mastery such as perseverance and acceptance of negative feedback.

In completing this course students are interviewed and pre-tested to determine their special educational needs and provided with individualized study plans. Because it is self-paced, this course may be repeated and a grade of I will be assigned until course objectives are met with a grade of C or better.

3 hours lecture.

PSY 101 INTRODUCTION TO PSYCHOLOGY (3)
Prerequisite(s): None.

Recommended: Reading level of 11.5.

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.

PSY 210 SOCIAL PSYCHOLOGY (3)
Prerequisite(s): PSY 101.

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.

PSY 230 PERSONALITY THEORIES AND RESEARCH (3)
Prerequisite(s): PSY 101.

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.

PSY 240 DEVELOPMENTAL PSYCHOLOGY (3)
Prerequisite(s): PSY 101 and ENG 101..

A sequential study of human life-span development emphasizing theories and research in the following areas: biological maturation, perceptual and motor skills development, language development, cognitive development, emotional development, personality and social development.

3 hours lecture.

PSY 250 INTRODUCTION TO PSYCHOLOGICAL RESEARCH, MEASUREMENTS AND STATISTICS (3)
Prerequisite(s): MAT 122 or higher, ENG 101 and PSY 101 or equivalent.

Basic concepts of experimental design, measurement, and descriptive and inferential statistics as applied to psychological variables.

3 hours lecture.

PSY 290 EXPERIMENTAL PSYCHOLOGY (4)
Prerequisite(s): PSY 101, PSY 250 and ENG 101.

Student involvement in the review and analysis of scientific literature, designing and implementing experiments, collecting and analyzing data, interpreting results and reporting experimental findings using A.P.A. format.

3 hours lecture; 3 hours laboratory.

Public Administration

PAD 101 INTRODUCTION TO MANAGEMENT SKILLS (2)
Prerequisite(s): Sponsorship by a public sector employer.

A practical introduction to public sector management for the first-line supervisor or potential supervisor. Focus is on communication techniques, delegation of authority, quality management, performance evaluation, discipline, and employee orientation. May be offered in a pass/fail grading format. Identical to MGT 101.

2 hours lecture.

PAD 102 THE MANAGER AND SYSTEM RELATIONSHIPS (2)
Prerequisite(s): PAD 101.

A practical study of the manager as a member of an organization with emphasis upon the processes and procedures necessary for managerial competence. Topics include management practices, employee motivation, organizational communications, budgetary systems and management, equal employment opportunity, and employee-management relations. May be offered in a pass/fail format. Identical to MGT 102.

2 hours lecture.

PAD 103 THE MANAGER AND THE WORK GROUP (2)
Prerequisite(s): PAD 102.

A practical analysis of the manager as a group/team leader focusing on group dynamics, behavioral analysis, group problem solving and decision making, change management, conflict management, and group interaction. May be offered in a pass/fail grading format. Identical to MGT 103.

2 hours lecture.

PAD 192 APPLICATIONS IN PUBLIC ADMINISTRATION (.5)
Prerequisite(s): None.

A study of topics related to applications in public sector employment. Subjects covered include: the strategic planning process, leadership practices, policy analysis, program evaluation and budgeting including financial management, information management, organizational design, culture and productivity.

1/2 hour lecture.

PAD 192A FUNDAMENTALS OF SUPERVISION (.5)
Prerequisite(s): None.

A practical introduction to the major concepts and skills needed by supervisors in today's diverse workforce. Topics covered are: the changing role of supervisors; managing your leadership style; techniques to plan, organize, prioritize and delegate work requirements; methodology of effective communication; ethical issues and quality management's impact on today's workforce.

1/2 hour lecture.

PAD 192B PERSONNEL ASPECTS OF SUPERVISION (.5)
Prerequisite(s): None.

This course is a continuation of the Fundamentals of Supervision course. Topics covered are: conducting an effective (and legal) interview; legal aspects of supervision including EEO, sexual harassment, ADA, affirmative action; discipline and grievance procedures; effective and productive performance appraisals; cultural diversity and its effect on the workplace; methods to motivate and empower employees, and the role group dynamics play in effective supervision.

1/2 hour lecture

PAD 201 MANAGEMENT IN THE PUBLIC ORGANIZATION (4)
Prerequisite(s): Successful completion of PAD 101-103 or a formal request for advanced entry, approved by the Center for Professional Development Coordinator and ASU.

A practical study of management designed to provide the public sector professional with the analytical approaches and skills necessary to function effectively within a management setting bound by human, fiscal, and environmental constraints. Focuses upon productivity, employee diversity, and political environments as well as on the management of planning, programs, human and financial resources and organizational change.

4 hours lecture.

PAD 202 SYSTEMS APPROACH TO PUBLIC MANAGEMENT (3)
Prerequisite(s): Successful completion of PAD 201.

A practical analysis of the public organization as a system. Includes the study of effective decision making, teams and team performance, the management function of information systems, the relationship of various systems approaches to organizational improvement/transformation, and the impact of the internal and external environment on organizational performance and organizational change. Incorporates an analytical problem-solving approach to actual situations faced by the public sector organizations.

3 hours lecture.

PAD 203 CASE STUDIES IN DECISION MANAGEMENT (2)
Prerequisite(s): Successful completion of PAD 202.

A theoretical and practical study of case analysis and the decision making process within public sector organizations. Includes a review of situational analysis, problem analysis, decision analysis and the relationship between the decision maker and the decision environment.
2 hours lecture.

Reading

RDG 019 TRANSITIONAL READING (3-4)
Prerequisite(s): Placement test score.
Recommended: Keyboarding skills.

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

3-4 hours lecture.

RDG 020A READING FUNDAMENTALS I (3-4)
Prerequisite(s): Placement test score.
Recommended: Computer skills.

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.

3-4 hours lecture.

RDG 020B READING FUNDAMENTALS II (3-4)
Prerequisite(s): Placement test score.
Recommended: Computer skills.

A continuing review of basic reading, spelling and study skills. This class emphasizes literal and inferential comprehension, vocabulary development, review of spelling rules, dictionary skills, basic study skills, and library use.

3-4 hours lecture.

RDG 020C READING FUNDAMENTALS III (5)
Prerequisite(s): RDG 020B or permission of instructor.

A review of basic reading, spelling and study skills for college students placing below the 9.5 reading level on the standardized reading placement test. This class emphasizes literal comprehension, rate improvement, vocabulary development, review of phonetics and spelling rules applied to English, dictionary skills, basic study skills and library use.

5 hours lecture.

RDG 021 POWER READING (3)
Prerequisite(s): Placement test score.
Recommended: Computer skills.

A course emphasizing literal and inferential comprehension, rate building, vocabulary development and textbook reading strategies.

3 hours lecture.

RDG 022 INDIVIDUALIZED READING (3)
Prerequisite(s): ENG 020

A continuation of reading ENG 020 for second semester students whose Nelson-Denny scores remain below 12.1; individualized approaches to reading for mature adults, part-time evening vocational students or those who wish to concentrate on selected aspects of literal and critical comprehension while developing higher level thinking skills using college vocabulary.

3 hours lecture.

RDG 110 COLLEGE STUDY SKILLS (3)
Prerequisite(s): Placement test score.
Recommended: Computer skills.

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.

RDG 122 READING CRITICALLY (3)
Prerequisite(s): Placement score on a standardized reading test.
Recommended: Computer skills.

An advanced course in reading for critical thinking using college level study strategies, vocabulary, and logical analysis of texts involving research across the disciplines. Upon completion of RDG 122, students receiving a C or higher will have attained the college reading requirement for graduation.

3 hours lecture.

Russian

RUS 101 ELEMENTARY RUSSIAN (4)
Prerequisite(s): None.

Comprehension of the spoken and written language, proper pronunciation, usage of proper grammar, oral reading skills, composition and conversation.

4 hours lecture; 1 hour laboratory.

RUS 102 ELEMENTARY RUSSIAN (4)
Prerequisite(s): RUS 101.

Continuation of RUS 101. Comprehension of the spoken and written language, proper pronunciation, usage of proper grammar, oral reading skills, composition, and conversation.

4 hours lecture; 1 hour laboratory.

RUS 115 CONVERSATIONAL RUSSIAN I (3)
Prerequisite(s): None.

Essentials of Russian for conversational situations. Designed for students who wish to use Russian for business, pleasure, or travel. May be used for elective credit toward the AA degree, but is transferable to a four-year institution only upon satisfactory performance on a proficiency examination.

3 hours lecture.

RUS 116 CONVERSATIONAL RUSSIAN II (3)
Prerequisite(s): RUS 115.

Continuation of RUS 115 with emphasis on role playing and use of everyday vocabulary and conversational phrases. Additional practice in reading, writing, speaking and understanding the language with short stories to enrich the student's vocabulary. May be used for elective credit toward the AA degree, but is transferable to a four-year institution only upon satisfactory performance on a proficiency examination.

3 hours lecture.

Social Services

SSV 103 MANUAL COMMUNICATIONS I (SIGN LANGUAGE) (3)
Prerequisite(s): None.

Principles, methods and techniques of communicating manually with the deaf and other persons with communication disabilities. May be repeated for Cochise College elective credit.

3 hours lecture.

SSV 104 MANUAL COMMUNICATIONS II (SIGN LANGUAGE) (3)
Prerequisite(s): SSV 103 or permission of instructor.

Intermediate level principles and techniques of communicating manually with the deaf and other persons with communication disabilities, emphasizing development of speed, accuracy and conversational skills.

3 hours lecture.

SSV 183 SUBSTANCE ABUSE: CAUSES AND TREATMENT (3)
Prerequisite(s): None.

A practical and theoretical introduction to psychological and socio-cultural aspects of substance abuse.

3 hours lecture.

SSV 210 LOSS, GRIEF AND DYING (3)
Prerequisite(s): None.

An exploration of grief, dying and the loss of loved persons as individual 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.

SSV 221 PREVENTION OF DRUG AND ALCOHOL ABUSE (3)
Prerequisite(s): None

Recommended: Reading grade level 11.0.

This course will examine strategies and programs used to prevent drug and alcohol abuse problems with focus on the work place, schools, and community.

3 hours lecture.

SSV 222 TREATMENT AND REHABILITATION FOR DRUG AND ALCOHOL DEPENDENCY (3)
Prerequisite(s): None.
Recommended: SSV 183 or SSV 221; also, reading grade level of 11.0.

This course will examine the various modalities used to help persons recover from drug and alcohol dependency. There will be a focus on the different treatment models used for intervention, rehabilitation and recovery, and the rationale for their use.

3 hours lecture.

SSV 223 PSYCHO-PHARMACOLOGY (3)
Prerequisite(s): None.
Recommended: SSV 183 and reading grade level of 11.0.

An in-depth examination of the physiological effects of alcohol and other drugs. The focus will be on how alcohol and drugs affect the central nervous system and human behavior on both a short and long term basis.

3 hours lecture.

SSV 224 FIELD EXPERIENCE IN SOCIAL SERVICES (1-6)
Prerequisite(s): A declared major in Social Services. Permission and approval of a Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in social services and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 credits in a given semester.

SSV 225 SUBSTNCE ABUSE AND THE FAMILY (3)
Prerequisite(s): None.
Recommended: SSV 183 or SSV 221; also reading grade level of 11.0.

An in-depth examination of the effects of drug and alcohol abuse on families and how to assist family members in understanding and coping with the substance abuser. The approach will be experiential, emphasizing learning effective skills and strategies to use when counseling the families of substance abusers. Students will learn through role-playing and group interaction.

3 hours lecture.

SSV 270 INTERPERSONAL COMMUNICATIONS (3)
Prerequisite(s): COM 102 and permission of instructor or second year standing in AAS Program.

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. Identical with COM 270.

3 hours lecture.

SSV 271 COMMUNICATIONS IN SMALL GROUPS (3)
Prerequisite(s): SSV 270 or COM 270 or permission of instructor.

A continuation of SSV 270 and COM 270 refining skills and techniques learned first semester and adding analysis and presentation with emphasis on small-group communication processes. Identical to COM 271.

3 hours lecture.

SSV 272 HUMAN SERVICES RESOURCES (3)
Prerequisite(s): PSY 101 or SOC 101.

A capstone course designed for advanced students, featuring individual study, discussion exchange and reports on practical resource issues and problems. This resource development group is intended for the student enrolled in the AAS Social Services Program.

3 hours lecture.

SSV 273 DETERMINANTS OF HUMAN BEHAVIOR (3)
Prerequisite(s): PSY 101 or SOC 101.

A review of the historical developments that have occurred in the field of mental health treatment. An examination of the founders and theories associated with therapeutic intervention. Examples include psychoanalytic, behavioral, person-centered, existential, and gestalt therapies.

3 hours lecture.

Sociology

SOC 101 INTRODUCTION TO SOCIOLOGY (3)
Prerequisite(s): None.

A survey of the science of sociology including: research methodology, the theoretical schools of sociology, culture, socialization, social institutions, collective behavior, social change, and the components of social structure from a global perspective.

3 hours lecture.

SOC 160 ETHNIC GROUPS AND MINORITIES (3)
Prerequisite(s): SOC 101, completion of ENG 101 or higher, and 12.0 or higher grade level reading ability.
Recommended: ENG 102

A theoretical analysis of prejudice, discrimination and minority group relations from a sociological viewpoint. Includes an in-depth analysis of the historical and sociological underpinnings of the racial and ethnic based minority status of African Americans, Hispanic Americans, Asian Americans, Native Americans, Jewish Americans and women. Also includes a review of the present socio-economic and cultural status of each group, their relationship with other social groups and future trends.

3 hours lecture.

SOC 202 SOCIAL PROBLEMS (3)
Prerequisite(s): None.

Recommended: SOC 101 and ENG 101.

Topics to be covered include issues, questions and problems affecting women, racial and ethnic minorities, 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 deviance. The course is designed to prepare students to assess social problems and propose resolutions in a logical and scientific manner.

3 hours lecture.

SOC 207 INTRODUCTION TO SOCIAL WORK (3)
Prerequisite(s): None.

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.

SOC 210 MARRIAGE AND THE FAMILY (3)
Prerequisite(s): PSY 101 or SOC 101.

Courtship, mate selection, marital adjustment, parenthood and family living from sociological and psychological points of view.

3 hours lecture.

SOC 212 WOMEN AND MEN IN A CHANGING SOCIETY (3)
Prerequisite(s): SOC 101, completion of ENG 101 or 107 and a 12.0 or higher grade level reading ability.

Recommended: ENG 102 and 108.

A study of the way culture shapes and defines the positions and roles of both men and women in society. Major emphasis on social conditions which lead to sex roles and may lead to a reduction of sex-role stereotypes and to a broadening of sex roles. Also includes an analysis of the implications of potential social change.

3 hours lecture.

SOC 230 HUMAN SEXUALITY AND GENDER AWARENESS (3)
Prerequisite(s): PSY 101 and SOC 101 or permission of instructor.

Study of human sexuality and gender awareness from biological, psychological, sociological, cultural, and ethical perspectives.

3 hours lecture.

SOC 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

Spanish

SPA 011 SPANISH ORTHOGRAPHY (1)
Prerequisite(s): None.

A concentrated study of Spanish spelling with emphasis on a step-by-step procedure from the simplest to the most complex words in Spanish. Special attention is given to the accent mark, colloquial and common errors and to areas of special spelling problems.

1 hour lecture.

SPA 025 SPANISH FOR TEACHERS (3)
Prerequisite(s): None.

A course especially designed for the classroom teacher who needs a basic familiarity with Spanish in order to effectively communicate with his/her Spanish-speaking pupils and their parents.

3 hours lecture.

SPA 026 SPANISH FOR MEDICAL PERSONNEL (3)
Prerequisite(s): None.

A course especially designed for doctors, nurses, and all other medical personnel who wish to effectively communicate with their Spanish speaking patients and their families.

3 hours lecture.

SPA 027 SPANISH FOR BEGINNERS (3)
Prerequisite(s): None.

A preparatory course in conversational Spanish with an emphasis on basic grammar, punctuation, patterns of speech, and language skills necessary for effective communication-oriented introduction to the Hispanic culture. Requires no previous exposure to the Spanish language. May be offered in a pass/fail format.

3 hours lecture.

SPA 092 SPANISH FOR OCCUPATIONS (1)
Prerequisite(s): Concurrent enrollment in SPA 102 or permission of instructor.

Intensive practice with Spanish vocabulary and specialized terminology useful in the workplace.

2 hours laboratory.

SPA 094 INTRODUCTION TO TRANSLATION AND INTERPRETATION (1)
Prerequisite(s): Concurrent enrollment in SPA 216 or 202 or permission of instructor.

An introduction to basic concepts and procedures useful in translation and interpretation between Spanish and English. Experience working with both general language and materials in the student's occupational specialty.

2 hours laboratory.

SPA 101 ELEMENTARY SPANISH (4)
Prerequisites: None.

Recommended: SPA 115 or previous experience/instruction in a second language.

Comprehension of the spoken language, understandable pronunciation, recognition of basic grammar structures, ability to converse, read and write in simple sentences on topics related to personal and classroom experiences..

4 hours lecture; 1 hour laboratory.

SPA 102 ELEMENTARY SPANISH (4)
Prerequisite(s): SPA 101 or 2 years high school Spanish.

Recommended: SPA 116 or previous experience/instruction in a second language.

Comprehension of the spoken language, understandable pronunciation, recognition of basic grammar structures, ability to converse, read and write in simple sentences on topics related to personal and classroom experiences.

4 hours lecture; 1 hour laboratory.

SPA 115 CONVERSATIONAL SPANISH (3)
Prerequisite(s): None.

Essentials of Spanish for conversational situations, designed for students who wish to use Spanish for business, pleasure or travel.

3 hours lecture.

SPA 116 CONVERSATIONAL SPANISH (3)
Prerequisite(s): SPA 115 or permission of instructor.

Continuation of SPA 115 with emphasis on role playing and use of everyday vocabulary and conversational phrases.

3 hours lecture.

SPA 189 UNDERSTANDING SPANISH (1)
Prerequisite(s): Concurrent enrollment in or prior completion of SPA 101.

Beginning-level practice listening to Spanish with emphasis on those elements of language most useful in the workplace. Intended for concurrent enrollment with SPA 101.

2 hours laboratory.

SPA 190 PRONOUNCING SPANISH (1)
Prerequisite(s): Concurrent enrollment in or prior completion of SPA 101.

Introduction to the sounds, rhythm, and intonation of Spanish, with emphasis on those aspects of the oral language which make it easier to understand and to be understood in Spanish.

2 hours laboratory.

SPA 191 SPANISH FOR OCCUPATIONS (1)
Prerequisite(s): Concurrent enrollment in or prior completion of SPA 102 or permission of instructor.

Intensive practice with Spanish vocabulary and specialized terminology useful in the workplace.

2 hours laboratory.

SPA 192 SPECIAL TOPICS IN LANGUAGE, LITERATURE & CULTURE (.5-1)
Prerequisite(s): None.

A rotating forum/seminar emphasizing linguistic development and change, regional literature, literary styles, folklore and related topics. Topics will vary in accordance with changes in student need and interest. Cochise College elective credit only unless otherwise designated in degree programs.

1/2-1 hour lecture.

SPA 201 INTERMEDIATE SPANISH (4)
Prerequisite(s): SPA 102 with a grade of C or better or two years of high school Spanish or competency based on travel and experience demonstrated to the satisfaction of the instructor.

A review of grammar, pronunciation and development of patterns of speech in Spanish with additional practice in reading, writing, speaking and understanding the language, supplemented by essays and short stories to enrich the student's vocabulary.

4 hours lecture; 1 hour laboratory.

SPA 202 INTERMEDIATE SPANISH (4)
Prerequisite(s): SPA 201 with a grade of C or better or three years of high school Spanish or competency based on travel and experience demonstrated to the satisfaction of the instructor.

A review of grammar, pronunciation, and development of patterns of speech in Spanish with additional practice in reading, writing, speaking and understanding the language supplemented by essays and short stories to enrich the student's vocabulary.

4 hours lecture; 1 hour laboratory.

SPA 203 SPANISH FOR NATIVE SPEAKERS I (4)
Prerequisite(s): Placement by interview and/or writing sample.

Intensive work in speaking, reading and writing standard Latin American Spanish for native and bilingual speakers of Spanish; special attention will be given to regional and stylistic variations.

4 hours lecture.

SPA 215 CONVERSATIONAL SPANISH (3)
Prerequisite(s): SPA 116 or permission of instructor.

Continuation of SPA 116 with drill patterns to reinforce vocabulary and use of verb tense, with a minimum of formal grammar study, with emphasis on practice in the spoken language.

3 hours lecture.

SPA 216 CONVERSATIONAL SPANISH (3)
Prerequisite(s): SPA 215 or permission of instructor.

A continuation of SPA 115, 116, and 215. Essentials of Spanish for conversational situations, designed for students who wish to use Spanish for business, pleasure, or travel.

3 hours lecture.

SPA 220 INTRODUCTION TO SPANISH LITERATURE I (3)
Prerequisite(s): SPA 202 or completion of equivalent course with permission of instructor.

A survey of the development of Spanish literature emphasizing the development of the literary genres with relation to the historical and social backgrounds of Spain. The beginnings of Spanish literature to 1700.

3 hours lecture.

SPA 221 INTRODUCTION TO SPANISH LITERATURE II (3)
Prerequisite(s): SPA 202 or completion of equivalent course with permission of instructor.

A survey of the development of Spanish literature emphasizing the development of the literary genres with relation to the historical and social backgrounds of Spain after the 18th century with emphasis on the generation of 1898 and after.

3 hours lecture.

SPA 224 INTRODUCTION TO MEXICAN LITERATURE I (3)
Prerequisite(s): Completion of SPA 202 or similar course, basic literacy skills in Spanish or permission of instructor.

An introduction to the works of representative Mexican authors and a historical look at the literature of Mexico before the Conquest, during the colonial period and the period when Mexico achieved independence from Spain.

3 hours lecture.

SPA 225 INTRODUCTION TO MEXICAN LITERATURE II (3)
Prerequisite(s): Completion of SPA 202 or similar course, basic literacy skills in Spanish or permission of instructor.

An introduction to the works of representative Mexican authors and a historical look at the literature of Mexico after its independence from Spain and its revolution of 1910.

3 hours lecture.

SPA 267 SPANISH BUSINESS COMMUNICATIONS (3)
Prerequisite(s): SPA 202 or equivalent placement.

A study of business compositions prepared in a business organization, typical internal and external communications (letters, memos, and reports), with emphasis on applying Spanish fundamentals, usage, syntax, and methods of organization.

3 hours lecture.

SPA 275 INTERMEDIATE SPANISH CONVERSATION AND COMPOSITION (3)
Prerequisite(s): SPA 202 or completion of equivalent course with permission of instructor.

A study of short excerpts from Hispanic literature to promote topic-centered discussions and compositions in Spanish, conducted principally in Spanish. Review and application of Spanish grammar rules and building of Spanish vocabulary.

3 hours lecture.

SPA 276 INTERMEDIATE COMPOSITION AND CONVERSATION (3)
Prerequisite(s): SPA 275 or equivalent proficiency as assessed by the instructor.

Continuation of SPA 275; conducted in Spanish. Further readings and discussions of short stories, articles and other pertinent materials to provide continued exposure to new vocabulary and enhance usage of the Spanish language.

3 hours lecture.

SPA 283 CULTURAL CONTEXT: CASE STUDIES (1)
Prerequisite(s): Concurrent enrollment in or prior completion of SPA 101 or 202 or permission of instructor.

Introduction to the social norms, cultural values and assumptions underlying workplace behavior with emphasis on comparative case studies and practical application to interaction between U.S. and Latin American cultures.

2 hours laboratory.

SPA 284 INTRODUCTION TO TRANSLATION AND INTERPRETATION (1)
Prerequisite(s): Concurrent enrollment in or prior completion of SPA 202 or permission of instructor.

An introduction to basic concepts and procedures useful in translation and interpretation between Spanish and English. Experience working with both general language and materials in the student's occupational specialty.

2 hours laboratory.

SPA 290 FUNDAMENTALS OF TRANSLATION AND INTERPRETATION (3)
Prerequisite(s): ENG 167 and SPA 267 or permission of instructor based on prescribed proficiency tests; concurrent enrollment in LIN 180 preferred.

An introduction to translation and interpretation theory and practice. Emphasis on application; translation of representative texts chosen from general and commercial contexts; interpretation of representative discourse chosen from a variety of social and business contexts. Familiarity with professional interpretation practices, ethics and technology. Identical with LIN 290.

3 hours lecture.

SPA 294 FIELD EXPERIENCE IN SPANISH (1-6)
Prerequisite(s): Sophomore standing in a declared major and prior approval of Cooperative Education Program Coordinator.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in Spanish. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than 6 units in a given semester. NOTE: Lower- and upper-division Cooperative Education courses may be combined but cannot exceed 16 units.

SPA 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

Spanish Immersion Program

Intensive day-long instruction in Spanish for seven weeks for non-native speakers, designed to provide a basic speaking-understanding facility in Spanish language. Eight units of college credit are available in this summer program which is equivalent to Spanish 101 and 102.

Teleservices

TLS 101 INTRODUCTION TO TELESERVCES (5)
Prerequisite(s): Sponsorship by a Teleservices Provider.

A comprehensive, practical introduction to the teleservices industry, emphasizing teleservices processes and the roles and duties of the entry-level customer service representative. Includes an in-depth review of the product, service, and the procedural and technical knowledge necessary to perform duties in an efficient and competent manner.

5 hours lecture.

TLS 102 TELESERVICES PRACTICUM I (1)
Prerequisite(s): TLS 101 and sponsorship by a Teleservices Provider.

A practical guide to the use of information management systems in teleservice processes and in fulfilling the roles and duties of the entry level teleservices employee. Includes a comprehensive introduction to and extensive use of computer based teleservice operating systems.

2.5 hours laboratory.

TLS 103 CUSTOMER SERVICE IN THE TELESERVICE INDUSTRY (5)
Prerequisite(s): TLS 101 and 102 and sponsorship by a Teleservices Provider.

A practical study of the duties and responsibilities of the teleservices employee, focusing on the customer enrollment process, customer service responsibilities and the creation and maintenance of customer accounts. Includes a review of customer confidentiality and the issue of fraud, both internal and external.

5 hours lecture.

TLS 104 TELESERVICES PRACCTICUM II: CUSTOMER SERVICE (1)
Prerequisite(s): TLS 101, 102 and 103 sponsorship by a Teleservices Provider.

A practical guide to the use of information management systems in teleservice customer service activities. Includes a comprehensive introduction to and extensive use of computer based resources.

2.5 hours laboratory.

Theatre Arts (Drama)

THE 101 ACTING (3)
Prerequisite(s): None.

Introduction to theories of dramatic art and practice in acting situations. This is an intensive course in learning about deportment, how to deal with the demands of the theater, how to comport oneself on the stage, how to enter, exit, or steal attention. The method is the use of basic acting techniques.

3 hours lecture plus performance.

THE 102 ACTING (3)
Prerequisite(s): None.

Through class discussion, directed reading, pantomime, improvisation, and performance of play cuttings, the student will gain understanding and skill in the creative process of acting.

3 hours lecture.

THE 103 INTRODUCTION TO THEATRE (3)
Prerequisite(s): None.

History and tradition of western theatre with analysis and discussion of representative drama, classical to contemporary.

3 hours lecture.

THE 104 PRINCIPLES AND TECHNIQUES OF PLAY PRODUCTION (3)
Prerequisite(s): None.

Introduction to the theory and practice of directing, set design, costuming, stage lighting, make-up and production organization.

3 hours lecture.

THE 105* THEATRE DANCE (1)
Prerequisite(s): None.

The study, comprehension and execution of basic dance styles often used in musical theater (ballet, modern, tap, and improvisation); introduction of basic steps, skills, combinations and short routines.

3 hours lecture, demonstrations and laboratory.

THE 110 THEATRE WORKSHOP (1-3)
Prerequisite(s): Permission of instructor/audition.

Actual participation in a college dramatic production either in an acting or production role. No student will be awarded more than four such credits.

1-3 hours lecture/laboratory.

THE 299 INDIVIDUAL STUDIES (1-4)
Prerequisite(s): Approval of the associate dean and instructor.

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 associate dean prior to initiation of the study. May be repeated for credit.

Welding Technology

WLD 105* OXYACETYLENE WELDING (3)
Prerequisite(s): None.

Safety practices, set-up and operation of oxyacetylene welding equipment. Welding in flat, horizontal and overhead positions of standard alloys of steel; brazing and soldering of ferrous and non-ferrous metals.

1 hour lecture; 4 hours laboratory.

WLD 106* ARC WELDING (3)
Prerequisite(s): WLD 105 or permission of instructor.

Safety practices, set-up and operation of arc welding equipment. Techniques of joining metals in all positions by electric arcs with the use of the electrode.

1 hour lecture; 4 hours laboratory.

WLD 202* WELDING SURVEY (4)
Prerequisite(s): None.

Theory and application of all major welding processes, including parameters, advantages and limitations, applications, equipment, health and safety; introductory welding metallurgy, weldment design and inspection, and practical application of SMAW, Oxyacetylene, brazing, GTAW and GMAW.

4 hours lecture; 1 hour laboratory.

WLD 203* BLUEPRINT INTERPRETATION (3)
Prerequisite(s): WLD 105 and 106
Recommended: Permission of instructor.

Principles and procedures for interpreting structural blueprints and engineering drawings. Essential concepts of blueprint format for structural and aircraft applications, as well as weld symbols and their specific meaning will be covered.

3 hours lecture.

WLD 207* MIG AND TIG WELDING (3)
Prerequisite(s): WLD 105 and 106.

Safety practices, set-up and operation of metal inert gas (MIG) and tungsten inert gas (TIG) welding equipment, using both consumable and non-consumable electrodes.

2 hours lecture; 3 hours laboratory.

WLD 208* GAS METAL ARC WELDING (GMAW) (3)
Prerequisite(s): WLD 105 and 106.

Safety practices, set-up and operation of Gas Metal Arc Welding (GMAW) equipment, using solid and core wire on ferrous and nonferrous metals.

2 hours lecture; 3 hour laboratory.

WLD 209* GAS TUNGSTEN ARC WELDING (GTAW) (3)
Prerequisite(s): WLD 105 and 106.

Safety practices, set up and operation of gas tungsten arc welding (GTAW) equipment, using ferrous and nonferrous metals.

2 hours lecture; 3 hours laboratory.

WLD 210* PIPE AND PLATE WELDING (3)
Prerequisite(s): WLD 105 and 106.

Continuation of WLD 106 Arc Welding to include out of position welding, pipe and plate welding and welding of medium carbon and high sulfur steels.

2 hours lecture; 3 hours laboratory.

WLD 211* PIPE FITTING AND WELDING (3)
Prerequisite(s): WLD 105, 106, 210.

Continuation of WLD 210 Pipe and Plate Welding to include methods of layout and fit-up of pipe of various sizes and types, also welding of pipe by use of electric arc and oxyacetylene.

2 hours lecture; 3 hours laboratory.

WLD 215* WELDING DESIGN AND FABRICATION (3)
Prerequisite(s): WLD 105, 106, 210.

Designed for students with demonstrated welding skills, to learn proper methods of design, layout and fabrication for welding. A specific project will be selected by the student or assigned by the instructor. The project will be constructed by use of electric arc, oxyacetylene, TIG or MIG welding.

2 hours lecture; 3 hours laboratory.

WLD 217* PIPE LAYOUT AND FITTING (3)
Prerequisite(s): WLD 211.

Continuation of WLD 211 Pipe Welding, to include methods of layout fittings and welding of pipe of various sizes and types.

2 hours lecture; 3 hours laboratory.

WLD 218* ADVANCED GTAW SOFT METALS (3)
Prerequisite(s): WLD 105, 106 and 109.
Recommended: Permission of instructor.

A continuation of WLD 209 to include advanced welding of aluminum alloys. This course will help develop the skills necessary to meet aircraft aerospace certification standards.

2 hours lecture; 3 hours laboratory.

WLD 219* ADVANCED GTAW HARD METALS (3)
Prerequisite(s): WLD 105, 106, 209.
Recommended: Permission of instructor.

A continuation of WLD 209 to include advanced welding application of stainless steel and nickel alloys. This course will develop skills to aircraft, aerospace certification standards.

2 hours lecture; 3 hours laboratory.

WLD 220* ADVANCED GTAW EXOTIC METALS (3)
Prerequisite(s): WLD 105, 106, 209, 219 or permission of instructor.

A continuation of WLD 219, to include advanced welding application of titanium, inconel, hastaloy and waspoloy. This course will help develop skills to aircraft, aerospace certification standards.

2 hours lecture; 3 hours laboratory.

WLD 224 FIELD EXPERIENCE IN WELDING TECHNOLOGY (1-6)
Prerequisite(s): A declared major in Welding Technology. Permission and approval of a Cooperative Education Program Coordinator.

Recommended: Sophomore standing.

A supervised Cooperative Education work experience involving the combined efforts of educators and employers to accomplish career objectives in welding technology and related fields. Variable credit (1-6) is available by special arrangement. May be taken four times for a maximum of 16 credit hours, no more than six units in a given semester.

Zoology

Please see Biological Sciences.

Administration

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