

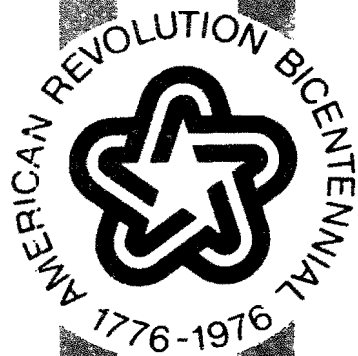
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# COCHISE COLLEGE

*IN ARIZONA'S  
COCHISE COUNTY*



## 1976-77



# **CATALOG and ANNOUNCEMENTS**

**Academic Year 1976-77**

## **Cochise College**

**Douglas, Arizona 85607**

**Area Code 602**

**Telephone: 364-3451      432-5737**

**(Douglas)      (Bisbee)**

**Cochise College is accredited by  
The North Central Association of  
Colleges and Secondary Schools**

# **GENERAL INFORMATION**

## **History**

Cochise College, a community college, was the second college organized under the act of the Twenty-Fourth Arizona State Legislature providing for district or county junior colleges. The establishment of the college district in 1961 and the funding for construction of the facility in 1962 represented a dedicated effort on the part of the citizens of Cochise County.

The College was first opened to students in September, 1964, serving both commuter and resident students by offering residence hall facilities, making it a service institution to the entire state.

The college campus is situated along Highway 80 approximately 16 miles east of the Bisbee-Lowell-Warren area and 7.5 miles west of Douglas. The 15-building campus is located on a 500-acre site.

The College district is controlled by the 17-member Arizona State Board of Directors for Community Colleges and by a five-man Governing Board elected from precincts in Cochise County. It is financed by legislative appropriation and a countywide levy.

## **Accreditation and Transfer**

Cochise College is accredited by the Arizona State Board of Directors for Community Colleges, and the North Central Association of Colleges and Secondary Schools. Students who complete appropriate lower division courses with a grade of C or better are accepted with full credit or transfer to the University of Arizona, Arizona State University, Northern Arizona University and all other universities and colleges in the nation.

Cochise College, working in close cooperation with the three Arizona universities, has developed transfer curriculum guides for most programs. These guides, available to students, detail required and elective courses in each curriculum area.

The College holds memberships in the Arizona Association of Junior Colleges, the Council of North Central Junior Colleges and the North Central Association of Colleges and Secondary Schools.

## **Philosophy of Education**

Cochise College, as a comprehensive community college, is dedicated to the service of its community. The College makes education beyond the high school level available to students interested in, and capable of, benefiting from programs of higher education.

The quality and effectiveness of instruction offered by the College is important to those interested in higher education — students, teachers, administrators, alumni and the general public. The administration of the College facilitates instruction and leads its staff and students to personal and group fulfillment in their educational endeavors. Free communication, a free flow of ideas and feelings among the administration, the faculty, the students, the governing board and the community is essential for the realization of personal and institutional goals.

## **Aims and Objectives**

The main aims and objectives of Cochise College:

1. To provide a program of general education which encompasses the common knowledge, skills and attitudes needed by each individual to be effective as a person, a member of a family, a worker and a citizen in our democratic society.
2. To assist each student to orient himself to adult and college life by providing a program of counseling which enables him to discover aptitudes and interests and helps in the choice of a vocation or further formal education.
3. To provide educational opportunity in several occupations for students who wish to prepare for immediate employment upon completion of the appropriate program. The programs are designed to enable students to achieve occupational competence and to provide them with opportunities for achieving skills for living in a contemporary society.
4. To offer studies during the first two years of college which may be used in transfer for the purpose of securing a bachelor's degree (the candidate for a bachelor's degree can transfer to the institution of his choice with full junior standing, after having successfully completed appropriate lower division studies during the first two full years of college).
5. To provide for the educational needs of mature and receptive adults whose interests and requirements lie in both cultural activities and occupational fields.
6. To make available other community services for the growth of the citizens of the county through lectures, forums, plays, concerts, art exhibits, and other cultural activities.
7. To provide a program of guided studies which will enable students in need of developmental work to pursue studies appropriate to individual needs and to promote honors study programs for students with superior academic capabilities.
8. To cooperate with other schools and colleges, with civic groups, with educational foundations and with private individuals and corporations in any proper endeavor likely to result in an educational advantage to the students of the College and the community.

## **Degree**

By the authorization of the Arizona State Board of Directors for Community Colleges, Cochise College may confer the Associate degree on students completing 60 or more units in prescribed courses with a C average or better. In addition to the degree programs, special certificated programs are offered which require less than two years of studies.

## **Advisory Committee**

In order that curricula leading directly to employment be developed in accordance with the needs of business, industry and the professions, Cochise College has invited a number of leaders in enterprises related to these curricula to advise the College staff on (1) the nature and extent of employment needs, (2) course content, (3) facilities and equipment needed, (4) the appropriateness of the curriculum content and the quality of the students receiving the degree or certificate.

To date the curriculum recommendations of several different citizen advisory committees have been implemented (see list under "Occupational Programs"). As additional needs are identified new advisory committees will be formed to assess the appropriateness, for Cochise College, of programs to meet these needs.



## **Continuing Education**

For those who wish to continue their education and training but are unable to attend regular daytime classes at the main campus, Cochise College offers day classes, evening classes and extension classes each semester in the Sierra Vista area and many communities in Cochise County. (Additional details of the Fort Huachuca-Sierra Vista program are found in a special section of this catalog, pages 117 through 120.

Detailed announcements concerning extension classes are made at the beginning of each semester through special publications. Evening and Extension classes parallel day courses in prerequisites, course content, time devoted to preparation of assignments and examinations.

Students attend extension classes to prepare for a vocation, to gain a better education and to satisfy requirements for university transfer. Professors gear their teaching methods to adults and their problems, but the course content and requirements remain the same for day and evening classes. Some day students take a portion of their class load in the evening.

In addition to guidance through individual contacts with faculty members during their office hours, the Extension program provides specialized counseling and academic advisement. Information and appointments may be arranged by telephone. High school and college transcripts and/or counseling examinations are required for admission to a number of classes.

The requirements for the Associate degree are the same for part-time students as for full-time students, namely 60 passing units in the prescribed courses with a grade point average of 2.0 or better. Physical Education, however, is not required. Certificated programs have specialized requirements.

## **Cochise College Foundation**

Cochise College Foundation, incorporated March 20, 1967, supports the educational objectives of Cochise College.

It has a countywide membership of 62 general members and a group of 15 men and women serving as officers and directors.

The Foundation, having received Internal Revenue Service qualification, is a recognized avenue for receipt of money, property or other things of value bequeathed or given for the benefit of the College whether for specific purposes or for general use.

The Foundation, in this role, has devoted some of such money received on a matching basis for construction of a rodeo complex on campus, as seed money for United Student Aid Funds for loans to college students, to Cochise College Aviation Division for purchase of wrecked airplanes from private owners to be rebuilt as part of the laboratory work by Airframe and Powerplant students enrolled in the College, on a matching basis for construction of an Archaeology Resource Center, and for 17 \$300 scholarships through Fall Semester 1975.

## **Community Services**

As a community college, Cochise College wishes to extend its educational services to the needs of the entire county. Community Services is that phase of the educational program which provides educational, cultural and recreational services over and beyond formalized classroom instruction

With this in mind Cochise College provides a number of community services: a College speaker's bureau, offering faculty lectures without charge; a program of public events and cultural activities including lectures and forums; art exhibits, film series, a program of non-credit courses and community use of the Learning Resources Center.

Other community services include institutes, workshops and lectures to meet special needs of business, industry and the professions; community recreation, campus tours, public information and community participation in the College program through citizens' committees.

### **Learning Resources Center**

The Learning Resources Center, one of the most modern resource buildings in the Southwest, was planned to meet the curricular needs of students and to provide optimum resources and facilities for college work. In addition to a large, open-stack reading and reference room, there are listening facilities, group study rooms, a lecture-exhibit room and an audio-visual section.

## **STUDENT AFFAIRS**

### **ADMISSION**

Prospective students are encouraged to visit the campus and discuss their educational objectives with the Admissions Officer. The Office of Admissions, in the Student Affairs Division on the west side of campus, is open throughout the year, Monday through Friday, 8:00 a.m. to 4:30 p.m. An appointment is preferable though not required.

All high school graduates are admitted to Cochise College. Those who have not graduated from high school will be admitted if they have reached the age of 19 on the first day of classes. Others who have not graduated from high school and are under age 19 may be admitted with high school equivalency examinations such as the GED.

### **ADMISSIONS PROCEDURE**

A Letter of Admission is sent to each applicant after the College has received and approved the following:

1. Application for Admission
2. \$5.00 application fee for out-of-state students

Applicants who have received a Letter of Admission must then submit the following to complete the admission process:

3. Student Medical Record - Part I. This self-appraisal form is to be completed by the applicant and is required of all Classified-Full-time and Classified-Part-time students. The College reserves the right to require a physical examination when deemed necessary by the College Health Service or by a particular college instructional program.
4. High School Transcripts. Final high school transcripts are required of all applicants who have graduated from high school. Those who have not completed high school and who are age 19 or older are not required to submit transcripts. Applicants who are under the age of 19 and who have not graduated from high school are required to submit results of the GED examination or evidence of other high school equivalency. Persons applying for unclassified status need not submit high school transcripts. High school transcripts are to be sent directly by the sending institution to the Office of Admissions. Transcripts carried by the applicant will not be accepted.
5. College Transcripts. Applicants who have attended college elsewhere must submit a transcript of college work. College transcripts are to be sent directly by the sending institution to the Office of Admissions. Transcripts carried by the applicant will not be accepted.
6. Report of Physical Examination - Part II. Persons intending to enter the Nursing program, or those planning to participate in intercollegiate athletics must have this form completed by a licensed physician. Professional Pilot students are required to have a Class I or II physical examination by an FAA-approved physician. Special FAA medical forms will be supplied and used by the physician.

College entrance examinations, such as ACT or SAT, are no longer a requirement for admission. However, the college does administer the ACT on the national testing dates for October, December, February, April and June as a service to county students who wish to take the test.

## ADMISSION TO NURSING PROGRAM

Applicants for the Nursing Program must meet the criteria established by the Nursing Department and Office of Admissions in order to gain admissions to the Nursing Program.

1. Admission to Cochise College.
2. Chemistry, Algebra and Biology in high school or college level with a 2.0 (C) average.
3. An overall high school or college GPA of 2.0 (C).
4. Satisfactory score on CGP exam.
5. Satisfactory medical examination.

## HOUSING

Campus housing is available in Huachuca Hall for men and Chiricahua Hall for women. All single students are advised to live on campus if they are not commuting from the home of their parents, legal guardian or relative. A limited number of studio apartments for married students are also available. A room deposit of \$40 is required of all applicants who desire campus housing. The deposit is refunded, less any damage charges, when the student leaves the college. Applications for campus housing should be directed to: Coordinator of Student Activities and Housing, Cochise College, Douglas, Arizona 85607.

## PROFESSIONAL PILOT PROGRAM

The Professional Pilot program requires a personal interview prior to acceptance to the program. Applicants are advised to complete all appropriate requirements for admission to the college. Upon receipt of the Letter of Admission, applicants for this program should make arrangements for a personal interview. Contact:

Chief Flight Instructor  
Cochise College  
Douglas, Arizona 85607  
(602) 364-3451 or (602) 432-5737

Arrangements for interviews with the Chief Flight Instructor should be made prior to entrance into program. Classes start July 14, 1976; January 5, 1977.

## NURSING AND AVIATION PROGRAM DEPOSITS

Students accepted to these programs are required to submit non-refundable program deposits well in advance of program start dates:

Professional Pilot .....	\$ 90
Airframe-Powerplant Technology .....	\$ 50
Associate Degree Nurse .....	\$100

## STUDENT CLASSIFICATION

Classified — Full-time students registered for 12 units or more

Classified — Part-time students registered for 1 to 11 units who intend to work toward a degree

Unclassified — Part-time students registered for 1 to 11 units who do not plan on working toward a degree

## ABLE AND AMBITIOUS STUDENTS

Students who have completed a minimum of three (3) full years in a county high school and who are now attending high school as a classified senior, may attend Cochise College, subject to stipulations and policies of the respective high schools. Able and ambitious high school students wishing to attend college are required to complete an Application for Admission only.

## RE-ADMISSION

Students who have been absent from Cochise College for a regular semester or longer, must apply for re-admission prior to the opening of the semester for which they wish to enroll.

## **SUMMER NEWSLETTER**

The Office of Admissions sends a summer newsletter to all new and returning students in mid-July. This publication contains detailed information on counseling, registration, housing, orientation and other items of interest.

## **Residence Requirements**

### **Residence in Local High School District**

Students whose residence is in one of the high school districts comprising the Cochise College District are qualified to enroll at Cochise College according to "Admission Procedures and Policies," above.

### **Residence in High School Districts**

#### **Not Maintaining A Community College**

Students who reside in a county not maintaining a community college are eligible to attend Cochise College. Students from such areas must complete a residence statement at the time of registration. Their tuition will be paid by the county of residence.

#### **Residence in Districts Maintaining A Community College**

Students who are residents of districts maintaining a community college are not charged Out-of-County tuition.

### **Students from Outside State**

Under an ordinance of the State Community College Board tuition waivers are no longer available to assist non-residents of the state to attend an Arizona Community College. (Scholarship monies, booster funds and certain federal program funds will still be available for non-state students).

## **RESIDENCY REGULATIONS**

The Arizona State Board of Directors for Community Colleges has established the following residency requirements of the community colleges of Arizona in accordance with Sections 15-791 through 15-795, Arizona Revised Statutes, as amended:

### **Persons Under 18 Years of Age**

1. A person who is under 18 years of age and whose parent is not domiciled in Arizona is classified as an out-of-state person for tuition purposes.
2. A person who is under 18 years of age whose parent has moved to Arizona but has not established a domicile in the State one year prior to the first day of classes as published by the college for the semester for which the person is registering is classified as an out-of-state person for tuition purposes.
3. A person under 18 years of age has the domicile of the legal guardian if (a) a letter of guardianship of the person, issued by a court, is presented for inspection, and (b) the guardian has been domiciled in Arizona for one year or more immediately preceding the first day of classes.
4. A person under 18 years of age may be eligible for the status of Emancipated Minor for tuition purposes. To gain this status, the person must submit clear and convincing evidence that (a) he is self-supporting, (b) he is not living with his parent or guardian, and (c) there has been a complete severance of the parent relationship as to all legal rights and liabilities, including care, custody, control and support. After being granted this status, the person must then meet the same conditions required of persons 18 years or more for establishing Arizona domicile.

5. A person under 18 years of age has the domicile of the parent having legal custody when the parents have been divorced or legally separated. Legal custody must be verified by an inspection of a certified copy of the court order. Where the custody of a minor has been granted to one parent, but the minor has lived with and been supported by the other parent for one year or more next preceding the first day of classes as published by the college, a request may be made to be classified according to the domicile of the supporting parent.
6. A person under 18 years of age whose parent is a member of the Armed Forces of the United States and stationed in Arizona under military orders shall be entitled to classification as an in-state student. A student, while in continuous attendance toward the degree for which he is currently enrolled, shall not lose his in-state student classification when his parent is thereafter transferred on military orders.
7. Any unemancipated person who remains in this State when his parent, who had been domiciled in this State, moves from this State, shall be entitled to classification as an in-state student until attainment of the degree for which he is currently enrolled, so long as he maintains continuous attendance.
8. While the domicile of an unemancipated person shall be that of his parents or legal guardian, the date of his parents' establishing a domicile in this State shall be considered the date for determining the domicile of the person after he becomes emancipated.

### **Persons Aged 18 Years or More**

9. A person aged 18 years or more whose parents are not domiciled in Arizona does not qualify for in-state status even though he has resided in Arizona the calendar year immediately preceding his 19th birthday. A person aged 18 years or more must present proof that domicile in the State of Arizona has been established (independently of the circumstance of attendance at an Arizona institution of learning) for one year immediately preceding the first day of classes.
10. No emancipated person has established a domicile in this State while attending any educational institution in this State as a full-time student, in the absence of a clear demonstration to the contrary.
11. A person from another state who has reached the age of majority in the state from which he originated may establish a domicile in Arizona subject to the requirements for establishing such domicile in this State.
12. A woman acquires the domicile of her husband as of the date of marriage. An out-of-state woman who marries a domiciliary of Arizona may have her classification for tuition purposes changed to in-state. A wife of an out-of-state person may not qualify for in-state classification, except, an in-state woman student who marries an out-of-state person may retain in-state classification while continuous attendance is maintained.
13. A person does not gain or lose in-state status by reason of his presence in any state or country while a member of the armed forces of the United States. Military personnel stationed in Arizona, their spouses and dependents shall be considered as in-state residents during the time the member of the Armed Forces is stationed in Arizona. An unemancipated person whose parent is stationed in Arizona on military orders shall be entitled to classification as an in-state student and to retain this classification while in continuous attendance.
14. A member of the Armed Forces stationed in Arizona may obtain in-state status by establishing a domicile of one year's duration in Arizona.
15. An alien student attending on an F-1 (student) visa will be classified as out-of-state. A non-citizen holding a visa which permits establishing an Arizona domicile must meet the same requirements established for a citizen to qualify for in-state classification.
16. Out-of-state tuition is waived for students enrolling for no more than six units.

**Veterans**

Cochise College has been approved for veterans training under federal and Arizona statutes. By Arizona Statute, Cochise College will determine the admissibility of an honorably discharged veteran, who has served in the armed forces of the United States for a minimum of two years and who has previously enrolled at a university or community college in Arizona. No failing grades by such veteran at any Arizona university or community college prior to his military service may be considered. Specific information on veterans progress, attendance and prior training evaluation may be obtained from the Coordinator of Veterans Affairs.

The student admitted or re-admitted to Cochise College under this statute is subject to progression, retention, graduation and other academic regulations and standards in this catalog.

All veterans should confer with the Coordinator of Veterans Affairs regarding educational benefits.

**TUITION, FEES AND  
OTHER CHARGES**

The Cochise County Community College District Governing Board and the State Board of Directors for Community Colleges of Arizona have approved the schedule of charges for 1976-77 as shown below.

All semester fees must be paid in full at the time of registration, except that arrangements may be made to pay the room, board and tuition on a two-payment basis.

**SEMESTER TUITION SCHEDULE**

<b>A. Full-time Students (12 or more units):</b>		<i>Per Semester</i>
1. Residents of Cochise County .....	No Charge	
2. Military personnel and their dependents living in Cochise County .....	No Charge	
3. Residents of counties without Community Colleges (home county pays Cochise County \$580 per semester) .....	No Charge	
4. Residents of Counties with Community Colleges Graham, Maricopa, Mojave, Navajo, Pima, Pinal, Yavapai, Yuma .....	No Charge	
5. Residents of other states, foreign countries .....	\$600	
<b>B. Part-time Students (1-11 units):</b>		
1. County residents including military personnel and their dependents .....	No Charge	
2. Residents of other counties, states & foreign countries		
1 - 6 units .....	No Charge	
7 - 11 units - Retroactive to one unit .....	\$50.00 per unit	
<b>C. Summer Session .....</b>	<b>\$15.00 per unit</b>	

**REGISTRATION FEE**

<b>A. Students carrying 10 or more units .....</b>	<b>\$100</b>
<b>B. Students carrying 5 to 9 units .....</b>	<b>40</b>
<b>C. Students carrying 1 to 4 units .....</b>	<b>20</b>
<b>D. Summer Session .....</b>	<b>10</b>

## SEMESTER ROOM AND BOARD

### A. Room and Board Charges:

1. Regular students (17 weeks) .....\$590
2. A & P students (10 weeks) .....350
3. Professional Pilot students
  - a. July 14 - Dec. 17, 1976, (23 weeks) .....\$805
  - b. Jan. 5 - June 3, 1977, (21 weeks) .....735

All full-time resident students who are single are advised to live in college housing and have their meals in the college dining hall. This does not apply to the commuting student who lives in his own home or with legal guardian or relatives. The board payment provides a seven (7) day meal ticket for the semester with 20 meals each week when classes are in session.

### B. Room Deposit .....\$40

The room deposit of \$40, which does not apply toward room and board fees, is payable before registration.

### C. Room and Board Payments

Students may make the full Room and Board payment for the semester at the time of registration or may pay on a two-payment basis as follows:

- (a) 50% of the room and board payment due upon registration for classes.
- (b) second 50% of the room and board payment due on or before the Monday of the Sixth (6th) week of college scheduled classes.

## MARRIED STUDENTS HOUSING

- A. Apartments, including utilities, per month .....\$125.00
- B. Housing deposit ..... 50.00

## GRADUATION FEE

Every candidate for an Associate degree is required to pay a graduation fee of \$12. Those completing certificate programs are not required to pay the \$12 fee. The graduation fee is to be paid when the student registers for his final semester.

## FLIGHT TRAINING FEES

### A. Basic Program Fees (Commercial License)

1. AT-80 Primary Flight and First Phase
  - Commercial Pilot .....\$880.00
2. AT-82 2nd Phase Commercial Pilot ..... 935.00
3. AT-86 Instrument Pilot ..... 970.00
4. AT-84 3rd Phase Commercial Pilot ..... 960.00
- TOTAL .....\$3,745.00

### B. Optional Fees

1. AT-88 Multi-Engine Pilot .....\$450.00
2. AT-89 Flight Instructor ..... 400.00
3. AT-90a Air Transport Pilot Rating ..... TBA
  - AT-90b Air Transport Pilot Rating ..... TBA
4. AT-92 Instrument Flight Instructor ..... 400.00

## LABORATORY FEES

- Classes in Art, Science, Welding, etc., Designated with\* .....\$10.00
- Aviation Mechanics (per 10-week phase) ..... 20.00

MISCELLANEOUS FEES

Out of State Application Fee .....	\$5.00
(This fee must accompany the Application for Admission)	
Late Registration .....	\$5.00
Late Payment of Fees .....	\$5.00
Credit by Examination (Per Semester Hour) .....	\$8.00
CLEP Subject Examination per test .....	T.B.A.
Transcript fee — First Free, Each Additional .....	\$1.00
Returned check fee (for each returned) .....	\$10.00
Nursing Insurance .....	\$12.00
Replacement of ID Card or Meal Card .....	\$1.00

All refunds and deposits due students for any reason will be forfeited unless written application is submitted on or before June 15 of the academic year in which they are due. The Governing Board reserves the right to revise tuition, fees and other charges as may be required.

REFUNDS

Tuition

The following graduated scale for refunding of TUITION FEES for students who officially withdraw or are dismissed from the College applies to all students. The refund schedule is:

- 75% if withdrawal is prior to the seventh (7th) calendar day after college scheduled classes commence.
- 50% if withdrawal is between the eighth (8th) and fourteenth (14th) calendar day after college scheduled classes commence.
- 0% if withdrawal is the 15th day or thereafter.

Registration Fee

Registration fee is non-refundable after the first week of classes. Fifty percent (50%) refund is allowed if withdrawal is completed prior to the end of the first (1st) week of classes.

Room and Board

Students who officially withdraw from the Residence Halls before the completion of a 17-week semester will receive a refund of the unused portion of the payment as per the following schedule:

Withdrawal prior	Two-Payment Plan	Full Semester Payment
to Friday of:	\$295.00	\$590.00
1st Week	152.30	447.30
2nd Week	124.35	419.35
3rd Week	96.40	391.40
4th Week	68.45	363.45
5th Week	40.50	335.50
6th Week	12.55	307.55
7th Week	-0-	279.60
8th Week	-0-	251.65
9th Week	-0-	223.70
10th Week	-0-	195.75
11th Week	-0-	167.80
12th Week	-0-	139.85
13th Week	-0-	111.90
14th Week	-0-	83.95
15th Week	-0-	56.00
16th Week	-0-	28.05
17th Week	-0-	-0-



### **Apartment and Room Deposits**

Apartment and/or room deposits will be refunded after the apartment or room is vacated less any amounts due the college for damages or other charges.

### **Aviation Students**

Students (Airframe and Powerplant, and Professional Pilot) who withdraw from the residence hall prior to the conclusion of a term or semester will receive refunds based on the same ratio used in computing the refund schedule for regular students.

### **Flight Fees**

Any unused flight fees will be refunded in full.

## **FINANCIAL AIDS - SCHOLARSHIPS**

Cochise College offers a variety of financial aids to full-time and part-time students who have completed the appropriate applications. Types of financial aids available include Scholarships, Grants-in-Aid, College Work Study (on and off campus), Non-Work Study, Athletic Grants-in-Aid, Fee Waiver Scholarships and Grants, Supplemental Educational Opportunity Grants, Migrant Opportunity Program Grants, Bureau of Indian Affairs Grants, Basic Educational Opportunity Grants, Cochise College Short-term Loans, Nursing Loans and Scholarships, Federally-insured Student Loans, National Direct Student Loans, Law Enforcement Loans and Grants, Dougherty Foundation Loans and Grants.

### **APPLICATION PROCEDURE**

To apply for any type of financial aid, with the exception of LEEP grants and loans, students must:

1. Complete the Family Financial Statement (FFS) of the American College Testing Program (ACT). Designate Cochise College as a recipient (Code 0089), send the Family Financial Statement to ACT with the appropriate fee for processing. Allow four weeks for processing.
2. Send the completed Institutional Data Sheet (IDS), to the Cochise College Financial Aids Officer. The Institutional Data Sheet serves as the initial application for all types of financial aid. Applications for all types of financial aid will be accepted and evaluated after March 1, only insofar as available funds permit. These forms may be obtained from your local high school counselor, the American College Testing Program, P.O. Box 1000, Iowa City, Iowa 52240, or Cochise College.
3. Complete the Basic Educational Opportunity Grant Application and submit in the self-contained envelope. These applications may be obtained from your local high school counselor or Cochise College. The BEOG Student Eligibility Report is returned to you. Please forward all copies to the Cochise College Financial Aids Officer.

**FINANCIAL AIDS COMMITTEE:** The Committee has nine members including the Financial Aids Officer, who acts as chairman; the Admissions and Career Placement Officer, the Coordinator of Counseling, the Comptroller, three faculty members and two students appointed by the Student Senate. It is the function of this committee to screen certain specified applications and determine recipients of these awards as well as recommend procedures to be utilized in the financial aid process. Financial Aids Committee meetings are held prior to the awarding process each semester. Special meetings may be called at other times in the academic year when procedural problems or specific issues arise.

## **SCHOLARSHIPS AND GRANTS-IN-AID**

Both new and returning full-time students are eligible for scholarships and grants-in-aid. Scholarships are awarded to graduates of Cochise County high schools and are made possible by the support of interested groups and individuals.

Three methods of selection are utilized as follows:

1. Recipients are chosen by the donor.
2. Selection is made by the Financial Aids Officer.
3. Selection is made by the Financial Aids Committee of Cochise College

(Athletic grant recipients selected by coaching staff, grants administered by financial aids committee)

**ACADEMIC SCHOLARSHIPS:** Are renewable the second semester for a total of two semesters, contingent upon continuous full-time enrollment and maintenance of a 2.5 (B-C) grade-point average. Qualifications for eligibility include a desire to attend college and rank within the top 40% of the student's graduating class.

## **GRANTS**

Grants-in-aid are available in the areas of athletics, art, music, and journalism. Athletic grants are administered by the Financial Aids Officer. Recipients of music and art fee waivers are selected by the Division of Humanities & Fine Arts and awards administered through the Financial Aids Officer.

**FEE WAIVER GRANTS:** Available to a limited number of freshmen applicants graduating from high schools throughout the state who express a desire to attend college. Grants are in the amount of the prevailing rate of the semester registration fee.

Grants are renewable the second semester for a total of two semesters, contingent upon continuous full-time enrollment and maintenance of a 2.0 (C) grade-point average. The only qualifications for eligibility are residency in the State of Arizona and a desire to attend college.

**SUPPLEMENTAL EDUCATION OPPORTUNITY GRANTS (SEOG):** This is a continuation of the program formerly known as the Educational Opportunity Grant (EOG) program. It consists of a federal program of grant aid (not repayable) to deserving students with exceptional financial need. A requirement of this program is that Supplemental Educational Opportunity Grants cannot be awarded in amounts of more than 50% of the total award given any student. This generally means the recipient must have received financial aid from another source at least equal to the SEOG amount.

**BASIC EDUCATIONAL OPPORTUNITY GRANTS (BEOG):** This program is legislated to serve all undergraduate students from families which are unable to contribute \$1,400 of annual support to their educational costs. Such students are entitled to the difference between the amount a family can reasonably contribute and \$1,400, regardless of the institution they plan to attend.

**NURSING SCHOLARSHIP GRANTS:** This program consists of grant aid (not repayable) for students pursuing a course of study leading to an Associate Degree in nursing. This aid is limited to students with exceptional financial need. Nursing students applying for financial aid are considered for both Nursing Student Loans and Nursing Scholarship Grants.

## **LOANS**

**NATIONAL DIRECT STUDENT LOANS (NDSL):** This is a continuation of the program formerly known as the National Defense Student Loan Program. Loans are available yearly to all qualified students. The amount of the loan award is determined by the student's need. Interest at a low rate (currently 3%) commences nine months after the borrower is no longer an officially-enrolled student. Repayment to the College is made in quarterly installments. Deferment while engaged in educational pursuits is available and certain cancellation factors may be used after completion of college.

**NURSING STUDENT LOANS (NSL):** Repayable loans are available to students enrolled in the Associate Degree Nurses Program. Nursing students are not eligible for the National Direct Student Loans. Interest at a low rate (currently 3%) commences nine months after the borrower is no longer an officially enrolled student. Repayment to the College is made in quarterly installments. Up to 50% of the loan may be cancelled at the rate of 10% per year for each full year of professional nursing employment. The amount of the loan award is determined by the student's need.

**THE LAW ENFORCEMENT EDUCATION PROGRAM:** Grants are available to full-time employees of a publicly-funded law enforcement or criminal justice agency who are enrolled in courses leading to an associate degree or bachelor's degree. Grants may be made for tuition, registration, fees and books relating to the courses taken. Loans to pre-service applicants will depend upon approval by the Law Enforcement Assistance Administration.

**FEDERALLY INSURED STUDENT LOANS (FISL):** This loan is based on financial need and students applying for this loan must submit the ACT Family Financial Statement and Institutional Data Sheet.

**OTHER STUDENT LOAN FUNDS:** In addition to the loan funds referred to above, several organizations and individuals have made contributions to the Student Loan Fund for distribution by the college. These include memorials to Miss Melinda Fredley, Mrs. Kathleen Evans, Mrs. Marie Whatcott, Dr. T. C. Johnston, John Wilson, N. F. Womer. Other funds have been contributed by the Altrusa Club, Martin Gentry, and Joseph Refsnes.

## **SCHOLARSHIPS**

**AIRESEARCH MFG. CO.:** Number and amount of scholarship vary.

**AMERICAN CITIZENS SOCIAL CLUB:** Provides one scholarship in the amount of \$200 per year. Recipient is selected by donor.

**AMERICAN COORDINATING COUNCIL FOR POLITICAL EDUCATION:** Provides two scholarships in the amount of \$100 each per year to worthy applicants.

**AMERICAN LEGION L. A. ENGLE, JR. POST No. 16:** Provides one scholarship in the amount of \$200 per year. Recipient is selected by donor.

**ARIZONA ASSOCIATION OF TEACHERS OF MATHEMATICS:** Provides a \$100 grant-in-aid to a bi-cultural freshman determined to have need.

**ARIZONA BANK, Douglas:** Award is made each year to an entering freshman graduate of Douglas High School. Number and amount of scholarship vary.

**ARIZONA CATTLE GROWERS ASSOCIATION:** Number and amount of scholarship vary.

**ARIZONA LUNG ASSOCIATION INC.:** Provides scholarships of up to \$300 each to this institution. Number and amount vary.

**ARMED FORCES COMMUNICATION AND ELECTRONICS ASSOCIATION:** Provides two \$250 grants-in-aid to pre-engineering or science-related majors. Applicants must have financial need and be residents of Southern Arizona.

**ASSOCIATED STUDENT SCHOLARSHIPS — MIKE BREWSTER SCHOLARSHIP FUND:** Scholarship set up as a living memorial to Michael Brewster.

**AVIATION SAFETY ADVISORY GROUP SCHOLARSHIP:** A \$2,500 scholarship to be awarded to a 1976 high school graduate who will enroll for an Associate in Science degree in Airframe and Powerplant Technology. Funds provided by the Hare Foundation, Scottsdale.

**BENSON BOOSTER CLUB:** Provides one scholarship in the amount of \$50 per year. Recipient selected by donor.

**BENSON WOMAN'S CLUB:** An annual award, the amount to be determined by the donor.

**MICHAEL BIALKOWSKI:** An award made to the college with the amount of the scholarship to be determined by the donor.

**BISBEE AMERICAN LEGION AUXILIARY UNIT 16:** Annual award of \$100 - \$200 to a Bisbee High School girl graduate. Recipient must be majoring in any of the following fields: Nurse, Teacher, Business. Must be in top one-third of class and daughter of a Legionnaire or Veteran.

**BISBEE BUSINESS & PROFESSIONAL WOMAN'S CLUB:** A \$120 scholarship to a Bisbee High School student. Financial Aids Committee chooses recipient with the following requirements set by donor: Financial need, Scholarship.

**BISBEE HIGH SCHOOL STUDENT BODY ASSOCIATION:** Number and amount of scholarship vary.

**BISBEE LIONESS CLUB:** Number and amount of scholarship vary.

**BISBEE ROTARY CLUB:** An annual award, amount varying each year.

**BISBEE WOMAN'S CLUB:** Annual award is made to a Bisbee High School girl graduate.

**DEL BOHMFALK MEMORIAL SCHOLARSHIP:** Scholarship has been provided as a memorial to one of the Cochise County's veteran members of the Sheriff's Department, the late Del Bohmfalk. Scholarship will be for \$100 per semester, to be awarded on recommendation of Cochise County Sheriff to person showing leadership potential who meets the following criteria: Criminal Justice major, resident of Cochise County, shows academic promise, maintains a cumulative grade point average of 2.8 or better.

**BOWIE YUCCA GARDEN CLUB:** Annual amount of award determined by donor. Recipient generally must be graduate of Bowie High School.

**BUENA HIGH SCHOOL SCHOLARSHIPS:** Number and amount vary.

**BUSHMASTERS CLUB OF BISBEE:** A scholarship presented to Cochise College for Bisbee High School graduates. Amount of scholarship varies.

**BUSHMASTERS CLUB OF DOUGLAS:** Several scholarships of \$200 each awarded annually. Recipients must be graduates of Douglas High School. Applicants names proposed by Douglas High School Scholarship Committee.

**RAY DIAMOS BUSTAMANTE SCHOLARSHIP:** A memorial scholarship established by Mrs. A. D. Kerson in July 1971. Made to needy students. This is an endowed scholarship.

**CATHOLIC DAUGHTERS OF AMERICA:** Provides one scholarship of \$100 to a needy student.

**CLUB ALBA:** Number and amount of scholarship vary.

**COCHISE COLLEGE ACTIVITIES SCHOLARSHIP:** Based on following criteria: Faculty advisors will recommend recipients, awarded at end of semester for activity during semester.

**COCHISE COLLEGE CLASSIFIED ASSOCIATION BOOK AWARDS:** Since spring semester 1974 this organization has awarded books to a deserving student each semester. The dollar amount depends on the cost of the student's books.

**COCHISE COLLEGE PROFESSIONAL ASSOCIATION AWARDS:** Two awards to outstanding sophomore graduates in the amount of \$150 each, based on scholastic ability, contributions to Cochise College, leadership.

**COCHISE COLLEGE FOUNDATION SCHOLARSHIPS:** Seven scholarships totaling \$4,200 were provided for the 1975-76 college year. Scholarships based solely on academic achievements (grade point average), through first 3½ years of high school. A list of students who meet minimum scholarship requirement of 3.2 (B+) submitted by high school counselors to college Financial Aids officer, who makes selection after review of applicants. The eligible recipients each awarded \$300 scholarship used in first semester at Cochise College. Recipients receive an additional \$300 scholarship in Spring semester if final grades in Fall semester 3.2 or better.

**COUNTY INDEPENDENT INSURANCE AGENTS:** Provides a total of \$1,200 to several recipients in need of financial aid. Recipients selected by Cochise County Independent Insurance Agents. Applicants should apply for grant-in-aid through Financial Aids Officer prior to March 15, 1977. Applicants must be Cochise County residents.

**COCHISE COUNTY MEDICAL SOCIETY:** Number and amount of scholarship vary.

**COPPER CITY WOMAN'S CLUB:** Scholarship of \$100 to a Bisbee High School graduate.

**COPPER QUEEN MINER'S UNION Local No. 551:** Four scholarships, \$300 each.

**DOUGLAS AMERICAN LEGION FRED HILBURN UNIT No. 11:** An annual scholarship established for one boy and one girl graduate of Douglas High School. Amount of award is \$200 for each student to cover a two-year period. Recipients must receive highest grade score of achievement for Americanism.

**DOUGLAS ART ASSOCIATION:** A \$200 award made to a Douglas High School graduate. Amount varies from year to year. Recipient must be an Art student chosen by the Douglas Art Association Board of Directors from a list of qualified students submitted by the Financial Aids Officer.

**DOUGLAS BUSINESS AND PROFESSIONAL WOMAN'S CLUB:** Scholarship in amount of \$150 provided.

**DOUGLAS ELKS LODGE No. 955:** Douglas Elks Lodge awards six scholarships of \$200 each.

**DOUGLAS EVENING LIONS CLUB:** Scholarship of \$150 established in July 1970. Following requirements stipulated: recipient must be a Douglas High School graduate, a Sophomore at Cochise College, equal value placed on scholarship and need.

**DOUGLAS GEM AND MINERAL CLUB:** Amount of this annual scholarship varies. Recipient selected by Financial Aids Officer.

**DOUGLAS HIGH SCHOOL PRINT CLUB SCHOLARSHIP:** Number and amount of scholarships vary.

**DOUGLAS JUNIOR WOMEN'S CLUB:** Scholarship of \$100.

**DOUGLAS KIWANIS:** Three scholarships of \$200 each awarded annually by Douglas Kiwanis Club.

**DOUGLAS MUSIC CLUB:** Recipients chosen by donor. An annual scholarship with amount varying yearly.

**DOUGLAS NOBLEMEN CLUB:** Number and amount of scholarship vary.

**DOUGLAS REPUBLICAN WOMEN SCHOLARSHIP:** Annual scholarship. Amount varies yearly.

**DOUGLAS TELEVISION COMPANY:** Annual awards are made by donor with recipients selected by Douglas High School counselors. Scholarships to Douglas High School graduates.

**ELIZABETH GRAY MEMORIAL SCHOLARSHIP FUND:** A scholarship fund established by Mr. and Mrs. Henry D. Clark as a living memorial to Mr. Clark's sister, Elizabeth Gray. Awards are made to sophomore students registered in the Associate Degree Nursing Program. This is an endowed scholarship.

**ELKS LODGE OF BISBEE No. 671:** Provides one scholarship in amount of \$25.

**EMERGING WOMAN SCHOLARSHIP:** A \$200 scholarship awarded annually.

**MEL ENGELSTAD BUSINESS SCHOLARSHIP FUND:** Eligibility requirements as follows: Student must be majoring in Business and willing to join Phi Beta Lambda before receiving the grant and remain a member in good standing, must be capable of maintaining GPA (Grade Point Average) of 2.5 or above. Sponsor of Phi Beta Lambda will interview and approve student before selection becomes final.

**FACULTY WIVES ASSOCIATION—HAZEL MONNETT SCHOLARSHIP:** Registration fee scholarships. Awarded to persons recommended by Cochise College Faculty Women's Association. Number and amount of scholarship vary from year to year.

**FIRST NATIONAL BANK OF ARIZONA:** Three \$150 annual scholarships awarded by First National Bank. Requirements are: Scholarship, need, resident of Arizona, majoring in Business, second-year students.

**FORT HUACHUCA OFFICERS AND CIVILIANS WIVES' CLUB:** Number and amount of scholarship vary.

**FUTURE NURSES CLUB OF BISBEE:** Number and amount of scholarship vary.

**GARDANIER SCHOLARSHIP:** Number and amount of scholarship vary. This is an endowed scholarship

**GUNTER MEMORIAL RODEO SCHOLARSHIP:** Awarded on recommendation of Rodeo Club sponsor, \$75 per semester.

**INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS:** Two scholarships of \$200 each. Selected recipients may qualify for a continuing scholarship in sophomore year. Recipient must meet following requirements: Graduate of Cochise or Santa Cruz County high schools, enrolled in Electronics Technology Program or plan to transfer to a four-year college or university to pursue an upper division major in an engineering scientific field, maintain a grade point average of 3.0 (B) or better during first year to maintain eligibility for assistance during second year.

**KINGMAN ELKS LODGE No. 468:** Number and amount of scholarship vary.

**KIWANIS CLUB OF BISBEE:** Provides \$200 scholarship.

**BARBARA AND MARY LEITCH SCHOLARSHIP:** Number and amount of scholarship vary.

**LAMBDA CHI OMEGA BETA CHAPTER:** Scholarship of \$250 provided a student exhibits financial need.

**LULAC-NATIONAL SCHOLARSHIP FUND:** Scholarship of \$400 awarded a student determined to have need.

**MECHA CLUB COCHISE COLLEGE:** Amount of scholarship varies.

**MILDRED C. LEWIS MEMORIAL SCHOLARSHIP:** Recipient must be a Douglas High School graduate and a Music major. Funds for scholarship are administered by Douglas Music Club.

**NOGALES LIONS CLUB:** Scholarship of \$600. Selection made by donor.

**MEXICAN-AMERICAN NON-PROFIT ORGANIZATION:** Two scholarships of \$200 each. Selection made by donor.

**PAUL LIME PLANT:** Yearly award of \$200 made to Cochise College. Two scholarships of \$100 each provided.

**PROCUREMENT DIVISION SCHOLARSHIP FUND—FORT HUACHUCA:** Number and amount vary. This is an endowed scholarship.

**INGWALD A. ROSAK SCHOLARSHIP FUND:** A scholarship awarded on the basis of Scholarship, Financial Need, Citizenship and Leadership qualities.

**SAL RAMIREZ MEMORIAL:** Number and amount of scholarship vary.

**MILLARD AND MAY SARGENT:** A \$20 scholarship provided one student.

**MISS SIERRA VISTA:** A scholarship of \$200.

**NAACP CHAPTER, SIERRA VISTA:** Number and amount of scholarship vary.

**NCO AND SPECIALISTS' WIVES CLUBS:** Scholarship of \$500 is provided annually.

**SAN PEDRO BUSINESS AND PROFESSIONAL WOMEN (BENSON):** A \$100 scholarship presented to a female student who is a graduate of St. David or Benson High Schools, or whose permanent residence is in the Pomerene, St. David or Benson areas. Applicant must show financial need.

**SAN JOSE COMMUNITY ASSOCIATION:** Scholarship of \$239.05 presented in 1975-76 college year. Donor selects recipient.

**SAN SIMON FIRE DEPARTMENT:** Number and amount of scholarship vary.

**SARAH MARLEY SCHOOL SCHOLARSHIP:** This is relative to students enrolled in Teacher Aide Program at Cochise College. Number and amount of scholarship vary.

**SIERRA VISTA WOMEN'S CLUB:** Annual \$200 scholarship awarded worthy recipient chosen by Cochise College Financial Aids Committee. Criteria used in determining recipient: Buena High School graduate, need.

**SOCIAL CLUB MEXICO:** Scholarship of \$250 provided. Selection is made by donor.

**SPANISH CLUB OF COCHISE COLLEGE:** Annual scholarship of \$200 provided over a two-semester period. Recipient chosen by club, must be Douglas High School graduate majoring in Spanish at Cochise College.

**TOMBSTONE HIGH SCHOOL:** Number and amount of scholarship vary.

**TUSCON HIGH SCHOOL:** Amount of scholarship varies.

**UNITED PRESBYTERIAN WOMEN:** Number and amount of scholarship vary.

**UNITED STEELWORKERS OF AMERICA Local No. 6305:** Scholarship of \$300. Recipient must meet following criteria: Douglas High School graduate, need, child of a member of the Steelworkers Union.

**UPPER DIVISION SCHOLARSHIP:** Eligibility requirements are: Student must be either Black, Chicano, Puerto Rican or American Indian; a citizen of the United States; in the second year of a two-year transfer program and anticipates completing requirements for the Associate Degree by the end of the academic year.

**VESTA CLUB SCHOLARSHIP BANK:** Number and amount of scholarship vary.

**VETERANS OF FOREIGN WARS JAMES MURPHY POST No. 836 AND AUXILIARY:** Donor to select recipient, a graduate of Bisbee High School. Scholarship in amount of \$300 to be presented in two payments.

**VOITURE No. 160 40 ET 8 NURSING SCHOLARSHIP:** Number and amount of scholarship vary.

**WHITE MOUNTAIN ROTARY CLUB SCHOLARSHIP:** Scholarship of \$100 provided. Recipient selected by donor.

**WILLCOX CLASSROOM TEACHERS ASSOCIATION SCHOLARSHIP:** Scholarship of \$150 provided. Recipient selected by donor.



**XI LAMBDA CHAPTER BETA SIGMA PHI:** Number and amount of scholarship vary.

## **CAMPUS EMPLOYMENT**

Jobs are available in various areas. Applications are screened by the Financial Aids Officer. Students are then referred to the Cooperative Education Department for interviews and job placement.

**COLLEGE WORK-STUDY:** This is a program for full or part-time students from low-income families who need employment to help defray educational expenses. Awards are made to deserving students who demonstrate financial need. Students generally are employed on a part-time basis, however, students may work on a full-time basis if approval is received from the Financial Aids Officer. The minimum basic pay rate is the existing federal minimum hourly wage rate. Students are interviewed after being declared eligible and then placed in jobs through the Cooperative Education Department.

## **Counseling**

Counselors are available to assist students in planning their educational program and in their general growth and adjustments to college life. Career choice and related course sequence are of particular concern. Careful attention is offered students to aid in implementing program of their choice.

An educational planning interview is available to the individual student before enrollment in the college and during each succeeding semester. Through preparation and experience, counselors are able to offer guidance and counseling services which include a carefully-coordinated curriculum, advantageous registration procedures, advice on adjustments to college and assistance in the solution of many other personal problems.

## **Faculty Advisor**

Students are assigned a faculty advisor according to their major interest. Students may change advisors if they desire or change major. Students undecided as to a major will be assigned to a counselor.

## **Program Contract**

In order to assure that students meet graduation or certificate requirements and to also assure maximum transferability of courses, the Advisor and the student work out a Program Contract. A proposed Program will be outlined and if followed by the student, the college agrees to award the appropriate degree or certificate. The Program Contract is reviewed by a counselor. Changes may be made in the Program Contract by mutual agreement of the student and/or a counselor.

## **Testing**

Although educational and vocational testing do not constitute the final answer, testing is useful in helping the student explore educational and vocational choices as well as helping the student gain personal insight into individual strengths and abilities. To supplement the group and individual counseling, Cochise College has a testing program in the areas of academic ability, aptitude, achievement, skill, interest and personality. Special testing is required for Nursing applicants. Students interested in testing should see a counselor in the Division of Student Affairs.

## **Career Information Services**

Cochise College has developed an extensive occupational information system. This includes broad coverage of colleges and universities (both state and national) to which a student

may transfer. The service also encompasses military, vocational and trade schools. The information includes entrance requirements, majors offered, courses offered, expenses and general information about the institutions. Career information is available in the Division of Student Affairs.

The main body of this service consists of job descriptions and related information for more than 36,000 occupations. Included are job descriptions, work performed, working conditions, training requirements, personal qualifications, method of entry, employment outlook, earnings, social and psychological factors and references for further information.

### **Placement**

The Career Placement Office in the Division of Student Affairs will assist graduates in meeting contacts and arranging interviews with prospective employers in their fields of specialization. A counselor will assist students in making application for admission to a four-year college or university if they have completed a transfer program.

### **Health Services**

The College offers a well-equipped campus health center directed by a full-time registered nurse. In cases of illness or injury, students are referred to the local doctor of their choice for diagnosis and treatment. Consultation with the home-town family doctor of resident students is also afforded.

### **Residence Hall Living**

Residence hall living is an integral part of the student's total educational experience at Cochise College. The College considers it important students live in an atmosphere which stimulates academic achievement and provides the opportunity for meaningful experiences for all students.

The College maintains campus housing for resident students. Each residence hall is under the supervision of a qualified housing officer who is assisted by trained student resident assistants. All resident students have the opportunity of participating in student government activities as provided by each residence hall council.

### **Apartment Housing**

The College maintains an apartment housing complex for married students. Each apartment is completely furnished and includes wall-to-wall carpeting, individual room air conditioning and heating controls, electric stove, garbage disposal, telephone and television connections.

Additional advantages include laundry facilities and trash pickup. The expenses for an apartment include a \$50.00 housing deposit which is refundable less any damage charges when the unit is vacated, and \$125.00 per month rent. All utilities and benefits with the exception of telephone service are included in the \$125.00 monthly rent.

### **Housing Admission**

Students who are interested in the residence halls or married student apartments may write or call the Coordinator of Housing, Student Union, Cochise College, Douglas, Arizona, 85607.

### **Housing Regulations**

#### **General**

All students are advised to live in college residence halls or in the home of parents, guar-

dians or relatives if they are commuting students. All residence hall students are required to participate in the college food service facilities and must sign a room and board contract. If students are under 18, a parent or guardian must also sign. Three (3) meals are served each day except Sunday, when only two (2) meals are served.

A student must submit a room deposit of \$40.00 with the housing contract and be admitted to the College before a room assignment may be made.

Adjustments in room rates are not made in periods of over-assignment and the College may reassign rooms from time to time to insure the general welfare of students and the economical operation of residence halls.

The College holds no responsibility for the loss, theft or damage to the personal effects of resident students.

The College reserves the right to:

- (a) deny or cancel room assignments in the interest of health, discipline or academic standards.
- (b) cancel housing applications when all residence hall rooms have been assigned to earlier applicants.
- (c) hold residence hall students financially responsible for all losses and damage in assigned rooms.

Huachuca and Chiricahua Halls will be closed through Thanksgiving, Christmas, semester break and spring vacations. All students will be expected to leave unless special permission is obtained. Those enrolled in the Aviation programs will be expected to leave when their classes terminate or for any of the breaks listed above.

### **Student Activities**

The College encourages participation in extra-curricular activities, campus organizations and intramural and intercollegiate athletics to promote leadership, student relationships and social development.

### **Student Union**

The "living room" of the campus offers an opportunity for students 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 various dining facilities augment the services to the student by the College. The office of the Coordinator of Student Activities is located in this building.

The dining room services provided by the Cochise College Student Union include a "rathskeller-style" snack bar, a private dining facility and a large well-equipped dining room capable of seating 500. Resident students are offered a well-balanced menu featuring popular foods. Seasonal buffets, steak nights and other unique monotony-breakers create a "second home" atmosphere in our Student Union.

### **Activities**

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 students.

Student activities include Apache Day, Athletic Events, Band, Choir, Billiards Tournaments, College Rodeo, Cultural Film Series, Drama Productions, Hawaiian Luau, Inter-

mal Dances, Intramural Sports, Parents Day, Public Events Series, Red and White Ball, Student Orientation Program, Las Vegas Night, Rock Concerts, Lectures, Picnics, Weekend Trips, Popular Film Series, Happenings, Snowball Dance.

**Social Events Committee**

A subsidiary of the Associated Student Commission, the Social Events Committee performs important programming functions for the Students. The committee is made up of a Commissioner and Committee members who have an expertise in some area of programming. The commissioner is elected at all-school election each spring. The committee schedules dances, selects movies, plans mid-week "happenings".

**Food Committee**

The Food Committee is comprised of student, faculty and food service representatives who work to produce the best in food quality, service and sanitation.

**Organizations**

Student organizations attempt to appeal to and satisfy every student's needs and interests. Students of similar interests may get together and form a club in which fellow students can participate in a specialized activity.

Organizations include Alpha Eta Rho (Aviation), Amerind Club, Associated Women Students, Baptist Student Union, Beta Phi Gamma (Journalism Honorary), Campus Crusade for Christ, Cheerleaders, Delta Epsilon (DECA), Drama Club, Freshman Class Officers, Heliograph (Newspaper), International Club, Latter-day Saints Student Association, MECHA, Spanish Club, Nurses Club, Phi Beta Lambda (Secretarial), Residence Hall Councils, Red Key Club (Leadership Honorary), Rodeo Club, Jongleaders, Sophomore Class Officers, Starchuters, Women's Recreation Association (WRA), Veteran's Club, Judo Club, Isimuss (Honorary Society), Political Science Specialists, Newman Club.

**ACADEMIC PROCEDURES  
AND POLICIES**

**Academic Council**

The enforcement, interpretation and waiving of academic requirements are a responsibility of the Academic Council. Membership includes the Dean of Instruction, the Dean of Special Projects, the Dean of Student Affairs, the Assistant Dean for Occupational Education, the Assistant Dean for Continuing Education, the Assistant to the Director of the Fort Huachuca-Sierra Vista Center, appointed faculty members and two students appointed by the Student Senate. The president of the College is an ex-officio member. Student petitions for the waiver of academic regulations may be presented to the Academic Council through the student's counselor.

**Classification of Students**

**FRESHMEN:**

Students with fewer than 28 passing units of college credit.

**SOPHOMORES**

Students with 28 or more passing units of college credit

**FULL-TIME STUDENTS:**

Students carrying 12 or more units during the semester.

**Grading System**

Grades are earned in each course and the grade is 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**

**WF — WITHDREW FAILING** Indicates withdrawal from the class after Friday of the ninth week with below a C in the course. A grade of WF is computed in the student's grade point average as an F, or failure.

**W — WITHDREW** Indicates a student has withdrawn from the course before Friday of the ninth week, or that 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.

**I — INCOMPLETE** Indicates that for a justifiable reason (serious illness, etc.) the student failed to complete all requirements for the course. 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. The grade of I is not computed in the student's grade point average.

**AU — AUDIT** Courses may be taken for audit at the discretion of the course instructor. Registration and fee policies are the same as those for regular students; however, priority in registration will be given those registering in a course for credit.

**P — PASSING** Passing in a pass-fail course.

**XF** — Failure in a Pass-Fail course.

**Grade Points**

Semester grades are assigned grade points as follows:

**A — 4 grade points per unit earned**

**B — 3 grade points per unit earned**

**C — 2 grade points per unit earned**

**D — 1 grade point per unit earned**

**F — 0 grade points per unit earned**

**WF — 0 grade points per unit earned**

Thus, a three-unit 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 units attempted (exclude W and I grades) and the result is known as the student's cumulative grade point average, or GPA. Each time a course is taken both the units attempted and the grade points are included in computing the cumulative grade point average.

**Scholastic Honors**

1. Any student who completes 12 or more units in one semester or phase and maintains a semester and cumulative GPA of 3.500 to 3.899 will be placed on Honors
2. Any student who completes 12 or more units in one semester or phase and maintains a semester and cumulative GPA of 3.900 or better will be placed on High Honors

## **Unit Load Limitations**

The maximum class load for a beginning freshman is 17 units, 19 units for second semester freshmen. Students wishing to exceed these limitations may petition the Academic Council.

Entering students with lower than "C" average will be limited to 15 units. This will include those coming from high school and those transferring from another college.

Continuing students who have: (a) 1 - 10 minus points will be limited to 15 units; (b) 11 or more minus points will have academic requirements determined by Academic Council. These requirements will be stated in writing and the student must indicate his understanding of requirements and agree to comply.

## **Academic Probation**

All students who have attempted nine or more units at Cochise College and maintain a semester and a cumulative grade point average of 1.999 or lower will be placed on Academic Probation by the Academic Council.

## **Removal from Academic Probation**

A student will be returned to academic good standing when his cumulative grade point average is 2.000 or better.

## **Academic Suspension or Dismissal**

1. A student who has attempted nine or more units may be academically suspended from the College for one semester if his cumulative grade point average falls below 1.6 at the end of any semester.
2. A student while on Academic Probation may be academically suspended if his cumulative grade point average falls below 1.6.
3. All available factors having a bearing upon the academic record of the student will be evaluated by the Academic Council before academic suspension.
4. A student required to leave the College a second time for academic reasons will be dismissed.
5. Exceptions may be made by the Academic Council when evidence of significant academic improvement is made by the student during his period of academic probation; such students must continue to show improvement to remain in this special probationary status.

## **Transfer Students**

The following rules govern the admission of a student who has attended another college

1. Courses for which the student has earned a grade of D or F will not be accepted for credit.
2. Students with a GPA below 2.000 may be admitted on academic probation.
3. Students academically dismissed from another college may not attend Cochise for one full semester after said dismissal.
4. In determining academic standing at Cochise College, the GPA of a transfer student is computed on the basis of units attempted at Cochise College only and will not include units and grade points earned at another college.

## **Credit by Examination**

A student enrolled for credit may establish credit by examination for a maximum of 12 units during his coursework at Cochise College but may challenge only one course for credit by examination per regular semester. A student may challenge only those courses which carry transfer credit, in which a written examination is the primary evaluative device, and in which he has not had advanced work in the same area. Credit by examination units will be computed into the regular course load with corresponding fee and unit-load limitations. The student should obtain the application for credit by examination from Student Affairs, then secure permission from department involved. A student may not petition to challenge a course a second time. Some departments may have additional qualifications which must be met before a course may be challenged. Challengers in the Nursing Department will be required to pass a practical examination.

## **College Level Examination Program (CLEP)**

Credit may be granted to students who have taken one or more tests of the College Level Examination Program developed by the College Entrance Examination Board. To receive credit on the General Examinations, a student must have a standard score of 500 or above. On the Subject Examinations, the student must have a standard score of 50 or better.

Students may earn up to 30 units of college credit by taking the CLEP. Any interested person may contact the Division of Student Affairs.

## **U.S.A.F.I. and Other Military Service Schools**

Cochise College follows the credit recommendation of the American Council on Education for U.S.A.F.I. and Military Service Schools.

Credit for U.S.A.F.I. courses will be granted if the student received a satisfactory or above, or if the score is in the 41st percentile or above.

**NOTE:** Colleges differ on their policies related to credit allowed for credit by examination, CLEP, U.S.A.F.I. and Military Service Schools. Credit granted by Cochise College does not obligate any other college or university nor guarantee its acceptance at another educational institution.

Students must be enrolled in at least one Cochise College course before credit will be granted for CLEP, U.S.A.F.I. or Military Service Courses. Credit allowed on any of these will not count toward the 15 resident hours required for an A.A. Degree from Cochise College.

## **Individual Studies**

Under "Course Offerings," and for most subjects, will be found a course description called Individual Studies. This course, No. 99 in all cases, is designed to accommodate particular needs of students capable of independent study. The number of units granted depends on the nature of the work undertaken. The transfer value depends also on the nature of the work and its acceptability by the institution to which the student transfers.

## **Grade Report**

Each student receives a grade report at completion of the semester. Final semester grades are recorded on the student's permanent record.

The grade reports of unmarried students under 18 years of age are mailed to parents or guardians. Grade reports of other students are mailed to their home address.

On the fifth week of each semester, students who are currently making a D or and F in any course will receive a deficiency notice from the Registrar's Office.

## **Institutional Non-Degree Credit**

Institutional Non-degree Credit is credit granted by Cochise College which is applicable toward a certificate, but not applicable toward a Cochise College degree.

## **Final Examinations**

Final examinations are given in most courses and students are personally responsible for taking all assigned final examinations as they are listed in the examination schedule. Final examinations normally will not be given in advance of the scheduled time.

## **Change of Grade**

A grade once reported to the Student Affairs Office may be changed only upon authorization of the faculty member issuing the grade.

## **Repetition of Courses**

1. If a student earns a grade of D or F, he may repeat the course and receive a new grade; however, the listing of the original grade remains as part of the permanent record. The units of the original course are not counted for graduation or in computing the cumulative point average.
2. A student need not repeat a course which he has failed unless it is a prerequisite for another course or is a course required for graduation or transfer.
3. Repetition of high school courses is permitted only if required by the College.
4. A student may not repeat a course in which he has received a grade of C or better.

## **Change of Program**

Students are expected to arrange their academic schedule carefully and maintain this schedule throughout the semester. Necessary program changes are to initiate with the instructor.

Courses may not be added to a program after the first week of classes. Part-time evening students may register the first evening the class meets without paying a late-registration fee.

A student may drop a course at any time up to Friday of the ninth week of classes without penalty and the grade assigned will be W, Withdrew. Courses dropped after Friday of the week following mid-semester examinations will receive a grade of W or WF (Withdrew Failing) at the discretion of the instructor.

Audit Courses may be taken for audit at the discretion of the course instructor. Students may change to audit with permission of instructors through Friday of the ninth week of the semester.

## **Withdrawal from College**

A student who withdraws from the College before the end of the semester must consult with his counselor in order to obtain proper dismissal. A student will receive a WF in all courses if he does not officially withdraw.



## **Transcripts**

A transcript is a copy of the student's permanent record which, upon the written request of the student, is available to the student, to another college or university or written prospective employer.

Transcripts are forwarded by the Registrar's office at the written request of the student. Transcripts to educational institutions will be sent directly by mail. Transcripts given directly to the student are marked "issued to student". The first transcript is issued without charge, with additional transcripts \$1 each.

## **Transfer of Credit**

Students transferring from approved institutions of higher education ordinarily will be given credit, hour for hour, for work done in those institutions insofar as it applies to the requirements of the curriculum pursued at Cochise College. A grade of D, earned at another institution, will not be accepted.

Students who have registered in other colleges and universities shall not disregard their records in such institutions in order to make application for admission solely on the basis of their high school records. Failure to report previous college attendance at the time of registration shall be sufficient cause for cancellation of the student's enrollment, or any credit earned, or both.

Students transferring from Cochise College to one of Arizona's state universities should observe the following:

1. Follow carefully the curriculum guide developed by Cochise College in cooperation with the universities for your major area.
2. In general, the universities will accept up to 64 units of community college courses.
3. Developmental Courses carrying X, Y or Z designation will not transfer.
4. Courses in which a student makes under a C are accepted for transfer only at the discretion of the universities and/or the particular college in the university.
5. The overall grade point average must be a 2 point (C) or better.
6. If particular problems concerning transfer are encountered, the student should contact the Dean of Student Affairs at Cochise College.

## **Attendance Policy**

Attendance policies at Cochise College are based on the belief maximum benefits can accrue to the student only if his attendance is regular and his assignments are prepared promptly and adequately. A student is expected to be in attendance at all times in classes, laboratories and orientation assemblies unless there is a compelling reason for absence. Professors set an attendance policy for each class and it is the student's responsibility to know and comply.

## **Registration for Physical Education**

The Board endorses the philosophy of required physical education. In instituting this policy, the following requirements are set forth:

1. A full-time student shall be enrolled in a physical education activity course each semester of attendance until he has acquired a minimum of two semester credits of physical education, except full-time students at Fort Huachuca-Sierra Vista Center.
2. A student who is physically unqualified for participation in physical education as cer-

tified by a licensed physician (such certification by a physician shall be renewed each semester) shall be exempt from physical education activity. Physically handicapped students will enroll in a Personal Health course, or a special adaptive physical education course.

3. A student 24 years of age or older at the time of registration shall be exempt from physical education courses.
4. Honorably discharged servicemen with a minimum of two years of active duty, married men and women, and men and women who are heads of households are exempt from the requirement of two units of physical education.

## **Graduation Requirements**

Cochise College grants the degree of Associate in Arts and the Associate in Science.

## **Graduation Application**

Students planning to graduate must file Graduation applications with the Division of Student Affairs. Applications will be available at Registration. Applications must be filed by October 1 for Fall graduation, and by March 1 for Spring graduation.

### **Requirements for Graduation with the Associate Degree are:**

1. Completion, with a cumulative GPA of 2.0 (C) or better, of at least 60 passing units. All courses attempted at Cochise College must be included in cumulative GPA.
2. A minimum of 15 units, with a grade average of 2.0 (C) or better, must be taken at Cochise College.
3. Registration at Cochise College (not necessarily full-time) when graduation requirements are completed except that a student who has met all other requirements and has earned up to 56 units at Cochise may, within one year, transfer from another institution a maximum of four units to complete the degree requirements at Cochise College.
4. The General Education requirement at Cochise College is 26 hours distributed as follows:

AREA 1: A six-unit requirement from the following and related options. English placement will be determined on the basis of placement test scores and high school record:

ENGL Y, Reading Fundamentals  
ENGL 1-2, Composition  
ENGL 3, Advanced Composition  
ENGL 4, Introduction to Literature  
ENGL 6, Critical Evaluative Reading  
ENGL 8-9, Written Communications and Reports  
JOUR 1, Communications  
JOUR 2, Basic Reporting  
JOUR 3, Intermediate Reporting  
SPAN 1a-b, Elementary Spanish  
SPAN 3a, 3b, Intermediate Spanish  
SPAN 75a, 75b, Intermediate Composition and Conversation  
SPCH 2, Fundamentals of Speech  
SPCH 10, Public Speaking

AREA 2: A six-unit requirement from the following options. Although several courses appear on both Area 1 and Area 2 lists, a specific course may be used only to fulfill requirements in one area:

ART 1, Introduction to Art  
ART 3, Basic Design  
ART 6, Basic Drawing  
ART 7, 8, Survey of World Art  
DRAMA 3, Introduction to Theater  
ENGL 4, Intro to Literature  
ENGL 7, Creative Writing  
ENGL 20, 21, British Literature  
ENGL 24, 25, American Literature  
ENGL 26, 27, World Literature  
HUM 1, Humanities in Contemporary Life  
HUM 50, 51, Humanities  
MUS 1, 2, Introduction to Music  
MUS 30, Keyboard Harmony  
MUS 32a, 32b, Music Theory  
MUS 50, Introduction to Jazz  
PHIL 11, Introduction to Philosophy  
PHIL 13, Ethics  
PHIL 20, Philosophies of the East  
PHIL 21, Philosophy of Religion  
SPAN 75a, 75b, Intermediate Composition and Conversation  
SPAN 104a, 104b, Introduction to Spanish Literature

AREA 3: A six-unit requirement from the following and related options:

ANTH 1, Origin and Antiquity of Man  
ANTH 2, Development of Culture  
ANTH 25, Society and Culture  
ANTH 26, Non-Literate Societies of the World  
ANTH 35, Introduction to Archaeology  
ANTH 36, Archaeological Excavation  
ANTH 37, Analysis of Archaeological Materials  
ANTH 38, Archaeological Summer Session  
ANTH 40, Developing Small Museums  
ANTH 41, Setting Up Small Museums  
ANTH 85, Prehistoric Cultures of North America  
ANTH 86, Historic Indian Tribes of North America  
BUS 9, Survey of American Business  
BUS 23, Personnel Management  
ECON 1, 2, Principles of Economics  
GEOG 1, Physical Geography  
GEOG 2, Cultural Geography  
GEOG 5, Economic Geography  
HIST 1, 2, History of the U.S.  
HIST 4, Survey of Western Civilization  
HIST 5, Major World Developments Since 1850  
HIST 15, Survey of the American West  
POL-SCI 2, American National Government  
POL-SCI 50, Introduction to International Relations  
POL-SCI 57, National and Arizona Constitutions  
PSYC 1, 2, Elementary Psychology  
PSYC 10, Introduction to Social Psychology

SOC 1, Introduction to Sociology  
SOC 2, Social Problems  
P.S. 54, Psychology for Law Enforcement  
P.S. 56, Criminology

**AREA 4:** A six-unit requirement from the following and related options:

ANTH 36, Archaeological Excavation  
ANTH 37, Analysis of Archaeological Materials  
ANTH 40, Developing Small Museums  
ANTH 41, Setting Up Small Museums  
AVIA 12, Applied Aero Math  
AVIA 14, Aero Physics  
BIOL 1, 2, General Biology  
BIOL 20, Microbiology  
BIOL 34, General Genetics  
BOT 1, General Botany  
BUS 1, Principles of Accounting  
BUS 4, Business Math  
BUS 19, Business Statistics  
BUS 72, Introduction to Data Processing  
BUS 73, Programming—COBOL Level I  
CHEM 1, Introduction to Chemistry  
CHEM 2a, 2b, General Chemistry  
D.T. 11, Blueprint Interpretation and Basic Drafting  
D.T. 12, Technical Graphics I  
D.T. 20, Technical Graphics II  
E.T. 10, Math for Electronic Technicians  
E.T. 20, Advanced Math for Electronics  
G.T. 1, Technical Math I  
G.T. 2, Technical Math II  
GEOL 1, Introduction to Geology  
GEOL 51, Physical Geology  
MATH 1X, Fundamentals of Mathematics  
MATH 2X, Elementary Algebra  
MATH 3X, Plane Geometry  
MATH 11, Intermediate Algebra  
MATH 20, College Algebra  
PHYS 1, Introduction to Physics  
PHYS 2a, 2b, General Physics  
ZOOL 1a, 1b, General Zoology  
ZOOL 20a, 20b, Human Anatomy and Physiology

**PHYSICAL EDUCATION:** A two-unit requirement

Courses which conform to the general pattern of the four areas may be accepted upon review by a counselor.

Students in occupational programs and students in pre-professional science programs whose General Education requirements are somewhat different should consult with their program advisors for appropriate requirements.

Students may be exempted from specific General Education requirements on the basis of advanced placement.

Students who intend to transfer should review general education requirements of universities they plan to attend with their counselors.

Students may complete the following graduation requirements in the Developmental Program:

Area 1	5 units
Area 3	3 units
Area 4	3 units

## **INSTITUTIONAL NON-DEGREE CREDIT COURSES**

Courses such as PREP or any courses in certificate programs are referred to as "Institutional Non-Degree Credit".

Institutional Non-Degree Credit is credit granted by Cochise College which is applicable toward a certificate, but not applicable toward a Cochise College degree.

Programs and courses which carry "Institutional Non-Degree Credit" are:

### **Predischarge Education Program (PREP)**

See special Fort Huachuca-Sierra Vista section, page 117.

### **Specialist Programs**

The following certificate or specialist programs will apply toward an Associate in Arts if a student subsequently desires to meet further General Education requirements:

Secretarial Certificate  
Middle Management Specialist  
Drafting Technology Certificate  
Electronic Technology Certificate  
Criminal Justice Certificate  
Professional Pilot Certificate

### **Serviceman's Opportunity College (SOC)**

Cochise College, a Serviceman's Opportunity College, assumes the responsibility of aiding servicemen in pursuance of educational objectives. Assistance provided to servicemen includes:

1. Advising and counseling
2. Granting of credit for appropriate educational experiences in the armed forces
3. Transfer and reverse transfer of credits
4. Contract for degree option

### **Project Ahead**

Cochise College is a Participant in the Armed Forces Cooperative Admission Program (AFCAP). As a member of the Armed Forces, the individual has opportunity to apply for admission to Cochise College at the time of enlistment or anytime during enlistment. From the beginning of service duty and college education the individual will be able to more adequately plan a total education experience, utilize time in service to acquire credits toward a degree and have continued access to a counselor at Cochise to advise in education pursuits.

## **INSTRUCTIONAL PROGRAMS**

### **College-Parallel Programs**

For the student who wishes to extend his education to include a bachelor's (four-year) degree, Cochise College offers the first two years of the four-year program. In addition he may remove any high school grade or subject deficiencies required for entrance to the four-year college or university of his choice.

Students who plan to transfer to Arizona universities, or to other colleges and universities, should consult the specific catalog with the aid of their counselors to determine lower division requirements of junior standing. Catalogs of major universities and colleges are available in the Learning Resources Center and the Student Affairs Office.

The student who plans to graduate from Cochise College and wishes to obtain junior standing in another college or university has four requirements to fulfill.

- (1) He must clear up any entrance deficiencies in grades or subject matter if the senior college to which he expects to transfer requires it;
- (2) He must fulfill the general requirements of the senior college which are prescribed for all students;
- (3) He must fulfill his own pre-major requirements, i.e., the lower division requirements for his upper division major;
- (4) He must earn a cumulative grade point average of 2.0 or better.

Under the provisions of the ROTC Vitalization Act of 1964, Community college men are now eligible immediately to enter the Advanced ROTC Program when they transfer to a four-year college or university. Information relative to this program may be secured from the Dean of Student Affairs.

## **DISCOVERY AND CHALLENGE**

The Discovery and Challenge is designed to present a challenging curriculum that stresses scholarship initiative and creativity in an effort to achieve a meaningful education. To develop a sense of the interrelatedness of disciplines and to relate oneself to this organic unity is at the heart of an educational process which the Program will endeavor to nurture. The general objectives of the program are:

1. To provide an intellectually challenging program for able students.
2. To originate creative and integrative educational opportunities of an interdisciplinary nature.
3. To encourage and support co-curricular activities and events which enrich and broaden academic experiences.
4. To provide opportunities for individual growth and development through independent study and dialogue.
5. To serve the entire College as an arena and agent for excellence, innovation, communication and integration.

## **Student Eligibility**

1. Both full- and part-time students will be eligible to enter the Program.
2. Applicants will be evaluated in terms of high school grades, standardized test scores and high school recommendations; however, major emphasis will be placed on the student's application.
3. The Program application will consist of the student's answers to the following questions:
  - a. Student's evaluation of the strengths and weaknesses of the formal education he has received to date.
  - b. Student's detailing of an experience that has been of exceptional profit to him.
  - c. Description of the student's reading habits and experiences with books with discussion of a single aspect of one book that has had particular significance for him.

- d. If in school, student narrative of how he has spent the previous two summers; if not in school, how he has occupied his time since leaving school.
- e. List of reasons for deciding to enroll in the Program and a discussion of his family's reactions to his educational plans.

## **Curriculum**

Students may enroll in one or more of the interdisciplinary blocks of instruction offered each semester in the Discovery and Challenge Program:

- a. Psychology-World Literature — a two-semester course team-taught by psychology and English instructors will involve examination of selected masterworks of literature and of the characters of these works in terms of basic psychological principles. The learning process will include lecture, seminar discussion, independent study, and laboratory experiences.
- b. Great Ideas in Science and Philosophy — a two-semester course team-taught by science and philosophy instructors will involve (1) in the fall semester an examination of the theories of motion, terrestrial and extraterrestrial, as they have developed from Aristotle to Einstein and a study of eastern and western philosophies as they relate to these theories; and (2) in the spring a study of the theories of the constitution of matter from the classical period to modern times. The learning process will include lecture, seminar discussion, independent study and laboratory experiences.
- c. Humanities 50 and 51, Introduction to Humanities—a two-semester course which discusses the major ideas of western civilization as they are reflected in the arts, literature, drama. Guest lecturers present special areas and problems. Discovery and Challenge students will be given the option of presenting special projects or papers rather than taking examinations required of regular students.
- d. Students in any interdisciplinary block may elect English 1 or 2 in the fall and English 2 or 3 in the spring on an individual basis, compositions to be based in part on block content. Students may also elect Speech 2 on a similar individual basis, with oral presentations made in block sessions or before campus or community groups.
- e. The student may also elect a 40-hour internship each semester for cooperative education credit in a vocational area of his choice to determine whether that vocational choice is personally valid.
- f. The student enrolled in the Program would therefore be eligible to enroll for as few as six units in the Program and as many as 19 each semester.

All courses in the program except the cooperative education internship component will be fully transferable to four-year colleges and universities.

## **Occupational Programs**

Occupational programs at Cochise College are intended for the student who wishes to gain employable skills.

Occupational programs in Middle Management, Criminal Justice, Associate Degree Nursing (RN), Practical Nursing, Nursing Assistant, Office Careers, Medical Secretarial Studies, Teacher Aides, Archaeology Aide and Museum Aide Programs for American Indians, Drafting Technology, Electronics, Airframe and Power Plant Technology and Professional Pilot Training are offered at Cochise. Each occupational program has been developed with the aid of business and industrial advisory committees to insure the student of quality instruction and to enhance his opportunities for successful employment. (Information relating to additional occupational curricula may be secured through the Office of Admissions.)

Upon completion of the required curriculum, the student will receive an Associate degree or a Certificate of Completion. The College Placement Bureau will assist graduates in finding permanent full-time positions in fields of specialization.

Several four-year technical programs are offered at Arizona State University and Northern Arizona University. A large number of occupational programs at Cochise College will transfer into many of these university programs. For further information on specific transfer options consult a counselor, the Office of Career Placement or the respective division chairman.

In addition to the established occupational programs listed above, the College will offer a variety of short-term, non-credit extension courses upon request of business, industry or other interested groups. Several one-year certificate programs are also offered. Many of the programs geared to business and industry are co-sponsored by the Small Business Administration.

**COOPERATIVE EDUCATION PROGRAM:** Cochise College students enrolled in any of the College's programs may elect to participate in the Cooperative Education Program. This is a cooperative arrangement between the employer, the student and the College to provide part-time (or in some cases, full-time) job placement in training positions related to the student's career interest. The student's work is coordinated by college staff and the student will receive college credit for this job experience. 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 is the laboratory component for the various programs offered at Cochise College.

**ARCHAEOLOGY AIDE—MUSEUM AIDE  
NATIVE INDIAN STUDIES**

Two programs are available to the student seeking a working knowledge in archaeology or museum work—the two-year program leading to an Associate of Arts Degree and an one-year program for the student desiring to receive a certificate.

A student planning to earn the AA Degree must meet the graduation requirements set forth in this catalog. A total of 60 semester hours must be earned. Twenty-six of these hours must be general education courses from the four areas listed on page 40. The remaining hours, to make a total of 60, are accumulated through anthropology courses pertinent to the programs and other elective subjects.

A student interested in an one year Certificate Program for Archaeology Aide or Museum Aide must complete the following course of study.

**Archaeology Aide**

FALL SEMESTER	SPRING SEMESTER	SUMMER SESSION
Anth 1 Origin & Antig. of man	Anth 2 Development of Culture	Anth 38 Summer Archaeological Field Session
Anth 35 Introduction to Archaeology	Anth 36 b Archaeological Excavation	
Anth 36 a Archaeological Excavation	Anth 37 Analysis of Archaeological Materials	
Anth 85 Prehistoric Cultures of North America		
* Anth 99 Individual series in Archaeology		
*Offered each semester.		



## Museum Aide

Anth 35	Introduction to Archaeology	Anth 26	Non-Lit.Soc. of the World
Anth 36a	Archaeological Excavation	Anth 37	Analysis of Archaeological Materials
Anth 40	Developing Small Museums	Anth 41	Setting Up Small Museums
Anth 85	Prehistoric Cultures of North America	Anth 86	Historic Indian Tribes of North America

\*Anth 99 Individual Studies-Problems in Museum Work

**\*Offered each semester.**

## NATIVE INDIAN STUDIES

An undergraduate minor is offered in Native Indian Studies at Cochise College. This minor consists of 24 units selected from the courses listed under Native Indian Studies in this catalog. These courses provide a varied range of topics dealing with the history, culture, life-ways and contemporary problems of the North American Indian.

A student planning to receive the AA Degree must meet the graduate requirements set forth in the Cochise College catalog. A total of 60 semester hours must be met. Twenty-six of these hours must be in general education courses from the four areas listed in the catalog. In addition, 24 hours selected from the courses listed below are required for the Native Indian Studies Program. The remaining 10 hours, to make the total of 60, is accumulated through elective subjects of the student's choice.

### COURSES FOR NATIVE INDIAN STUDIES

Course content is directed to Native Indian studies in this program.

NIS 25	Society and Culture (Identical with Anthro. 25)	3
NIS 26	Non-Literate Societies (Identical with Anthro. 26)	3
NIS 36 A&B	Archaeol. Excavation (Identical with Anthr. 36 A&B)	4
NIS 40	Developing Small Museums (Identical with Anthro. 40)	4
NIS 85	Prehist. Cultures of N.A. (Identical with Anthro. 85)	3
NIS 86	Hist. Indian Tribes of N.A. (Identical with Anthro. 86)	3
NIS 99	Individual Studies	
NIS 31	Three Dimensional Design (Identical with Art 31)	3
NIS 4	Introduction to Literature (Identical with English 4)	3
NIS 2	Social Problems (Identical to Sociology 2)	3

\*Any art lab course may be substituted.

## AVIATION TECHNOLOGY

### Aviation Administration:

Graduates of this program will enter the aviation industry as mid-management trainees with airlines, in aircraft sales or in airport management. The programs include general education, business management and aviation courses of study. (Refer to Mid-Management Curriculum Guide).

**Professional Pilot:**

Academic and technical studies combined with flight training qualify the student for positions requiring professional pilots. All phases of flight training are available which will enable the student to complete the Airman Certification Requirements of the Federal Aviation Administration.

The Professional Pilot Program may be completed under one of the following options:

**OPTION I**

			Units
<b>July Phase</b> (23 weeks)	AT 80g-80f	Basic Flight	4-3
	AT 82g-82f	Intermediate Flight	3-3
	AT 86g-86f	Instrument Flight	3-3
		General Education	12

TOTAL 30

**January Phase**

<b>(21 weeks)</b>	AT 84g-84f	Advanced Flight	3-3
	AT 88g-88f	Multi-Engine	option 1-2
	AT 89g-89f	Flight Instructor	option 3-2
	AT 92g-92f	Instrument Flight Instructor	option 1-2
		General Education	13

TOTAL 30

**OPTION II**

<b>July Phase</b> (23 weeks)	AT 80g-80f	Basic Flight	3-3
	AT 82g-82f	Intermediate Flight	3-3
	AT 86g-86f	Instrument Flight	3-3
		General Education	6

TOTAL 24

**January Phase**

<b>(21 weeks)</b>	AT 84g-84f	Advanced Flight	3-3
	AT 88g-88f	Multi-Engine	option 1-2
	AT 89g-89f	Flight Instructor	option 3-2
	AT 92g-92f	Instrument Flight Instructor	option 1-2
		General Education	6

TOTAL 23

**ONE SEMESTER**-13 additional general education units to total 60 units required for an Associate in Arts Degree.

**OPTION III**

<b>July Phase</b>	AT 80g-80f	Basic Flight	4-3
	AT 82g-82f	Intermediate Flight	3-3
	AT 86g-86f	Instrument Flight	3-3
		General Education	3

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**January Phase**

AT 84g	Advanced Flight	3
AT 84f	Advanced Flight	3
AT 86g-86f	Instrument Flight	3-3
	General Education	9

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One semester - 12 units of electives. The suggested electives include:

88g	Multi Engine	1
88f	Multi Engine	2
89g	Flight Instructor	3
89f	Flight Instructor	2
92g	Instrument Flight Instructor	1
92f	Instrument Flight Instructor	2

One semester - 13 units general education or more to total 60 units required for an Associate Degree.

Options I, II and III lead to an Associate in Arts Degree. Students are urged to consult with the Aviation Department and Student Affairs before choosing Option I, II or III. A minimum of 24 credits from the Professional Pilot offerings are necessary for graduation. The Professional Pilot Program is a continuing operation and students may enter and start class when scheduled at any time during a single phase, at the discretion of the Aviation Department. The regular semester (16 weeks) must be taken during the regular Calendar Semester period.

## AIRFRAME & POWERPLANT TECHNICIAN:

This curriculum, approved by the Federal Aviation Administration, consists of the theory and practical experience involved in disassembling, inspecting, overhauling and repairing aircraft powerplants and accessories including ignition, fuel systems, lubrication, propellers, powerplant overhaul and maintenance, jet engine and turbo-prop theory, instruments and aircraft systems in compliance with F.A.A. procedures. All courses offered in Aviation Maintenance will be completed during the 50-week program. Sequencing will be determined by department, as well as entrance dates at discretion of Division.

		<b>Cr.</b>
AT 11	Aircraft Materials and Processes	4
AT 12	Applied Aero Math	3
AT 20	Basic Aircraft Powerplants	11
ENGL 8	Written Communications and Reports	3
AT 21	Aircraft Propeller Systems	3
AT 14	Aerophysics	3
AT 30	Adv. Aircraft Powerplants	11
AT 42	Aircraft Elec. Systems	4
AT 15	Aeronautics Drafting	4
AT 40	Basic Airframe Structures	5
AT 50	Adv. Airframe Structures	6
AT 16	Theory of Flight and Instrm.	4
AT 17	Shop Management Principles	3
AT 53	Hydraulic and Pneumatic Systems	5
AT 52	Aircraft Assembly, Rigging, and Insp.	7

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## BUSINESS ADMINISTRATION — TRANSFER PROGRAM

### (College Parallel)

The transfer program (college parallel) is designed to serve individuals who desire to complete the first two years of a Business Administration baccalaureate degree program at Cochise College.

The following course outline is suggested for students planning to transfer to Arizona four-year institutions of higher learning upon completion of two years of study at Cochise College.

<b>Freshman Year</b>	<b>Total Hours</b>	<b>Sophomore Year</b>	<b>Total Hours</b>
English 1, 2	6	Accounting (Bus. 1a, 1b)	6
Natural Sciences	8	Business Statistics (Bus. 19, 20)	6
Math 20 (or higher)	3	Business Law (Bus. 31)	3
Economics 1, 2	6	Math 35	3
Social Sciences	6	Humanities	8
Physical Education	2	*Electives	6
*Elective	0-3		
	<hr/> 31-34		<hr/> 32

\*Recommended electives include, but are not limited to, Speech, Introduction to Data Processing, Math 50 (or 51), Survey of American Business, Typing and Business Communications. Consult the Transfer Curriculum Guide applicable to the four-year institution where you wish to continue your education following completion of two years at Cochise College for appropriate elective choices.

## MIDDLE MANAGEMENT

The Mid-Management program is designed to serve individuals having diverse occupational objectives. The primary objective of the program is to prepare students for full-time employment upon graduation from Cochise College. Participation in the program does not preclude the student from entering a four-year institution of higher learning. Career plans are often altered and not infrequently in a direction requiring further education. The Mid-Management student who does decide to continue his schooling will find that the majority of the course work will be accepted for transfer credits.

The Mid-Management program consists of three areas of concentration: General Business, Hotel-Motel and Aviation Administration. The curriculum for each area consists of three parts: General Education, Area of Concentration and the Mid-Management core. The core and general education requirements are the same for each area.

<b>Freshman Year</b>	<b>Total Hours</b>	<b>Sophomore Year</b>	<b>Hours With Intern- ship</b>	<b>Hours Without Intern- ship</b>
Gen. Educ. Requirements	18	Gen. Educ. Requirements	9	9
Area of Concentration	3-6	Area of Concentration	0-3	12-15
Mid-Management Core:		Mid-Management Core:		
Princ. of Marketing	3	Personnel Management	3	3
Princ. of Management	3	Bus. 1a or Bus. 56	3	3
Salesmanship	3	Seminar-Trends & Prac- tices in Marketing & Management	3	3
		*Intern. in Coop. Educ.	12	0
	<hr/> 30-33		<hr/> 30-33	<hr/> 30-33

\* Internship in Cooperative Education (on-the-job training) has three options.

1. Full-time basis during the student's fourth semester.
2. Part-time basis during the student's school year. This is dependent upon student being placed locally in order that he or she may attend classes at Cochise College
3. Research Study — Students who are employed full-time may do a research study with the permission of the Coop Coordinator. Credit will be limited to three credit hours per semester

Mid-Management courses are designed to accommodate students who have different occupational goals by permitting appropriate course selection in an area of concentration. These options are as follows:

### GENERAL BUSINESS

Area of Concentration:

Suggested courses from which to choose the Area of Concentration electives include, but are not limited to, Survey of American Business, Business Math, Economics, Business Law, Accounting, Statistics, Typing, Business Communications, Introduction to Data Processing.

### HOTEL-MOTEL MANAGEMENT

Area of Concentration

BUS 58

Hotel-Motel Management

A series of correspondence courses from the Educational Institution of the American Hotel and Motel Association.

### AVIATION ADMINISTRATION

Area of Concentration

AT 80g

Basic Flight (ground)

AT 17

Shop Management Principles

DT 11

Blueprint Interpretation and Basic Drafting

GEOG 5

Economic Geography

BUS 31

Business Law

### MIDDLE MANAGEMENT SPECIALIST PROGRAM (One Year)

First Semester	Total Hours	Second Semester	Total Hours
Mid-Management Core:		Mid-Management Core:	
Princ. of Marketing	3	Salesmanship	3
Princ. of Management	3	Bus. 1a or Bus. 56	3
Personnel Management	3	Seminar-Trends & Practices	
Internship in Coop. Ed.	6	in Marketing & Management	3
*Seminar in Coop. Ed.	1	Internship in Coop. Ed.	6
		*Seminar in Coop. Ed.	1
	15-16		15-16

\* A course from the core area may be substituted upon permission from the coordinator

### CLERICAL-SECRETARIAL STUDIES

Two-year programs, leading to an Associate of Science degree, are available in the areas of General Secretary, Medical Secretary, Legal Secretary and Bilingual Secretary.

Certificate programs include: Clerk-Typist and Receptionist with the following areas of concentration: general, medical, legal and bilingual.

**CLERK-TYPIST  
(GENERAL, MEDICAL, LEGAL AND BILINGUAL)  
CERTIFICATE PROGRAM FOR DIRECT EMPLOYMENT**

<b>Required Courses</b>	<b>Course Numbers</b>	<b>Units</b>
Typewriting	BUS 6, 7, 8, 14 (Bil.)	6
Business Math	BUS 4	3
Bookkeeping & Financial Mgmt.	BUS 56	
or		
Principles of Accounting	BUS 1a	3
Grammar Usage & Punctuation	ENG 11	3
Business Communications	BUS 66	3
General Office Procedures	BUS 61	3
*Clerical Practice	BUS 62	3
Personnel Management	BUS 23	3
Calculating Machines	BUS 18	2
Records Management	BUS 17	3
Electives		3-6
<b>Recommended Electives:</b>		
Medical Terminology for the medical clerk-typist	BUS 81	(3)
Business Law for the legal clerk-typist	BUS 31	(3)
Six hours of Spanish for the bilingual clerk-typist		(6)
		<hr/> 35-38

\* This course will be individualized for the General, Medical, Legal and Bilingual Clerk-Typist.

**RECEPTIONIST  
(GENERAL, MEDICAL, LEGAL AND BILINGUAL)  
CERTIFICATE PROGRAM FOR DIRECT EMPLOYMENT**

<b>Required Courses</b>	<b>Course Numbers</b>	<b>Units</b>
Typewriting	BUS 6, 7, 8, 14 (Bil.)	6
Grammar Usage & Punctuation	ENG 11	3
Bookkeeping & Financial Mgmt.	BUS 56	
or		
Business Math	BUS 4	3
General Office Procedures	BUS 61	3
Records Management	BUS 17	3
Business Communications	BUS 66	3
Personnel Management	BUS 23	3
*Clerical Practice	BUS 62	3
Calculating Machines	BUS 18	2
Electives		6
<b>Recommended Electives:</b>		
Medical Terminology for the Medical Receptionist	BUS 81	(3)
Business Law for the Legal Receptionist	BUS 31	(3)
Six hours of Spanish for the Bilingual Receptionist		(6)
Key punch	BUS 70	(3)
Principles of Accounting	BUS 1a	(3)
for other business electives		(6)
		<hr/> 35

\* This course will be individualized for the General, Medical, Legal and Bilingual Receptionist

**EXECUTIVE SECRETARY  
(GENERAL, LEGAL AND BILINGUAL)  
ASSOCIATE IN ARTS DEGREE FOR DIRECT EMPLOYMENT**

<b>Required Courses</b>	<b>Course Numbers</b>	<b>Units</b>
Grammar Usage & Punctuation	ENG 11	3
Typewriting	BUS 6, 7, 8, 14 (Bil.)	9
Shorthand	BUS 10, 11, 12, 22	9
Business Math	BUS 4	3
Survey of American Business	BUS 9	3
Bookkeeping & Financial Mgmt.	BUS 56	
or		
Principles of Accounting	BUS 1a	3
Calculating Machines	BUS 18	2
Personnel Management	BUS 23	3
Secretarial Office Procedures	BUS 64	3
Records Management	BUS 17	3
Business Law	BUS 31	3
*Secretarial Practice	BUS 68	3
Business Communications	BUS 66	3
Fine Art Electives		6
Other Electives		6-9
Recommended Electives:		
Six hours of Spanish for the Bilingual Secretary		(6)
Key punch	BUS 70	(3)
Intro. to Data Processing	BUS 72	(3)
Programming-- COBOL Level I	BUS 73	(3)
or		
Principles of Accounting	BUS 1b	(3) (9)
		<hr/> 62-65

\* This course will be individualized for the General, Legal and Bilingual Secretary

**MEDICAL SECRETARY  
ASSOCIATE IN ARTS DEGREE FOR DIRECT EMPLOYMENT**

<b>Required Courses</b>	<b>Course Numbers</b>	<b>Units</b>
Grammar Usage & Punctuation	ENG 11	3
Shorthand	BUS 10, 11, 12, 22	9
Typewriting	BUS 6, 7, 8	9
Human Anatomy & Physiology	ZO 20A-20B	8
Business Math	BUS 4	3
Bookkeeping & Financial Mgmt.	BUS 56	
or		
Principles of Accounting	BUS 1a	3
Secretarial Office Procedures	BUS 64	3
Medical Terminology	BUS 81	3
Records Management	BUS 17	3
Business Communications	BUS 66	3
Personnel Management	BUS 23	3

Calculating Machines	BUS 18	2
*Secretarial Practice	BUS 68	3
Business Law	BUS 31	3
Fine Art Electives		6
		64

In addition to the above, the Medical Secretary degree requires an internship to be done the summer following graduation.

(16)  
**TOTAL**      80

\* This course will be individualized for the Medical Secretary.

## CRIMINAL JUSTICE

This program is responsive to current changes in the profession; therefore, it is recommended the applicant consult with the Dept. Head of Criminal Justice at the earliest opportunity.

The magnitude and complexity of today's law enforcement and rehabilitation activities dictate the need for educated law enforcement personnel. The program at Cochise College is designed to prepare the student for the challeging and demanding opportunities which exist in public service and private industry. Failure to meet proper requirements may exclude persons from acceptance into the program.

Private industry offers positions in protective services, insurance investigation and personnel checking for employment and security. City, county and state law enforcement agencies offer positions in patrol, identification, public relations, research, statistical analysis and juvenile programs. Women are finding careers in law enforcement challenging too, especially in youth and investigative work. The value of a college education cannot be overemphasized for the alert young man or woman who plans to make a career in law enforcement.

## FRESHMAN YEAR

	General Education	16 hrs
PS 20	Introduction to Criminal Justice	3 hrs
PS 21	Introduction to the Criminal Justice System	3 hrs
PS 22	Police Patrol Functions I	3 hrs
PS 24	Supervision for Police	3 hrs
PS 27	Rules of Evidence	3 hrs
PS 30	Juvenile Procedures	3 hrs
		----
		34 hrs.

## SOPHOMORE YEAR

PS 35	Physical Evidence-Photography	3 hrs
PS 32	Criminal Law I	3 hrs
PS 34	Criminal Law II	3 hrs
PS 36	Physical Evidence-Recognition, Collection, Preservation	3 hrs
PS 38	Criminal Investigation	3 hrs
PS 46	Police Community Relations	3 hrs
PS 48	Institutional Corrections	3 hrs
PS 49	Constitutional Law	3 hrs
PS 52	Accidents, Citations, Disorder	3 hrs
	Elective (or) General Education Course	3 hrs
		----
		30 hrs



## DENTAL THERAPY ASSISTANT

This curriculum, established for the purpose of serving the needs of the U.S. Army Medical Activity at Fort Huachuca, and restricted to members of the U.S. Army and Department of the Army Civilian, consists of work performed under general supervision of a dentist who specifies procedures to be performed, observes and evaluates the quality of work performed. The Dental Therapy Assistant serves as a fully-trained non-professional member of an oral health care delivery team, performing both the primary and advanced dental therapy duties. The Dental Therapy Assistant provides chairside dental assistance to the dentist when such duties are adjunctive to the primary or advanced duties of the Dental Therapy Assistant.

NOTE: (Since this program was developed specifically for the U.S. Army Medical Activity on Fort Huachuca admission is restricted to U.S. Army Personnel and Department of the Army civilians.)

## DRAFTING TECHNOLOGY

The complexity of American industrial and building construction requires that ideas, sketches and verbal instructions be neatly and accurately recorded in the form of engineering drawings or documents.

Today most industries fill their drafting job openings by employing only graduates who have received specialized training in Design and Drafting from Community Colleges or Technical Institutes.

The curriculum in Drafting Technology is designed to prepare the student with a variety of skills and related knowledge necessary to perform as efficient draftsmen and design draftsmen capable of transferring ideas from engineers and designers to the finished product.

The Drafting Technology Program at Cochise College is accredited by the American Institute for Design and Drafting on the Draftsman level.

Graduates may be employed by manufacturing industries, construction companies, mapping companies, mines, utilities or architectural planners.

Preparation for this career includes Technical Drafting skills and a knowledge of mechanical components and devices, technical mathematics, materials and processes of industry.

## FRESHMAN YEAR

### Two-year Associate Degree Program

#### First Semester

DT-12	Technical Graphics I .....	3 hrs.
DT-31	Electronics Drafting .....	3 hrs.
DT-3	Electro-mechanical Design .....	3 hrs.
GT-1	Technical Mathematics I .....	3 hrs.
GT-5	Manufacturing Materials and Processes I .....	3 hrs.

#### Second Semester

15 hrs.

DT-20	Technical Graphics II .....	3 hrs.
DT-24	Spatial Relationships .....	3 hrs.
GT-2	Technical Mathematics II .....	3 hrs.

GT-6	Manufacturing Materials and Processes II	3 hrs.
Eng-8	Written Communications and Reports	3 hrs.
		15 hrs.

## SOPHOMORE YEAR

### Third Semester

DT-36	Drafting for Manufacturing	4 hrs.
DT-49	Topographical Design and Drafting	4 hrs.
T.I.-40	Principles of Industrial Management	3 hrs.
General Education Electives		6 hrs.
		17 hrs.

### Fourth Semester

DT-46	Construction Drafting	4 hrs.
DT-50	Tool Design	4 hrs.
General Education Electives		6 hrs.
		14 hrs.

## DRAFTING TECHNOLOGY

### One-Year Certificate Program

## FRESHMAN YEAR

### First Semester

DT-11	Blueprint Interpretation & Basic Drafting	3 hrs.
DT-12	Tech Graphics	3 hrs.
DT-31	Drafting for Electronics	3 hrs.
GT-5	Manufacturing Materials & Processes I	3 hrs.
Math 2X	Elementary Algebra	3 hrs.
		15 hrs.

### Second Semester

DT-20	Tech Graphics II	3 hrs.
DT-24	Spatial Relationships	3 hrs.
GT-6	Manufacturing Material & Processes II	3 hrs.
Math 3X	Plane Geometry	3 hrs.
Eng. 8	Written Communications and Reports	3 hrs.
		15 hrs.

## ELECTRONICS TECHNOLOGY

Electronics has made a significant contribution to the scientific age in which we live. The electronics technician plays a very important role in this exciting and rapidly growing industry.

The electronics program at Cochise College is designed for young men and women interested in becoming technicians and a part of the scientific team which will meet the demands and challenges of this interesting industry. The program provides the student with a thorough foundation in electronics, supported by a knowledge of mathematics, English and basic sciences. In modern laboratories the student practices experimental techniques and develops technical competence with the use of test equipment and trainers designed to reinforce and apply the student's knowledge of theory. The objective of the total program is to produce a competent electronics technician who may work individually, or be capable of

working and communicating directly with engineers and production personnel in his specialized work. He will be capable of satisfactorily performing work for his employer and of growing into positions of increasing responsibility. The electronics field provides excellent employment opportunities for students who are interested in working as a team with engineers in research and development, and installation and servicing of electrical and electronic devices.

Major employers are computer manufacturers, aerospace industries, nuclear installations, communication equipment manufacturers, automated industrial manufacturing companies and government organizations which are involved in many areas of the electronics field. There will also be increasing demands in the fields of oceanography, medical electronics, satellite communication and education electronics.

## **FRESHMAN YEAR**

General Education Requirements .....	9 hrs
ET 10 Mathematics for Electronic Technicians .....	3 hrs
ET 20 Advanced Mathematics for Electronics .....	3 hrs
Other Technical Subjects:	
ET 1 Electronics Foundations .....	3 hrs
DT 31 Drafting for Electronics Technicians .....	3 hrs
D 48 Microprocessors .....	4 hrs
Electronics Technology Core .....	16 hrs
ET 2a Introduction to DC Circuits .....	(3)
ET 2b Introduction to AC Circuits .....	(4)
ET 22 Semiconductors and Transistors .....	(4)
ET 25 Electronic Circuits and Systems .....	(5)

## **SOPHOMORE YEAR**

General Education Requirements .....	11 hrs
Science Requirements (Minimum of 3 hrs of General Education total)	
Electronics Technology Core .....	25 hrs
ET 31 Pulse Circuits .....	(5)
ET 33 Digital Circuits and Systems .....	(4)
ET 43 Modern Electronic Devices .....	(4)
ET 45 Communications Electronics I .....	(4)
ET 47 Communications Electronics II .....	(4)
ET 46 Avionics I .....	(4)

## **ELECTRONICS TECHNOLOGY**

### **Two-Year Certificate Program**

## **FRESHMAN YEAR**

ET 2a Introduction to DC Circuits .....	3 hrs
ET 2b Introduction to AC Circuits .....	4 hrs
ET 22 Semiconductors and Transistors .....	4 hrs
ET 25 Electronic Circuits and Systems .....	5 hrs
	16 hrs

## **SOPHOMORE YEAR**

ET 31 Pulse Circuits .....	5 hrs
ET 33 Digital Circuits and Systems .....	4 hrs

ET 43	Modern Electronic Devices	4 hrs
ET 45	Communications Electronics I	4 hrs
ET 47	Communications Electronics II	4 hrs
ET 46	Avionics I	4 hrs
		25 hrs

HEALTH TECHNOLOGIES: NURSING

Nurse Assistant

Practical Nurse

Associate Degree Nurse

Cochise College offers an open-ended curriculum in nursing which allows students to travel at their own pace, getting on and off the curriculum ladder as needed. It is imperative that the student maintain a grade of C or better in all nursing courses, ZO 20 A & B and Chemistry 10 in order to progress satisfactorily.

The nursing curriculum is a basic core in which the student can elect to take all or part. It is devised so that at the end of the first semester, taking minimum requirements, the student is eligible to receive a certificate of proficiency as Nurse Assistant. At the end of first two semesters the student will have the necessary requirements to apply for State Board exams to become a Licensed Practical Nurse. At the end of the fourth semester, taking maximum requirements, the student is eligible to apply for State Board exams to become a Registered Nurse.

**The Health Technology Program** prepares young men and women to become Nurse Assistants, Practical Nurses or Graduate Nurses. Students are prepared to render quality nursing care at various levels and in those functions commonly associated with bedside nursing. Technical nursing skills are taught in the classroom and related clinical areas such as hospitals, clinics, public health agencies, doctors offices and nursery schools. In addition, courses in general education are provided for all students in the program.

**Nurse Assistants:** Qualified nurse assistants are in constant need to function as members of the hospital or community health team. Primary functions of nurse assistants are to care for sub-acutely ill patients and to assist other members of the health team. An one-semester program.

**Practical Nurses:** Completion of requirements in this program will qualify men and women to apply for state licensure as Licensed Practical Nurses. LPN's function at the hospital and in community health services at a skilled level under the direction of a Registered Nurse or physician. Practical Nurses are in high demand to give basic nursing care and to assist other members of the health team. A two-semester program.

**Associate Degree Nurses:** Employment opportunity for these technical nurses is at a premium high. RN's function in the hospital or community at a cognitive level under the direction of a licensed physician. The primary function of this nurse is to give scientific and comprehensive health care and to assist other members of the health team. Completion of requirements for this program qualifies graduates to apply for state licensure exams for Registered Nurse status. A four-semester program.

# ASSOCIATE DEGREE NURSE

## First Semester

General Education Requirements	7 units
ZO 20A Human Anatomy & Physiology	(4)
English I Composition	(3)
HT 56 Nursing I	10 units
	17 units

After satisfactorily completing Nursing I, each student will receive a certificate as a Nurse Assistant.

## Second Semester

General Education Requirements	4 units
ZO 20B Anatomy & Physiology	(4)
HT 10 Drugs, Dosages, and Calculations	2 Units
HT 57 Nursing II	10 units
	16 units

Student may apply for licensure as a Practical Nurse.

## Third Semester

General Education Requirements	10 units
Psych 1 Elementary Psychology	(3)
Anthro 25 or Sociology I	(3)
Chem 10 Basic Science Health and Medical Concepts	(4)
HT 58 Nursing III	8 units
	18 units

## Fourth Semester

General Education Requirements	9 units
Fine Arts or Humanities	(3)
Communications	(3)
Elective	(3)
HT 60 Trends and Leadership	2 Units
HT 59 Nursing IV	8 Units
	19 units

Student is eligible to apply for State Board examination to become a Registered Nurse.

## ALLIED HEALTH

Through consortium effort with Cochise College, Arizona Western College, Arizona College of Technology, and Pima College the following programs are offered wherein the students may take core course work during their first year at Cochise College and do their laboratory practicum in various Tucson hospital facilities through arrangements with Pima College. The following programs fall into this category.

Ophthalmic Dispensing Technology, Radiologic Technology, Respiratory Therapy, Dental Assisting Technology.

## Teacher Aide Program

The Teacher Aide Program is a certificate program to train students as elementary school teacher aides. The program is designed to serve aides employed by local public school districts. Courses in the program include Art 5, Business 3, English 2Y-TA, 11 and 12, Physical Education 189, Psychology 13, Math 1X, Science 1 and Cooperative Education 10 and 20. Bilingual aides will also take Spanish 3a and 3b (see individual catalog descriptions). Aides who complete the program may go on to complete the second year curriculum in preparation for transfer to the university in Elementary Education, Special Education or Home Economics. Interested students should contact the College before the beginning of the fall or spring semesters.



**PART-TIME FACULTY ON CAMPUS** Cochise College has a large number of people involved as part time instructors throughout the county they take part in orientation as semester commences, with some of the group seen awaiting start of a session in the Little Theater on the main campus

# COURSE OFFERINGS

## Numbering of Courses

Courses designated 1 through 99 carry college level credit. The number to the left of the title of the course is the identification number of the course, viz. 1 General Biology.

Courses carrying a letter designates X, viz. IX Fundamental Mathematics and Y, viz. IX. Reading Fundamentals may be used to complete graduation requirements toward the Associate Degree but may not be counted as transfer courses.

## Credit Value

The number to the right after the course title indicates the number of units of credits given for the semester. The number of lecture and laboratory hours per week is given in some cases at the conclusion of each course description. When laboratory work is not indicated, the course is considered to be a lecture; the word "lecture" does not imply that class discussion or participation is not an essential part of the course work.

## Prerequisites

The prerequisites as shown in the description for each course must be met before enrollment in the course is permitted. Prerequisites stated are intended to insure that the student will have sufficient preparation to assure a reasonable chance of success.

## Schedule of Classes

The College reserves the right to make additions or deletions to the list of course offerings during the year and to cancel those sections in which enrollment is not great enough to justify continuance. The Semester Schedule, published each fall, spring, is the official list of courses offered.

## Agriculture

- |          |  |                |
|----------|--|----------------|
| <b>1</b> | <b>PRINCIPLES OF VETERINARY SCIENCE</b><br><b>Prerequisite: None.</b><br>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.   | <b>3 UNITS</b> |
| <b>2</b> | <b>INTRODUCTION TO AGRICULTURE</b><br><b>Prerequisite: None.</b><br>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 the option(s) available. 2 hours lecture.  | <b>3 UNITS</b> |
| <b>3</b> | <b>INTRODUCTION TO ANIMAL AND DISEASE PROCESS</b><br><b>Prerequisite: None.</b><br>This course is designed to familiarize the student with the normal animal, including the anatomical description, the physiological function, and the structural differences of the simple cell compared to the complex organs of the body. The instruction will link the above normal information specifically to the disease process and serve as an introduction to the scientific basis of disease. 3 hours lecture. | <b>3 UNITS</b> |

- 4 PRINCIPLES OF AGRONOMY 3 UNITS**  
**Prerequisite: None.**  
 Principles of field crop production with special emphasis on origin, distribution, cultural practices and improvements. 3 hours lecture.
- 5 RANGE MANAGEMENT I 3 UNITS**  
**Prerequisite: 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.
- 6 ANIMAL DISEASES AND SANITATION 3 UNITS**  
**Prerequisite: Ag 3.**  
 This course is designed to deal specifically with individual diseases which affect the common domestic animals and will include the definition, symptoms, diagnosis, prognosis, treatment and communicability to both man and animals. Sanitation and its application to prevention of these diseases and the health of both man and animals as inter-related to the above diseases will be discussed. 3 hours lecture.
- 7 RANGE PLANTS 3 UNITS**  
**Prerequisite: None.**  
 Introduction to the study of local native grasses and other plants. Identification, value and control of each will be covered. 2 hours lecture; 3 hours laboratory.
- 8 ANIMAL INDUSTRY 3 UNITS**  
**Prerequisite: None.**  
 Fundamental principles as applied to animal, dairy, and poultry science. Also the marketing and distribution of animal products. 3 hours lecture.
- 9 AUXILIARY ENGINE OPERATION AND REPAIR 2 UNITS**  
**Prerequisite: None.**  
 The operation, servicing, adjusting, care and repair of small gas engines of various types and models. 1 hour lecture; 3 hours laboratory.
- 10 GENERAL WELDING I 4 UNITS**  
**Prerequisite: None.**  
 Techniques of operating arc welding machines; oxy-acetylene torches for fusion welding heating, brazing, cutting, hard facing, and soldering of all common types of metal. Emphasis on individual projects. 2 hours lecture; 6 hours laboratory.
- 11 ECONOMICS IN AMERICAN AGRICULTURE 3 UNITS**  
**Prerequisite: None.**  
 The student will gain an understanding of economic principles governing the production of agriculture including the principles of supply and demand, pricing, investing, measuring and consuming in the economy. Theories and practical applications to current economic problems will be emphasized. 3 hours lecture.



<b>15</b>	<b>HOME GARDENING</b> <b>Prerequisite: None.</b> Includes the study of the care and maintenance of trees, shrubs, hedges, and flowers. This course is designed for those students of horticulture for practical application in growing vegetable and flower gardens. 3 hours lecture.	<b>3 UNITS</b>
<b>25</b>	<b>INTRODUCTION TO ANIMAL HUSBANDRY</b> <b>Prerequisite: None.</b> The types and breeds of livestock, including cattle, sheep, swine and poultry. Production trends and basic skills in breeding, testing, and records of selection are emphasized. 3 hours lecture.	<b>3 UNITS</b>
<b>30</b>	<b>ANIMAL FEEDING</b> <b>Prerequisite: None.</b> Basic principles of animal nutrition and digestion. Selection, evaluation, and use of feeds in balancing rations for livestock and poultry. 3 hours lecture.	<b>3 UNITS</b>
<b>37</b>	<b>HORSE HUSBANDRY</b> <b>Prerequisite: None.</b> An introduction to the types and breeds of horses with emphasis on feeding, breeding and daily care of horses. 3 hours lecture.	<b>3 UNITS</b>
<b>42</b>	<b>LIVESTOCK JUDGING</b> <b>Prerequisite: None.</b> Selection of animals by type, production, and pedigree; practice judging and selection of livestock.	<b>3 UNITS</b>
<b>62</b>	<b>LIVESTOCK PRODUCTION AND MANAGEMENT.</b> <b>Prerequisite: None.</b> The managerial skills necessary in the management practices in production, feeding, and care of livestock on farms and ranches. 3 hours lecture.	<b>3 UNITS</b>

### Anthropology

<b>1</b>	<b>THE ORIGIN AND ANTIQUITY OF MAN</b> <b>Prerequisite: None.</b> A survey of human biological origins based upon paleontological and archaeological records including recent developments in physical anthropology.	<b>3 UNITS</b>
<b>2</b>	<b>THE DEVELOPMENT OF CULTURE</b> <b>Prerequisite: None.</b> An introduction to elements of cultural anthropology. The study of man's cultural progress from Lower Paleolithic to historic periods.	<b>3 UNITS</b>
<b>25</b>	<b>SOCIETY AND CULTURE</b> <b>Prerequisite: None.</b> Theoretical and practical insight into cultural forces which affect man's way of life including study of material culture, technology, social, political, economical systems, religion and language.	<b>3 UNITS</b>
<b>26</b>	<b>NON-LITERATE SOCIETIES OF THE WORLD</b> <b>Prerequisite: None.</b> The study of selected non-literate peoples and their way of life with major attention to such groups as tribes, chiefdoms, pastoral and peasant societies.	<b>3 UNITS</b>

<b>35</b>	<b>INTRODUCTION TO ARCHAEOLOGY</b>	<b>3 UNITS</b>
	<b>Prerequisite: None.</b>	
	A basic study of archaeological theory and technique. Field trips and laboratory work are important aspects of the course.	
<b>36a-36b</b>	<b>ARCHAEOLOGICAL EXCAVATION</b>	<b>4-4 UNITS</b>
	<b>Prerequisite: None.</b>	
	Practical experience through scientific excavation of an archaeological site. Sessions held in the field and laboratory. May be repeated for credit.	
<b>37</b>	<b>THE ANALYSIS OF ARCHAEOLOGICAL MATERIALS</b>	<b>3 UNITS</b>
	<b>Prerequisite: Permission of Instructor.</b>	
	Experience in scientifically analyzing materials recovered in archaeological excavation. Lectures, laboratory sessions and field trips.	
<b>38</b>	<b>ARCHAEOLOGICAL SUMMER SESSION</b>	<b>6 UNITS</b>
	<b>Prerequisite: None.</b>	
	Scientific excavation of a prehistoric Indian ruin, with emphasis on archaeological method, technique and interpretation for the novice. Offered only during the summer. May be repeated for credit.	
<b>40</b>	<b>DEVELOPING SMALL MUSEUMS</b>	<b>4 UNITS</b>
	<b>Prerequisite: None.</b>	
	An introduction to the creation of displays and the management and conservation of collections. The laboratory portion of the course will consist of an extensive survey of graphic arts skills pertaining to the creation of displays.	
<b>41</b>	<b>SETTING UP SMALL MUSEUMS</b>	<b>4 UNITS</b>
	<b>Prerequisite: None.</b>	
	Lectures will provide practical insight into all of the legal, financial, technical and management aspects of setting up small museums. Photographic skills for publications and displays will be taught in the lab.	
<b>85</b>	<b>PREHISTORIC CULTURES OF NORTH AMERICA</b>	<b>3 UNITS</b>
	<b>Prerequisite: None.</b>	
	A survey of prehistoric cultures of Canada, the United States and Northern Mexico. Field trips.	
<b>86</b>	<b>HISTORIC INDIAN TRIBES OF NORTH AMERICA</b>	<b>3 UNITS</b>
	<b>Prerequisite: None.</b>	
	A survey of Native American Tribes from the Arctic to the Mexican Sierra Madre. Field trips.	
<b>99</b>	<b>INDIVIDUAL STUDIES</b>	<b>1-4 UNITS</b>
	<b>Prerequisite: Approval of the Division Chairman and Professor.</b>	
	The student with demonstrated academic ability will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.	
<b>Art</b>	<b>*\$10 LAB FEE</b>	
<b>1X</b>	<b>*PAINTING FUNDAMENTALS</b>	<b>2 UNITS</b>
	<b>Prerequisite: None</b>	
	Basic principles of painting in watercolor, oil and other media for the non-art major. Not transferable. Studio 6 hours	

1	<b>*INTRODUCTION TO ART</b> <b>Prerequisite: None.</b> Introduction of art elements and principles. A study of the developments of ideas, materials and techniques. Lecture 2 hours, lab 4 hours.	<b>3 UNITS</b>
3	<b>*BASIC DESIGN</b> <b>Prerequisite: None.</b> A study of the basic elements of visual perception and organization. Lecture 2 hours, studio 4 hours.	<b>3 UNITS</b>
5	<b>*ART IN THE ELEMENTARY SCHOOL</b> <b>Prerequisite: None.</b> To introduce the teacher aide to the varied materials and methods used in an elementary art class. A study of a child's artistic development through lectures, slides, films and appropriate art experiences in lab involvements. Will not fulfill the art education requirement for elementary school certification.	<b>3 UNITS</b>
6	<b>*BASIC DRAWING</b> <b>Prerequisite: None.</b> An introduction to representational drawing and expressive pictorial design. Lecture 2 hours, studio 4 hours.	<b>3 UNITS</b>
7	<b>SURVEY OF WORLD ART</b> <b>Prerequisite: None.</b> A study of the development of the art and architecture of western civilization from pre-historic times through the Gothic era. Lecture 3 hours.	<b>3 UNITS</b>
8	<b>SURVEY OF WORLD ART</b> <b>Prerequisite: None.</b> A continuation of Art 7 through the modern era. Lecture 3 hours.	<b>3 UNITS</b>
30	<b>*TWO DIMENSIONAL DESIGN</b> <b>Prerequisite: Art 3.</b> An introduction of the theory and practice of two dimensional composition and design. Lecture 2 hours, studio 4 hours.	<b>3 UNITS</b>
31	<b>*THREE DIMENSIONAL DESIGN</b> <b>Prerequisite: Art 3.</b> An introduction to methods of sculpture, pottery and jewelry. Lecture 2 hours, studio 4 hours.	<b>3 UNITS</b>
45	<b>*BEGINNING FIGURE DRAWING</b> <b>Prerequisite: Art 6 or permission of professor.</b> A study of organic form, relationships, motion and rhythm with secondary emphasis on the human figure in its environment. Lecture 2 hours, studio 4 hours.	<b>3 UNITS</b>
65	<b>*BEGINNING COMMERCIAL DESIGN</b> <b>Prerequisite: Art 3.</b> The principles of commercial design and techniques of advertising layout, concentrating on practical applications. Lecture 2 hours, studio 4 hours.	<b>3 UNITS</b>
70	<b>*CERAMICS</b> <b>Prerequisite: Art 3, Art 31, or permission of professor.</b> An introduction to clay and glaze techniques through hand-built, wheel-thrown	<b>3 UNITS</b>

<b>80</b>	<b>*BEGINNING PAINTING</b> <span style="float: right;"><b>3 UNITS</b></span> <b>Prerequisite:</b> Art 3, Art 6 or permission of professor. An introduction to the principles and techniques of oil, water color, casein and fresco painting. Lecture 2 hours, studio 4 hours.
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<b>85</b>	<p><b>*BEGINNING PHOTOGRAPHY</b> <span style="float: right;"><b>3 UNITS</b></span></p> <p><b>Prerequisite:</b> Art 3 or permission of instructor.</p> <p>An introduction to the use and function of the camera and black and white darkroom technique. Lecture 2 hour., studio and lab 4 hours.</p>
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## Aviation Technology

The following airframe and powerplant courses are taught as an integrated program which is structured 50% lecture-discussion and 50% laboratory work.

<b>12</b>	<b>APPLIED AERO MATH</b>	<b>3 UNITS</b>
	A rapid review of high school algebra, plane geometry and arithmetic manipulations directly applicable to the Aviation Mechanic Technician's everyday problems.	

<b>15</b>	<b>AERONAUTICS DRAFTING</b>	<b>4 UNITS</b>
	A course in basic drafting skills with emphasis on blueprint interpretation and sketching with considerable practice in tracing electrical circuits on schematic drawings.	

<b>16</b>	<b>THEORY OF FLIGHT AND INSTRUMENTATION</b>	<b>4 UNITS</b>
	A study of the theory of flight as it relates to the maintenance technician with particular emphasis on the associated instrumentation in an aircraft.	
<b>17</b>	<b>SHOP MANAGEMENT PRINCIPLES</b>	<b>3 UNITS</b>
	A study of fundamental concepts of management with emphasis on handling the common problems that arise with workers, including extensive examination of union grievances and solutions.	
<b>20</b>	<b>BASIC AIRCRAFT POWERPLANTS</b>	<b>11 UNITS</b>
	An introductory course in powerplants of various kinds specialized for aircraft use, a foundation for AT-30.	
<b>21</b>	<b>AIRCRAFT PROPELLER SYSTEMS</b>	<b>3 UNITS</b>
	A study of the complex nature of sophisticated propeller systems used on modern aircraft, including propellers used with turbine power.	
<b>30</b>	<b>ADVANCED AIRCRAFT POWERPLANTS</b>	<b>11 UNITS</b>
	A continuation of AT-20 with emphasis on the more complex and modern powerplants, including in-depth study of radial engines and turbine engines (jets). Stress on trouble-shooting and actual repairs.	
<b>40</b>	<b>BASIC AIRFRAME STRUCTURES</b>	<b>5 UNITS</b>
	An introductory course in actual structures and repair procedures applicable to same.	
<b>42</b>	<b>AIRCRAFT ELECTRICAL SYSTEMS</b>	<b>4 UNITS</b>
	A study of the entire electrical system, as well as the component parts, with trouble-shooting and repair as objectives.	
<b>50</b>	<b>ADVANCED AIRFRAME STRUCTURES</b>	<b>6 UNITS</b>
	A continuation of AT-40 with emphasis on more sophisticated repairs to larger aircraft primarily in the laboratory.	
<b>52</b>	<b>AIRCRAFT ASSEMBLY, RIGGING AND INSPECTION</b>	<b>7 UNITS</b>
	A course in which the student has the opportunity to perform final work and inspection on an aircraft prior to its return to service after receiving required maintenance, with stress on FAA regulations.	
<b>53</b>	<b>HYDRAULIC AND PNEUMATIC SYSTEMS</b>	<b>5 UNITS</b>
	A study of aircraft hydraulic and pneumatic systems in depth with laboratory experience oriented toward trouble-shooting and repair.	

**NOTE:** All courses offered in Aviation Maintenance will be completed during the 50-week program. Sequencing will be determined by department.

The (g) ground school courses are lecture-discussion, the (f) flight are considered laboratory.

<b>80g-80f</b>	<b>BASIC FLIGHT</b>	<b>4-3 UNITS</b>
	<b>Prerequisite: Possession of an FAA Medical Certificate.</b>	
	The student will solo the aircraft, learn to navigate cross-country both by pilotage and radio, gain proficiency in all maneuvers required for a private license, learn to read and understand weather reports and learn the Federal Aviation Regulations pertaining to the private license.	

<b>82g-82f</b>	<b>INTERMEDIATE FLIGHT</b> <b>Prerequisite: Grade of C or better in 80g and 80f.</b> The student will become familiar with the commercial maneuvers and with radio navigation. The student will complete the cross-country hours required for a commercial license.	<b>4-3 UNITS</b>
<b>84g-84f</b>	<b>ADVANCED FLIGHT</b> <b>Prerequisite: Grade of C or better in 80g and 80f and 82g and 82f.</b> The student will become proficient in all the commercial maneuvers and in controlling the aircraft solely by reference to instruments. He will be introduced to instrument procedures.	<b>3-3 UNITS</b>
<b>86g-86f</b>	<b>INSTRUMENT TRAINING</b> <b>Prerequisite: Grade of C or better in 80g and 80f, 82g and 82f, and 84g and 84f.</b> The student will become proficient in ILS, VOR, DME, ADF and radar approaches and cross-country navigation by reference to instruments, and in air traffic control procedures and emergency procedures.	<b>3-3 UNITS</b>
<b>88g-88f</b>	<b>MULTI-ENGINE</b> <b>Prerequisites: Possession of a Private Pilot's License and a current Medical Certificate.</b> The student will become proficient in piloting multi-engine aircraft, learning all the emergency procedures pertaining to a multi-engine airplane and the problems and advantages of operating a multi-engine aircraft.	<b>1-2 UNITS</b>
<b>89g-89f</b>	<b>FLIGHT INSTRUCTOR</b> <b>Prerequisites: Holder of a current Medical Certificate and a Commercial Pilot Airplane Certificate with an Instrument rating.</b> Development of teaching skills necessary to become a Certified Flight Instructor, including a working knowledge of pertinent F.A.R.'s gained by study in depth and repeated use.	<b>3-2 UNITS</b>
<b>90a-90b</b>	<b>AIRLINE TRANSPORT RATING PROGRAM</b> Designed to meet minimum requirement for an Airline Transport Rating as set forth in Federal Aviation Regulations.	<b>9-6 UNITS</b>
<b>92g-92f</b>	<b>INSTRUMENT FLIGHT INSTRUCTOR</b> <b>Prerequisites: Holder of current Medical Certificate, Commercial Pilot Airplane Certificate with an Instrument rating, and a Flight Instructor Airplane Certificate.</b> Development of teaching skills and knowledge required of a Certified Instrument Flight Instructor. Ground School 1 unit, Flight 2 units	<b>1-2 UNITS</b>
<b>99</b>	<b>INDIVIDUAL STUDIES</b> <b>Prerequisite: Approval of Division Chairman and Professor.</b> The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit	<b>1-4 UNITS</b>

**Biology**

<b>1</b>	<b>*\$10 LAB FEE</b> <b>*GENERAL BIOLOGY</b> <b>Prerequisite: None.</b> Principles and concepts of biology with reference to organization and function of cells, flowering plants and man. Not open to majors in the Biological Sciences or the pre-professional curricula. Lecture 3 hours, Laboratory 3 hours	<b>4 UNITS</b>
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2	*GENERAL BIOLOGY	4 UNITS
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**Prerequisite: None.**

Major principles of biology as illustrated by the animal and plant kingdoms, inheritance, speciation and ecology. Not open to majors in the Biological Sciences or the pre-professional curricula. Lecture 3 hours, Laboratory 3 hours.

## 20 \*MICROBIOLOGY 4 UNITS

**Prerequisite:** Completion of a semester of a college biological science.

A survey of microbial life and fundamental biological peculiarities. The characteristics of bacteria as prototypes of all microorganisms; characteristics and importance of microorganisms other than bacteria; control of microorganisms; microorganisms and disease; and other aspects of applied microbiology. Lecture 3 hours. Laboratory 3 hours.

## 34 GENERAL GENETICS 3 UNITS

**Prerequisite:** Completion of a semester of a college biological science.

Fundamental concepts and methods of analysis of plant and animal inheritance. Includes basic Mendelism, elementary probability, chromosome behavior, population and biochemical genetics. Laboratory 3 hours

## 99 INDIVIDUAL STUDIES 1-4 UNITS

**Prerequisite: Approval of the Division Chairman and Professor.**

The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.

## Botany

<b>GENERAL BOTANY</b>	<b>4 UNITS</b>
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**Prerequisite:** None.

Basic course in botany for students of biological science or agriculture. An introduction to the principles of botany as illustrated by flowering plants with emphasis on anatomy and physiology. Lecture 3 hours. Laboratory 3 hours.

## 99 INDIVIDUAL STUDIES 14 UNITS

**Prerequisite:** Approval of Division Chairman and Professor.

The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.

## Business

1a **PRINCIPLES OF ACCOUNTING** 3 UNITS

**Prerequisite: None.**

This is 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 transaction and preparation of financial statements for single proprietorships, partnerships and corporations are stressed. Lecture 3 hours, laboratory 2 hours.

**1b PRINCIPLES OF ACCOUNTING 3 UNITS**

**Prerequisite:** Business 1a.

**Business 1b** is a continuation of **Business 1a** with increased emphasis placed upon partnership and corporation accounting. Capital structure and interpretation and usage of accounting data for managerial decision-making purposes are stressed. Lecture 3 hours, Laboratory 2 hours.

- 2a** **INTERMEDIATE ACCOUNTING** **3 UNITS**  
**Prerequisite:** Business 1b.  
 This is a comprehensive course in gathering, recording and using the financial data of a business. The accounting treatment of assets, including related principles of profit determination, is stressed. Lecture 3 hours Laboratory 2 hours.
- 2b** **INTERMEDIATE ACCOUNTING** **3 UNITS**  
**Prerequisite:** Business 2a.  
 Business 2b is a continuation of Business 2a. The accounting treatment of liabilities and capital accounts and the analysis of financial statements are stressed. Lecture 3 hours, Laboratory 2 hours.
- 3** **INSTRUCTIONAL MEDIA; USE AND DEVELOPMENT** **3 UNITS**  
**Prerequisite:** None  
 Course is designed to introduce students in Teacher-aide Program to use of typewriter, audiovisual equipment, production of instructional media and duplicating processes as they may be applied in elementary schools. Clerical duties such as attendance reports, money collection, ordering materials, record-keeping also introduced.
- 4** **BUSINESS MATH (Programmed)** **3 UNITS**  
**Prerequisite:** None.  
 The fundamentals of business mathematics and ability to communicate with the "number language" of today's business world is stressed. The programmed approach permits students to advance at their own rate, to realize higher achievement levels and to gain a complete and thorough mastery of the subject matter. Essentially 100% Laboratory.
- 5** **TYPING REVIEW** **1 UNIT**  
**Prerequisite:** None.  
 Through individualized instruction, case problems and production work, the student will review skills and mechanical functions of the typewriter, letter format, tabulation, form and manuscripts. This course begins at midterm. Laboratory 1 hour.
- 6** **ELEMENTARY TYPING** **3 UNITS**  
**Prerequisite:** None.  
 The student will develop basic typewriting skills and techniques. In addition to learning the keyboard, the student will be introduced to letter styles, tabulations, forms and manuscripts through individualized units of work. Students who have had typing in high school should enroll in Business 5 or 6. 50% Instruction; 50% Laboratory.
- 7** **INTERMEDIATE TYPING** **3 UNITS**  
**Prerequisite:** Business 6, high school typing, the ability to type 35 wpm, or permission of the instructor.  
 The student will improve basic typewriting skills, techniques, and accuracy through problem typing; as well as demonstrating an increase in words per minute in timed writings. Production work will include individualized units of work dealing with all types and styles of letters and business forms. 50% Instruction; 50% Laboratory.
- 8** **ADVANCED TYPING** **3 UNITS**  
**Prerequisite:** Business 7, ability to type 55 wpm, or permission of the instructor.  
 The student will gain additional typewriting skills in special, more demanding problems in business letters, manuscripts, tabulation and various business



forms through the use of individualized units of work. In addition, the student will be introduced to actual business situations and demands faced by office typists. The student should successfully demonstrate an improvement in speed as well. 50% Instruction; 50% Laboratory.

- 9 SURVEY OF AMERICAN BUSINESS 3 UNITS**  
**Prerequisite: None.**  
The course presents the fundamental characteristics and functions of modern business, with emphasis on possible career opportunities.  
3 hours lecture.
- 10 ELEMENTARY SHORTHAND 3 UNITS**  
**Prerequisite: Business 6 or equivalent, minimum grade of C in English, or permission of the instructor.**  
The student will undertake an intensive study of Gregg Shorthand theory. Students are expected to attain a minimum speed of 60 wpm on new material. Students with a year of high school shorthand should enroll in Business 11 or 13. 3 hours Lecture; 2 hours Laboratory.
- 11 INTERMEDIATE SHORTHAND 3 UNITS**  
**Prerequisite: One year of shorthand in high school, Business 10 with a grade of C or better, or permission of the instructor.**  
The student will improve shorthand skills and should develop dictation speed to a minimum of 80 words a minute on new material. 3 hours Lecture; 2 hours Laboratory.
- 12 ADVANCED SHORTHAND 3 UNITS**  
**Prerequisite: Two years of shorthand in high school, Business 11 with a grade of C or better, or permission of the instructor.**  
This course emphasizes speed dictation, vocabulary development and mailability of transcripts. Students are expected to attain a minimum speed of 100 words a minute on new material. 3 hours Lecture; 2 hours Laboratory.
- 13 SHORTHAND REVIEW 1 UNIT**  
**Prerequisite: Previous shorthand experience, minimum grade of C in English, or permission of the instructor.**  
Through the reinforcement of previous ability to write shorthand and through the review of principles and theory of Gregg Shorthand, students are expected to attain a minimum speed of 60 words a minute on new material. 1 hour Lecture; 1 hour Laboratory.
- 14 BILINGUAL TYPING 3 UNITS**  
**Prerequisite: Spanish proficiency at the second-year level, finished or currently enrolled in Business 7, or permission of the instructor. It is also recommended that the student have completed or enrolled in Spanish 75a.**  
This course is for students interested in qualifying as a bilingual (English and Spanish) typist. Through individualized instruction the student will demonstrate ability to type mailable copy in both English and Spanish.
- 16 NOTEHAND 3 UNITS**  
**Prerequisite: None.**  
The student will study a simple and easy-to-use adaption of Gregg Shorthand expressly designed for notemaking. The fundamentals of good notemaking, both theory and practice, will be stressed for personal use. 3 hours Lecture.

- 17 RECORDS MANAGEMENT 3 UNITS**  
**Prerequisites:** Business 6 or equivalent; minimum grade of C in English.  
 The principles and procedures of filing and actual practice in the basic systems of filing will be taught. The course deals with the management of established filing systems, transferring and disposing of records. 3 hours Lecture.
- 18 CALCULATING MACHINES 2 UNITS**  
**Prerequisites:** Business math or permission of the instructor.  
 The student will develop fundamental skills in operating rotary calculators, 10-key and printing calculators and electronic computation equipment. 1 hour Lecture; 1 hour Laboratory.
- 19 BUSINESS STATISTICS 3 UNITS**  
**Prerequisites:** Business 4, college or high school algebra, or permission of the instructor.  
 This course stresses introductory topics of business statistics such as data presentation, probability, probability distributions, sampling distributions, elementary decision-making, estimation of population means and testing of hypotheses. 3 hours Lecture.
- 20 BUSINESS STATISTICS 3 UNITS**  
**Prerequisite:** Business 19.  
 This course is a continuation of Business 19 and will stress such topics as testing and estimation, statistical inference, variance analysis, regression and correlation and time series and index number application. 3 hours Lecture.
- 21 TAXATION PRINCIPLES AND PROCEDURES 3 UNITS**  
**Prerequisite:** Business 1a or permission of the instructor.  
 Tax laws, accounting procedures and preparation of required United States and Arizona Income Tax returns as they apply to individuals and businesses is presented. This course is intended for those who do not anticipate specialization beyond the junior college level, but is a college-level course and may, in some cases, be accepted for transfer. 3 hours Lecture.
- 22 ADVANCED TRANSCRIPTION 3 UNITS**  
**Prerequisites:** Business 11 and 12 or presently enrolled in Business 12, two years of shorthand in high school with a minimum of 100 words a minute, or permission of the instructor.  
 This fourth semester course in shorthand and transcription stresses high-quality techniques and skills. A shorthand speed of 110 words a minute is required for successful completion of the course. Shorthand and typing are integrated with English skills in order to prepare the student for office standards. 3 hours Lecture; 2 hours Laboratory.
- 23 PERSONNEL MANAGEMENT 3 UNITS**  
**Prerequisite:** None.  
 This course is a study of policies and techniques pertaining to personnel management and human relations as applied to employee selection, placement, training, motivation, promotion and supervision. Employer and employee social responsibilities are also introduced and studied. 3 hours Lecture.
- 25 OCCUPATIONAL SAFETY AND HEALTH ACT OF 1971 (OSHA '71) 3 UNITS**  
**Prerequisite:** None.  
 The student will be able to demonstrate his understanding of the comprehensive, single source safety and health standards as contained within the Act. He

will be able to select the standards for individual situations and apply them. 3 hours Lecture.

- 27 CONSUMER EDUCATION 3 UNITS**  
**Prerequisite: None.**  
A course designed to improve consumer skills and awareness of problems facing the modern consumer. Areas covered will include legal rights, aids and protection, advertising, warranties, guarantees; money, banking and credit, saving and investing; specific consumer buying problems such as mortgages, autos, housing, insurance, food and health services. 3 hours Lecture.
- 31 BUSINESS LAW 3 UNITS**  
**Prerequisite: None.**  
The basic legal principles involved in laws of contracts, negotiable instruments, property and business organization are presented to assist in meeting the daily problems of management, ownership or employment in business. 3 hours Lecture.
- 35 PRINCIPLES OF BANK OPERATIONS\* 3 UNITS**  
The fundamentals of bank functions in a descriptive fashion so that the beginning banker may view his chosen profession in a broad (and operational) perspective. 3 hours Lecture.
- 36 ANALYZING FINANCIAL STATEMENTS\* 3 UNITS**  
The characteristics and analysis of financial statements, with emphasis on their utilization in banking. Covers the balance sheet, the profit and loss statement and analysis of earning potential. An American Institute of Banking Course. 3 hours Lecture.
- 37 BUS. MONEY AND BANKING 3 UNITS**  
**Prerequisite: Bus 36, Principles of Bank operations or permission of instructor.**  
This course stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student to apply his knowledge to his particular job. Emphasis is also placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios. 3 hours Lecture.
- 40 REAL ESTATE 3 UNITS**  
**Prerequisite: None.**  
This is an instructional program specifically designed to meet the State Real Estate Board's educational requirements for the licensing of salesmen and the certification requirements of the National Association of Real Estate Boards. 3 hours Lecture.
- 41 PRINCIPLES OF REAL ESTATE 3 UNITS**  
**Prerequisite: Bus. 40**  
An instructional program specifically designed to meet the State Real Estate Board's educational requirements for the licensing of brokers and the certification requirements of the National Association of Real Estate Boards. 3 hours Lecture.

\*A series of courses in banking is being developed in cooperation with the American Institute of Banking for the benefit of employees of state banking institutions.

51	<b>INSURANCE</b> <b>Prerequisite: None.</b> Principles and practices of insurance, including coverage available, buying methods, procedures for settling claims, analysis of contracts and forms of insurance purchased by the average individual are presented. 3 hours Lecture.	3 UNITS
52	<b>PRINCIPLES OF MANAGEMENT</b> <b>Prerequisite: None.</b> This course presents managerial principles with emphasis on planning, organizing, motivating and controlling for effective business decisions. 3 hours Lecture.	3 UNITS
53	<b>SALESMANSHIP</b> <b>Prerequisite: None.</b> Career opportunities in sales work, practical and psychological factors in selling, development of a desirable sales personality and correct techniques in conducting sales campaigns are presented. Members of the class will engage in practical sales demonstrations. 3 hours Lecture.	3 UNITS
55	<b>PRINCIPLES OF MARKETING</b> <b>Prerequisite: None.</b> This course presents 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, storage, etc. 3 hours Lecture.	3 UNITS
56	<b>BOOKKEEPING AND FINANCIAL MANAGEMENT</b> <b>Prerequisite: None.</b> The basic accounting cycle; business transactions, journalizing, posting and financial statements, will be studied. Additional areas of study will be cash control and banking, payroll preparation, credit and receivables control, inventory control, sources of funds, budgeting and ratio analysis. 3 hours Lecture.	3 UNITS
58	<b>HOTEL-MOTEL MANAGEMENT</b> <b>Prerequisite: Permission of instructor.</b> This is a series of correspondence courses from the Educational Institute of the American Hotel and Motel Association.	2-15 UNITS
60	<b>LABOR RELATIONS</b> <b>Prerequisite: Business 23 or Business 52 or permission of instructor.</b> A presentation of the history of the labor movement in the United States; union structure, the collective bargaining process, and a review of labor legislation and a summation of current and future problems and trends in the labor field. 3 hours Lecture.	3 UNITS
61	<b>GENERAL OFFICE PROCEDURES</b> <b>Prerequisite: Business 6, or high school typing, or permission of the instructor.</b> The student will learn and experience general office procedures, including duties of office workers, staff members and management. Personnel qualifications, systems of filing, preparation of reports, handling mail, using the telephone, and operations of duplicating and calculating machines most commonly found in business offices will be stressed. Case problems, projects and actual machine operations will be observed and evaluated to determine student development. 3 hours Lecture.	3 UNITS

- 62 CLERICAL PRACTICE (GENERAL, MEDICAL, LEGAL & BILINGUAL) 3 UNITS**  
**Prerequisite:** Business 61 or permission of the instructor.  
 This course will include actual practice in handling office mail, job applications and interviews, filing and telephone techniques for each individual occupational option. Transcription equipment machines, executive typewriters and actual practice in using duplicating equipment will be stressed. Students will work with practice sets in specialized areas. This course will be individualized for medical, legal, bilingual and general business students. Essentially 100% Laboratory.
- 64 SECRETARIAL OFFICE PROCEDURES 3 UNITS**  
**Prerequisites:** Business 8, 12 and 17.  
 This course deals with office organization and layout, workflow, procedures, standards, personnel policies and supervision procedures through progressive job situations. 3 hours Lecture.
- 65 MEDICAL TRANSCRIPTION 3 UNITS**  
**Prerequisite:** Bus. 64 or permission of instructor.  
 Actual practice in using equipment used for transcription of written, verbal or recorded ideas into typewritten form. Includes work on transcription equipment machines, executive typewriters, practice in using duplicating equipment. Final course, officestyle dictation, business letters, technical articles, filing, telephone procedures, mailing, and personal grooming for each individual occupational option. Work with practice sets in specialized fields. 3 hours Lecture.
- 66 BUSINESS COMMUNICATIONS 3 UNITS**  
**Prerequisites:** English 1, Business 6.  
 Development of skills and techniques used in communicating facts and ideas in business is the objective of this class. 3 hours Lecture.
- 68 SECRETARIAL PRACTICE (GENERAL, MEDICAL, LEGAL & BILINGUAL) 3 UNITS**  
**Prerequisites:** General: Business 64 or permission of the instructor; Medical: Business 64 and ZO20a; Legal: Business 31 and Business 64; Bilingual: Business 14 and Business 64.  
 This course will include actual practice in using equipment for the transcription of written, verbal or recorded ideas into typewritten form. Students will obtain proficiency on transcription equipment machines, executive typewriters and duplicating equipment. This course also emphasizes office-style dictation, business letters, technical articles, filing, telephone techniques, mailing and personal grooming for each individualized occupational option. Students will work with practice sets in specialized areas — general, medical, legal and bilingual. Essentially 100% Laboratory.
- 70 KEYPUNCH 2 UNITS**  
**Prerequisites:** Business 6 or equivalent, or permission of the instructor.  
 This course deals with developing proficiency on the key punch machine to job-entry level. 100% Laboratory w/ Instruction.
- 72 INTRODUCTION TO DATA PROCESSING 3 UNITS**  
**Prerequisite:** None.  
 An overview of the data processing field, general practices and aims of business, data processing systems and terminology are presented. Topics covered include data collection, report preparation, functions of data process-

ing units, flow charts, system design concepts and basic computer programming. Students receive actual practice in writing computer programs. 3 hours Lecture.

**73                      PROGRAMMING - COBOL LEVEL I                      3 UNITS**

**Prerequisite:** Business 72 or permission of the instructor.

A detailed study of the COBOL programming language is presented and the student becomes familiar with the organization of a COBOL program. Topics covered include computer organization, data structure, program procedures, input-output and operator considerations. A minimum of two operational programs is required from each student. One hour Lecture; 2 hours Laboratory.

**74                      PROGRAMMING - COBOL LEVEL II                      3 UNITS**

**Prerequisite:** Business 73 or permission of the instructor.

This course is an advanced study of the COBOL language. Topics covered include such advanced techniques in the design of a computer program as control and validation methods using magnetic devices, table organization and random and sequential file processing. Students will be required to construct and successfully write several programs using advanced techniques. 1 hour Lecture; 2 hours Laboratory.

**79                      COMPUTER OPERATIONS - LEVEL I                      3 UNITS**

**Prerequisite:** Business 73 or permission of the instructor

A detailed study of the hardware associated with a computer system is made. An overview of unit record equipment is presented to relate the interface of unit record equipment with computer operations. Laboratory exercises involving planning, set-up and actual operations of each of the peripheral devices associated with the computer are completed. 1 hour Lecture; 2 hours Laboratory.

**81                      MEDICAL TERMINOLOGY                      3 UNITS**

**Prerequisite:** Zoology 20a or permission of the instructor.

Terms frequently encountered in medical records are learned through the study of prefixes, suffixes and the principles for combining the two to make a compound; followed by a comprehensive study of a list of diagnostic, operative symptomatological and drug terms and abbreviations.

**82                      MANAGEMENT INFORMATION SYSTEMS                      3 UNITS**

**Prerequisite:** Business 72, comparable work experience, or permission of the instructor.

This course is a study of the management sciences involved in meeting the informational needs of business, industry, governmental and educational agencies. A study of the skill and knowledge of man versus machine to develop and design data processing systems to accomplish these needs is made. A problem-oriented approach will be utilized to assist the student in this course. 2 hours Lecture, 1 hour Laboratory.

**93                      SEMINAR-TRENDS AND PRACTICES IN  
MARKETING AND MANAGEMENT                      3 UNITS**

**Prerequisites:** Business 53, 55 and 1a or 56; or permission of the instructor.

This course is designed to dovetail theory and practice. Problems encountered by students in their employment will be discussed and current readings in marketing and management will be assigned. 3 hours Lecture.

- 95**                    **INTERNSHIP AS MEDICAL SECRETARY**                    **16 UNITS**  
**Prerequisite:** **Business 68 and 81.**  
This course is designed to dovetail theory and practice with experience in a medical record department or similar facility. 100% On the Job Training.
- 99**                    **INDIVIDUAL STUDIES**                    **1-4 UNITS**  
**Prerequisite:** **Approval of the Department Head and the instructor.**  
Solving a problem or completing a project under the direction of a faculty member is required. This course may be repeated for credit.

## Chemistry

- \*\$10 LAB FEE**
- 1**                    **\*INTRODUCTION TO CHEMISTRY**                    **4 UNITS**  
**Prerequisite:** **Math 2X or equivalent.**  
Elements of general chemistry. Adapted to the needs of those students who have not had high school chemistry. Lecture 3 hours, Laboratory 3 hours.
- 2a**                    **\*GENERAL CHEMISTRY**                    **4 UNITS**  
**Prerequisite:** **One year of high school chemistry, Chemistry 1 or Math 11.**  
Introduction to the general principles of chemistry with emphasis on quantitative relationships. Chemical bonding and properties of matter are related wherever possible to present concepts of atomic structure. Redox principles and chemical equilibria are introduced. Lecture 3 hours, Laboratory 3 hours.
- 2b**                    **\*GENERAL CHEMISTRY**                    **4 UNITS**  
**Prerequisite:** **Chemistry 2a.**  
Continuation of Chemistry 2a with emphasis on kinetics and equilibria along with a study of the elements through group relationships on periodic tables. Aspects of organic and biochemistry are included. Lecture 3 hours, Laboratory 3 hours.
- 10**                    **\*BASIC SCIENCE: HEALTH AND MEDICAL CONCEPTS**                    **4 UNITS**  
**Prerequisite:** **None.**  
A one-semester laboratory course dealing with a number of basic science concepts but emphasizing chemical principles important to the understanding of human biological functions and related medical aspects. Adapted to the needs of students in Nursing and Health-related fields. Lecture 3 hours, Laboratory 3 hours.
- 30**                    **\*ANALYTICAL CHEMISTRY**                    **4 UNITS**  
**Prerequisites:** **Chemistry 2b.**  
Principles of quantitative chemical analysis including theory and practice of separation processes and analytical determinations involving gravimetric, volumetric, colorimetric and electroanalytical procedures. Lecture 2 hours, Laboratory 6 hours.
- 40a-40b**                    **\*ORGANIC CHEMISTRY**                    **4-4 UNITS**  
**Prerequisite:** **Chemistry 2b.**  
General principles of organic chemistry; laboratory preparation of organic compounds. Lecture 3 hours, Laboratory 3 hours.
- 99**                    **INDIVIDUAL STUDIES**                    **1-4 UNITS**  
**Prerequisites:** **Approval of Division Chairman and professor.**  
The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.

## Cooperative Education

- 10                    INTERNSHIP IN COOPERATIVE EDUCATION                    1-12 UNITS**  
**Prerequisite:** Prior approval of Cooperative Education Coordinator.  
Student should enroll concurrently in Coop Ed 20 unless excused by coordinator. Internship credit is provided in career areas, such as Manufacturing, Construction, Marketing, Business and Office, Teacher-Aide, Fine Arts and Humanities, Public Service, Social work and Police Science.
- 20                    SEMINAR IN COOPERATIVE EDUCATION                    1-4 UNITS**  
**Prerequisite:** Permission of Coop. Ed. Coordinator. Student should enroll concurrently in Coop. Ed. 10 unless excused by coordinator.  
Basic processes and concepts of the world of work: Job application, job responsibilities, human relations, career areas and supervisory development will be discussed and explored.

## Counseling

- 1                    CAREER AND LIFE PLANNING                    3 UNITS**  
**Prerequisite:** None  
Explores career opportunities and assists students in deciding on and planning for their chosen careers. 3 hours Lecture.

## Criminal Justice

- 20                    INTRODUCTION TO POLICE SCIENCE                    3 UNITS**  
**Prerequisite:** None.  
The history of criminal justice in the United States and Europe including study of the different law enforcement agencies and their standards, qualifications, and functions, application of police report writing procedures and ethical practices, and application of basic criminal procedures of the judicial system to problems similar to those encountered in police work. 3 hours Lecture.
- 21                    INTRODUCTION TO THE CRIMINAL JUSTICE SYSTEM                    3 UNITS**  
**Prerequisite:** None.  
This course is designed to present the elements and processes of the criminal justice system. The material presents the elements of law, crime and punishment, the adversary system, court systems (state and federal), and the processes from criminal incident to arrest, and correctional processes. Also included is the juvenile court process and juvenile corrections. Finally, the persons involved in the criminal justice system from police to corrections personnel, psychiatrists and social workers, their duties, responsibilities and functions are studied in detail. 3 hours Lecture.
- 22                    POLICE PATROL FUNCTION                    3 UNITS**  
**Prerequisite:** None.  
An introductory course designed to present the various duties and responsibilities of the police patrol division covering the basic theories of patrol, care of uniforms and personal equipment, including the care and use of protective weapons, self defense, use of patrol cars and police radio, and elements of patrol systems arrest, and the handling of prisoners. 3 hours Lecture.
- 24                    SUPERVISION FOR POLICE                    3 UNITS**  
**Prerequisites:** P.S. 22 or permission of instructor.  
This course is designed to present the role, prime functions, responsibilities, administrative and management duties of the police supervisor within the



police organization. The following areas will be studied: principles of scientific personnel deployment and distribution, processes of oral and written communications, techniques of conference leading, command presence, leadership, problems of employee morale, training and discipline. 3 hours Lecture.

**25 PRIVATE SECURITY, PRINCIPLES AND PRACTICE 3 UNITS**

An introductory course designed to present the history, nature and scope of private security in modern technical society; the principles of physical security, internal loss prevention, defensive security systems, fire prevention and safety; the security function in the corporate structure; operations and career opportunities exemplified in such specific areas as retail, hospital, industrial, cargo and computer security; security services, contract and proprietary. 3 hours Lecture.

**26 POLICE ORGANIZATION AND ADMINISTRATION 3 UNITS**  
**Prerequisites: PS 20, PS 22 and PS 24.**

Study of the basic administrative and organizational concepts being advanced in police science including the organization of police service, the administrative services, the operational police services and the auxiliary services and police plant facilities. 3 hours Lecture.

**27 RULES OF EVIDENCE 3 UNITS**  
**Prerequisite: None.**

Examination of the Rules of Evidence, as applied in the courtroom to the evidence as compiled by the police officer in the investigation of criminal offenses. Trial procedure in criminal cases is examined and reviewed. The kinds of evidence, privileged communications, hearsay rule, exclusionary rule, confessions and admissions are examined in light of the police officer's duties and responsibilities as he prepares his case for prosecution. 3 hours Lecture.

**30 JUVENILE PROCEDURES 3 UNITS**  
**Prerequisite: None.**

Study of the social problem of juvenile delinquency, some of its causes, and what is being done to correct such causes. Juvenile delinquency and dependency and the police, juvenile crime, procedure of arrest, juvenile court, correctional methods and facilities and the various aspects and effectiveness of rehabilitative procedures. 3 hours Lecture.

**32 CRIMINAL LAW I 3 UNITS**  
**Prerequisite: P.S. 20 or permission of instructor.**

This course offers a general overview of criminal procedure for investigation to conviction of criminal offenders including arrest, search and seizure. The main text will deal with the substantive criminal law and various elements of particular crimes as set forth generally in common law and specifically as applied to Arizona Revised Statutes, Criminal Code Title 13. 3 hours Lecture.

**34 CRIMINAL LAW II 3 UNITS**  
**Prerequisite: None.**

Study of the three main working areas of law enforcement for the police officers: arrest, search, and seizure. Discussion of constitutional law cases involving these areas in detail. 3 hours Lecture.

**35 PHYSICAL EVIDENCE I (PHOTOGRAPHY) 3 UNITS**  
**Prerequisite: None.**

This course is designed to familiarize the student with the basic procedures of taking photographs of physical evidence, crime scenes and traffic accidents.

The student will be given the opportunity of learning darkroom procedures involving development of film, making prints and enlarging prints. Color slide development for police in-service training films will allow the student to develop techniques for presentation to groups for instructional purposes. 1 hour Lecture, 3 hours Laboratory.

**36                      PHYSICAL EVIDENCE II (RECOGNITION,                      3 UNITS  
COLLECTION, PRESERVATION)**

**Prerequisite: None.**

Examination of the various forms of physical evidence that may be located at the crime scene. Emphasis on importance of physical evidence in the successful prosecution of the guilty including proper collection, packaging, and transportation of such evidence as latent fingerprints, plaster casts, blood, semen, hair, tissue, soil, grasses. Study of specific types of crime, e.g. homicide, robbery, burglary, sex crimes and hit-and-run to familiarize the student with the criminal "method of operation". 3 hours Lecture, 2 hours Laboratory.

**38                      CRIMINAL INVESTIGATION                      3 UNITS**

**Prerequisite: PS 20.**

A study of the investigative methods and procedures used in major and minor crimes. Emphasis on sources of information, preliminary and follow-up investigation and identification of individuals. 3 hours Lecture.

**46                      POLICE- COMMUNITY RELATIONS                      3 UNITS**

**Prerequisite: PS 20 and PS 22.**

Through seminar study, preparation of researched data, which is logical, substantiated and well-documented with plans for the improvement of law enforcement relationships within the communities served. In-service students will be required to offer solutions to problems similar to those encountered in their own communities. 3 hours Lecture.

**48                      INSTITUTIONAL CORRECTIONS                      3 UNITS**

**Prerequisite: None.**

An introductory course is designed to present the elements, processes and history of imprisonment as a means of societal retribution and its more recent evolution to more scientific means of training, educating and rehabilitating those convicted of crime. The material presents: elements of the scientific method as applied to shift in penal philosophy, overview of the modern correctional system, an historical sketch of punishment, changing attitudes toward punishment as a deterrent to crime, the correctional institution and its administration, prisoner's rights, victimology, probation and parole; the challenge of rehabilitation methods; measurement of success and future expectations.

**49                      CONSTITUTIONAL LAW FOR POLICE                      3 UNITS**

**Prerequisite: PS 21, 32, 34, or permission of instructor.**

A comprehensive study of the U.S. Constitution and the Bill of Rights. Emphasis will be placed heavily on the 1st through the 14th amendments. In-depth study will be made of numerous U.S. Supreme Court cases particularly in the area of freedom of speech and assembly, arrest, search and seizure, due process of law, right to silence, an attorney, a fair and speedy trial. 3 hour Lecture.

**52                      ACCIDENTS, CITATIONS, DISORDERS                      3 UNITS**

**Prerequisite: None.**

Study of traffic law and various types of accident situations including, methods

of handling, reporting and collecting evidence. Emphasis will be placed on prevention of accidents; citations, their form, function and place in traffic enforcement, various kinds of civil disorders, and police methods of control, dispersing or arresting participants, equipment used and legal aspects of disorder. 3 hours Lecture.

**54 PSYCHOLOGY IN LAW ENFORCEMENT 3 UNITS**

**Prerequisite:** PS 20 or permission of professor.

Study of the fundamental terms and psychological theories including comparison and evaluation of some psychological theories advanced and how they could apply to police science. Discussion of the police officer encountering the mentally disturbed. 3 hours Lecture

**56 CRIMINOLOGY 3 UNITS**

**Prerequisite:** Sociology 1 or permission of professor.

Methods of collecting information regarding crime, organization and systemization of such information and drawing of conclusions from such data and the examination of facts of crime and delinquency. Factoral data examined includes variations of crime and delinquency statistical collection methods, variables of race, age, sex, stratification, poverty and changing social values. Some time will be spent on the related subject corrections, probation and parole. 3 hours Lecture.

## Dental Therapy Technology

**21 ORAL AND DENTAL ANATOMY 3 UNITS**

**Prerequisite:** None.

A course designed to study those anatomical structures of man associated with the oral cavity. The numbering system, eruption dates of teeth are emphasized along with dental occlusion. A practical exercise in reproduction of tooth anatomy in wax is conducted. 2 hours Lecture, 2 hours Laboratory.

**22 ORAL PATHOLOGY 2 UNITS**

**Prerequisite:** None.

The study of Pathology as related to the tissues of the oral cavity to include the teeth, periodontal tissues and surrounding soft tissues of the mouth. 2 hours Lecture

**23 PRINCIPLES OF DENTAL SCIENCE I 2 UNITS**

Orientation to course and necessary preparation for future patient treatment. A study of pharmacology, microbiology, sterilization procedures and tooth deposits. 2 hours Lecture, 1 hour Laboratory.

**24 PRINCIPLE OF DENTAL SCIENCE II 3 UNITS**

**Prerequisite:** None.

A study of Pedodontics, common dental emergencies and treatment, cavity preparation terminology, endodontics, dental first aid, oral surgery, radiography, diagnostics aids, the care and maintenance of dental equipment. The principles of four-handed sit-down dentistry and the "team" approach are studied and learned through practical exercise. 2 hours Lecture, 2 hours Laboratory

**25 DENTAL MATERIALS 2 UNITS**

**Prerequisite:** None.

Study of composition, properties and manipulation of dental restorative materials and impression materials. 2 hours Lecture, 1 hour Laboratory.

**26 DENTAL HEALTH EDUCATION 2 UNITS**

**Prerequisite:** None.

Study of preventive dentistry to include instruction on fluorides, dentifrices,

diet and nutrition. Instruction in educating patients individually and in groups on the rationale and methods of oral disease control. 2 hours Lecture.

- 27 DENTAL THERAPY ASSISTANT BASIC PROCEDURES 3 UNITS**  
**Prerequisite: None.**  
 Study and practical exercise involving the following areas: rubber dam techniques, oral hygiene procedures, prosthodontics procedures, periodontal procedures, and the Dental Health Record. 2 hours Lecture; 2 hour Laboratory.
- 61 PRE-CLINICAL RESTORATIVE PROCEDURES I 3 UNITS**  
**Prerequisites: DT 21-Oral and Dental Anatomy.**  
 Practical exercise in restorative dentistry on models and manikins. 5 hours Laboratory.
- 62 PRE-CLINICAL RESTORATIVE PROCEDURES II 3 UNITS**  
**Prerequisite: DT 61.**  
 Advanced practical exercise in restorative dentistry on manikins. 5 hours Laboratory.
- 63 INTRODUCTION TO CLINICAL PRACTICE 8 UNITS**  
**Prerequisites: DT 61 and DT 62.**  
 Clinical training in the treatment and management of patients predominately in the field of oral hygiene, dental disease control and basic restorative procedures are reversible and performed under the direct supervision of a dentist. 13 hours Laboratory.
- 64 CLINICAL PRACTICE I 10 UNITS**  
**Prerequisites: DT 61, 62 and 63.**  
 Clinical training, predominately in the field of restorative dentistry, under the direct supervision of a dentist. 17 hours Laboratory.
- 65 CLINICAL PRACTICE II 8 UNITS**  
**Prerequisite: Clinical Practice I.**  
 Clinic training in the field of restorative, prosthodontic, periodontic, pedodontic, endodontics and oral surgery. All procedures are reversible and under the direct supervision of a dentist. 13 hours Laboratory.
- 66 ADVANCED CLINICAL TRAINING 8 UNITS**  
**Prerequisite: DT 65.**  
 Clinical training with emphasis on general practice and quadrant restorative dentistry, under direct supervision of a dentist. 13 hours Laboratory.
- 99 INDIVIDUAL STUDIES 1-4 UNITS**  
**Prerequisite: Approval of Division Chairman and Professor.**  
 The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.

## Developmental Program

The Developmental Program attempts to provide the basic background necessary for success in college. Reading, notetaking and test-taking skills are emphasized. Students are advised about possible careers and graduation requirements. Field trips serve as a liaison between classroom experiences and the real world. Courses in the program include History 15, Science X, Reading Y, Math 2X, Speech 2, Composition I. (See individual catalog descriptions.) Interested students should contact the college before the beginning of the fall or spring semesters.

(See page 41 for Program explanation and course offerings.)

**Drafting Technology**

- |           |  |                |
|-----------|--|----------------|
| <b>11</b> | <b>BLUEPRINT INTERPRETATION &amp; BASIC DRAFTING</b><br><b>Prerequisite: None.</b><br>A beginning course in the basic elements involved with blueprint interpretation and drafting. The course is designed to make the individual very proficient in the reading and interpretation of blueprints and also have a broad general knowledge of drafting and sketching practices as related to mechanical and architectural requirements. Two lectures, 6 hours laboratory. | <b>4 UNITS</b> |
| <b>12</b> | <b>TECHNICAL GRAPHICS I</b><br><b>Prerequisite: None.</b><br>Emphasis on orthographic and axonometric projection, geometric forms, graphs, basic dimensioning and elements of descriptive geometry. Two lectures, 4 hours laboratory.  | <b>3 UNITS</b> |
| <b>20</b> | <b>TECHNICAL GRAPHICS II</b><br><b>Prerequisite: DT 12.</b><br>Study of auxiliary and oblique surfaces, intersections, detailing standards, fasteners, materials and dimensioning. Elements of descriptive geometry are stressed. Two lectures, 6 hours laboratory   | <b>3 UNITS</b> |
| <b>24</b> | <b>SPATIAL RELATIONSHIPS</b><br><b>Prerequisite: DT 12.</b><br>Solutions of points, lines and planes, single-curved, double-curved and warped surfaces. Emphasis upon mechanical, civil and mining engineering applications. Two lectures, 4 hours laboratory  | <b>3 UNITS</b> |
| <b>31</b> | <b>ELECTRONICS DRAFTING</b><br><b>Prerequisite: None.</b><br>Introduction to the field of electronics drafting, electronics components, their functions and symbols will be discussed. Instruction stresses schematics, logic diagrams, printed circuit layout and master art work taping. 2 hours Lecture, 4 hours Laboratory.  | <b>3 UNITS</b> |
| <b>32</b> | <b>ELECTRO-MECHANICAL DESIGN</b><br><b>Prerequisite: DT 12 or concurrent with</b><br>Concentration on the developmental skill in mechanical drafting as it applies to electricity and electronics. Practical packaging problems related to the electronics industry will be solved. Includes block diagrams, wiring diagrams and cable drawings. 2 hours Lecture, 4 hours Laboratory   | <b>3 UNITS</b> |
| <b>36</b> | <b>DRAFTING FOR MANUFACTURING</b><br><b>Prerequisite: DT 12 and GT 1.</b><br>A study of fabrication procedures, machine elements, and the influence of manufacturing on design. Development of skills in precision dimensioning and the delineation of complex detail and assembly drawings. Two lectures, 6 hours laboratory  | <b>4 UNITS</b> |
| <b>46</b> | <b>CONSTRUCTION DRAFTING</b><br><b>Prerequisite: DT 12 and GT 1.</b><br>Principles and applications of architectural and structural details as they apply to the residential and structural building industry. Two lectures, 6 hours laboratory  | <b>4 UNITS</b> |

**49 TOPOGRAPHICAL DESIGN AND DRAFTING 4 UNITS**  
**Prerequisites:** DT 1<sup>st</sup> and GT 2.  
 Topographical mapping, highway design and subdivision design are correlated with basic surveying from a design standpoint. Land parcels, profiling, contouring, sectioning, area calculations, horizontal curve analysis and vertical curve analysis are emphasized with actual in-the-field use of surveying equipment. Two lectures, 6 hours laboratory

**50 TOOL DESIGN 4 UNITS**  
**Prerequisite:** DT 24 and GT 2.  
 An introduction to the philosophy of tooling as it is used in the economical manufacturing of industrial products. A study is made of standardized tooling components and materials through the use of manufacturer's catalogs. An introduction to the fields of elementary jigs and fixture design, gage design and an introduction to basic punch and die design. Presents the fundamentals in these specialized design areas. Elements of descriptive geometry, technical math, and material and processes of industry are used in solving design problems. Two lecture - 6 hours laboratory

## Drama

**1 ACTING 3 UNITS**  
**Prerequisite:** None.  
 Introduction to theories of dramatic art and practice in acting. Lecture 3 hours

**2 ACTING 3 UNITS**  
**Prerequisite:** None.  
 Introduction to development of characterization in all types of dramatic literature and practice in acting. Lecture 3 hours

**3 INTRODUCTION TO THEATER 3 UNITS**  
**Prerequisite:** None.  
 A study of the history and tradition of western theater with analysis and discussion of representative drama from classical to contemporary theater. Lecture 3 hours

**4 PRINCIPLES AND TECHNIQUES OF PLAY PRODUCTION 3 UNITS**  
**Prerequisite:** None  
 Introduction to the theory and practice of directing, set design, costuming, stage lighting, make-up and production organization. 3 hours Lecture

**5 THEATRE DANCE 1 UNITS**  
**Prerequisite:** None  
 Study and practice in stage movement and choreography for theatrical productions. Designed for students in Musical Theatre productions. Meets one day a week for three hours. (Not intended for transfer credit.)

**10 THEATER WORKSHOP 1-3 UNITS**  
**Prerequisite:** Permission of Instructor.  
 Actual participation in a college dramatic production either in an acting or a production role. No student will be awarded more than FOUR such credits

## Economics

**1 PRINCIPLES OF ECONOMICS 3 UNITS**  
**Prerequisite:** None.  
 This course is a macro-economic presentation of the fundamental

characteristics of American capitalism and includes the areas of economic analysis, economic theories, and practical application of theory to current economic problems.

## **PRINCIPLES OF ECONOMICS**

**3 UNITS**

**Prerequisite:** Economics 1.

This course is a micro-economic presentation of price theory for product market models, agricultural economics, monopolistic competition, distribution of income, labor economics and problems of poverty and insecurity. The public sector and taxation, the international economy and gold and the current balance of payment problems are also presented.

## **INDIVIDUAL STUDIES**

**1-4 UNITS**

**Prerequisite:** Approval of the department head and the instructor.

Solving a problem or completing a project under the direction of a faculty member is required. This course may be repeated for credit.

# **Electronics Technology**

## **ELECTRONICS FOUNDATIONS FOR NON-ELECTRONICS MAJORS**

**3 UNITS**

**Prerequisite:** Concurrent enrollment in Tech Math or equivalent.

A general overview of basic electronic principles. This course will cover the general principles of DC and AC circuits. Impedence, resonance and power will be discussed without going into deep mathematical derivations. Various amplifiers, transistors, diodes and bridge circuits will also be introduced to give the student a general concept of the field of electronics. 3 hours Lecture.

## **INTRODUCTION TO DC CIRCUITS**

**3 UNITS**

**Prerequisite:** ET 10 or equivalent (ET 10 may be taken concurrently.)

The analysis of direct current resistive circuits, emphasizing Ohm's Law, Kirchoff's laws, Thevenin's, Notron's and superposition theorems. 2 hours Lecture; 3 hours Laboratory.

## **INTRODUCTION TO AC CIRCUITS**

**4 UNITS**

**Prerequisite:** ET 2a (ET 2a may be taken concurrently).

An introduction to alternating current passive circuits, and the application of trigonometry and vectors to circuit solutions. 3 hours Lecture; 3 hours Laboratory.

## **MATHEMATICS FOR ELECTRONICS**

**3 UNITS**

**Prerequisite:** One year of high school algebra or permission of Professor.

A review of arithmetic and the study of algebraic principles necessary to analyze electronics circuitry and provide a firm background for advanced studies. Fractions, decimals, fundamental concepts of algebra, scientific notation, the slide rule, graphing, the trigonometric functions, linear equations and the solution of DC electric currents presented. 3 hours Lecture.

## **ADVANCED MATHEMATICS FOR ELECTRONICS**

**3 UNITS**

**Prerequisite:** ET 10 or equivalent.

Study of basic trigonometric relations applied to electronics with emphasis on network problems and analysis of alternating current circuits. 3 hours Lecture.

- 22 SEMICONDUCTORS AND TRANSISTORS 4 UNITS**  
**Prerequisite:** ET 1, ET 10.  
 A comprehensive study of semiconductor devices, stressing the ideal transistor approach. Study of semiconductor physics, the P-N junction diode, transistor configurations, bias arrangements, temperature effects and frequency response. Laboratory work, closely associated with lectures, is designed to illustrate the principles of semiconductors. 3 hours Lecture, 3 hours Laboratory.
- 25 ELECTRONIC CIRCUITS AND SYSTEMS 5 UNITS**  
**Prerequisite:** ET 10, concurrent enrollment in ET 20 or equivalent.  
 Study of rectifier circuits and filters, audio, video and R.F. amplifiers. Use of theoretical concepts for practical application in these and oscillator, modulation and demodulation circuits. 3 hours Lecture, 6 hours Laboratory.
- 31 PULSE CIRCUITS 4 UNITS**  
**Prerequisite:** ET 22.  
 A study of waveforms, networks, passive pulse circuitry, transistor switching, non-linear waveshaping, gating and multi-vibrators. The laboratory work illustrates the principles covered in the lectures. 3 hours Lecture, 3 hours Laboratory.
- 33 DIGITAL CIRCUITS AND SYSTEMS 4 UNITS**  
**Prerequisite:** ET 31.  
 A study of logic and digital circuits common to computers and other areas of digital electronics. Emphasis on binary and octal numbers, codes, Boolean Algebra, logic circuits, counters, digital clocks, computing circuits and storage devices. Application of digital circuits and systems studied in the laboratory. 3 hours Lecture, 3 hours Laboratory.
- 40a RADIO COMMUNICATIONS 3 UNITS**  
**Prerequisite:** None.  
 Study and analysis of international and U.S. laws and FCC rules and regulations required to obtain a 3rd class FCC license. Typical questions will be studied and analyzed to insure clear understanding of the laws and their background. The student will be introduced to the basic technical knowledge required to further his career and obtain a 2nd class FCC license. 3 hours Lecture.
- 40b RADIO COMMUNICATIONS 3 UNITS**  
**Prerequisite:** Background in basic electronics or ET 40a.  
 Study and analysis of requirements to obtain a second class FCC radio telephone license. Theory and typical questions will be studied to prepare students for the 2nd class FCC radio-telephone examination. 3 hours Lecture.
- 43 MODERN ELECTRONIC DEVICES 4 UNITS**  
**Prerequisite:** ET 22.  
 A study of the characteristics of operational amplifiers, applications and analysis of practical op amp circuits, photoconductive and photovoltaic devices, unijunction transistors, silicon-controlled rectifiers and selected material covering other electronic devices. 3 hours Lecture, 3 hours Laboratory.
- 45 COMMUNICATION ELECTRONICS I 4 UNITS**  
**Prerequisite:** ET 20 and ET 22 (ET 20 may be taken concurrently).  
 Resonant circuits, coupled circuits, voltage and power amplifiers and oscillators will be studied and analyzed in this course. Stress on practical application and problem-solving. 3 hours Lecture, 3 hours Laboratory.



**Prerequisites:** ET 22, ET 25, and concurrent enrollment in ET 45.

Analysis and troubleshooting of aircraft receivers and transmitters. The student will have the opportunity to apply basic theoretical concepts to practical circuits and complex electronic systems. Emphasis is placed on schematic diagram reading and the use of industrial test equipment in systems analysis, troubleshooting and restoration of communication avionics equipment. 3 hours Lecture; 3 hours Laboratory.

**COMMUNICATION ELECTRONICS II**

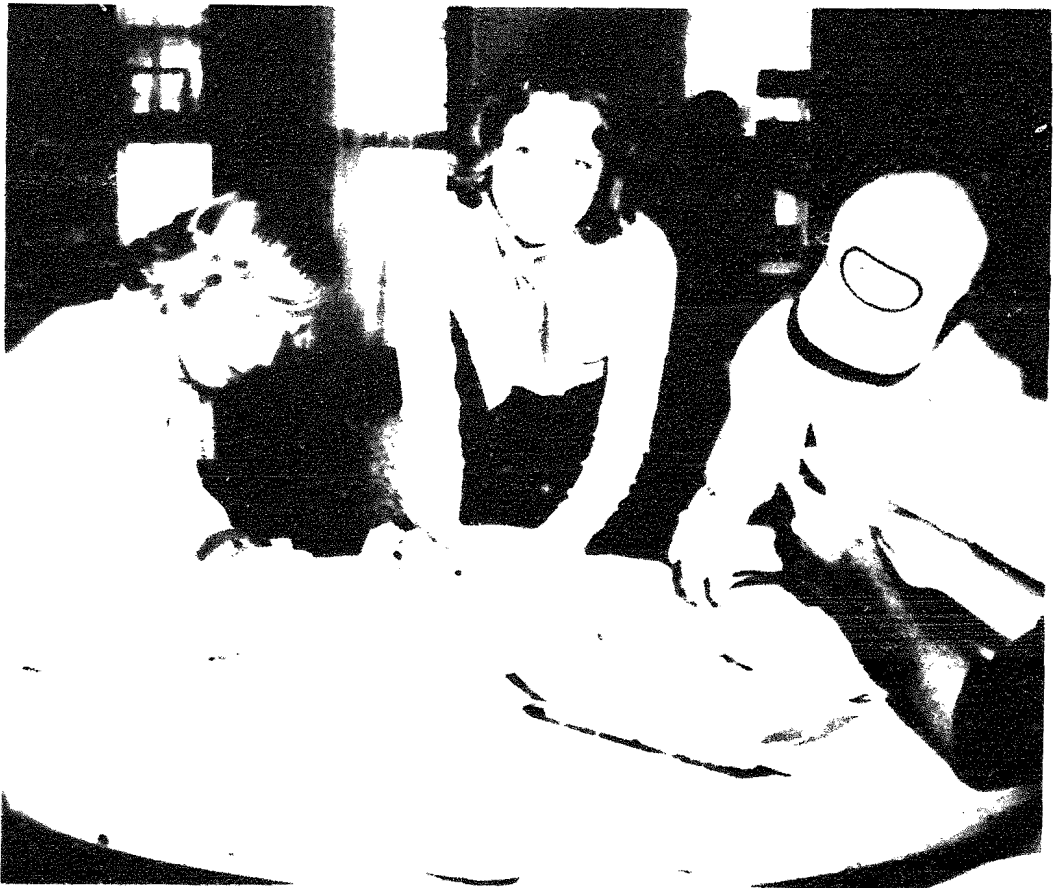
**Prerequisite:** ET 45.

A continuation of Communication Electronics I, including AM receivers, frequency modulation, transmission lines, antennas and propagation. In the laboratory, emphasis on the use of electronic test equipment in the analysis and adjustment of receivers. 3 hours Lecture; 3 hours Laboratory.

**MICROPROCESSORS**

**Prerequisites:** ET 22, ET 25 and ET 43

Application and identification of microprocessors. Emphasis on current testing and systems analysis. 3 hours Lecture; 3 hours Laboratory.



**STUDENT REGISTRATION** One-day registration for students has been in effect for fulltime students for the past year at the college as counselors and advisors work with the young people in the Student Union dining room. This group of students appear to be intent on the programs for the coming semester.

## English

- X**                      **ENGLISH FUNDAMENTALS**                      **3 UNITS**  
An intensive review of grammar, spelling, vocabulary and other fundamentals, with emphasis on writing paragraphs and short themes. Cannot be transferred to a four-year institution. Lecture 3 hours.
- 1X,2X,  
3X,4X**                      **CONVERSATIONAL ENGLISH**                      **3-3-3-3-UNITS**  
**Prerequisite: A desire to speak English clearly. Some proficiency in reading English is helpful.**  
The class provides text and explanation; the language laboratory offers individual practice, recording and tutoring. Class recitation is individual and in concert according to its level of conversational proficiency. The language laboratory provides tape recordings of the text material, records of selected portions of the text and tapecards which allow immediate recording, listening and correcting of pronunciation. English 1X and 2X are NOT creditable toward AA degree or transferable. English 3X and 4X ARE creditable toward AA degree but are not transferable.
- Y**                      **READING FUNDAMENTALS**                      **2 UNITS**  
**Prerequisites: None.**  
Development of optimum reading efficiency through units in college level vocabulary, comprehension and rate. Techniques include viewing timed tachomatic films with comprehension checks, reviewing word-attack skills, reference skills, paragraph organizational patterns and skimming-scanning techniques. Vocabulary checks and comprehension checks given weekly in addition to pre and post Nelson-Denny tests.
- 2Y**                      **INDIVIDUALIZED READING**                      **2 UNITS**  
A programmed second semester of reading for students falling below the 51 percentile on the Nelson-Denny reading test, particularly bilingual or foreign students. Emphasis will be placed on growth of college vocabulary, reading rate above 300 wpm and advanced comprehension skills needed for college textbooks. Emphasis will be placed on individualized self-study in the LRC, in addition to reading lab work. English TY-TA designates a reading course for teacher aides, with emphasis of methods as well as content.
- Z**                      **BASIC COMMUNICATIONS**                      **3 UNITS**  
An introduction to verbal and non-verbal systems of communication: elementary speech, TV, radio, film, art, photography. Not transferrable to a four-year institution.
- 1**                      **COMPOSITION**                      **3 UNITS**  
**Prerequisite: Placement by Communications Division. The student may also be required to take Reading Y, based on placement scores.**  
The student writes approximately 5,000 words of expository prose, including the techniques of narration and description. Student is introduced to the methodology of writing documented papers.
- 2**                      **COMPOSITION**                      **3 UNITS**  
**Prerequisites: English 1 with a grade of C or better. The student may also be required to take English 6.**  
A continuation of English 1. The student will write 5,000 words, emphasizing argumentative and persuasive techniques, and will demonstrate knowledge of research techniques. Some emphasis will be placed on critical and evaluative reading.

- 3 ADVANCED COMPOSITION 3 UNITS**  
**Prerequisite:** English 2 or permission of instructor.  
 Critical and evaluative writing and analysis of various literary genre: drama, poetry, short story and the novel. Credit for English 4 will not be granted if the student has taken English 4.
- 4 INTRODUCTION TO LITERATURE 3 UNITS**  
**Prerequisite:** English 2 or permission of the instructor.  
 A study of literary genre: drama, poetry, fiction, criticism. Emphasis on writing about literature. Credit for English 4 will not be granted if the student has taken English 3.
- 5 ENGLISH FOR BILINGUAL AND FOREIGN STUDENTS 3 UNITS**  
**Prerequisite:** Permission of instructor.  
 An intensive study of grammar, vocabulary and principles of expository writing for students whose native language is not English.
- 6 CRITICAL EVALUATIVE READING 2 UNITS**  
**Prerequisites:** 40th percentile on the placement test.  
 Exercises in reading as an analytical, interpretive and evaluative process requiring the reader to make rational judgments about both the content and style of writing based upon valid and appropriate criteria. The emphasis of the course is upon non-fiction, magazines and newspapers wherein accurate word perception and skillful interpretation of language are important. Student recognition of satire, irony, propaganda devices and author's purpose is stressed as well as the formulation of accurate inferences, generalizations, assumptions and conclusions.
- 7 CREATIVE WRITING 3 UNITS**  
**Prerequisites:** English 1 and permission of instructor.  
 A three-hour lecture and workshop in creative writing with emphasis on composition of poetry, short story, essay and description.
- 8 WRITTEN COMMUNICATIONS AND REPORTS 3 UNITS**  
**Prerequisites:** Counselor placement; Airframe and Powerplant students only.  
 Development of the skills of effective written communication, with emphasis on the organization of factual materials. Special attention to the vocabulary used in the A & P program.
- 9 WRITTEN COMMUNICATIONS AND REPORTS 3 UNITS**  
**(Criminal Justice Students Only)**  
**Prerequisites:** 5 units of English 1 and Reading Y or English 1 and 2. One year of practice in the organization and mechanics of written communications and one year of courses in Criminal Justice.  
 Concentrated practice in the form of police reports, including vocabulary study and exact observation of cases.
- 10 WRITTEN COMMUNICATIONS 3 UNITS**  
**(Nursing Students only)**  
**Prerequisite:** None.  
 Development of optimum reading efficiency in the areas required by Associate Degree Nursing students. Intensive study of roots and vocabulary used in the health technologies. The development of study skills will be adapted to particular courses in the ADN program.

- 11 GRAMMAR, USAGE AND PUNCTUATION 3 UNITS**  
A general review of modern English punctuation, grammatical structure, diction and modern American English usage. Lecture 3 hours.
- 12 CHILDREN'S LITERATURE 3 UNITS**  
**Prerequisite: None.**  
A survey of the most important works in Children's Literature.
- 15a-b THE STUDY OF ENGLISH WORDS 3-3 UNITS**  
Designed to assist the student to increase his command of modern English. Emphasis in 15a is on English words with Latin origins, and 15b the emphasis is on English words with Greek origins. 15a is not a prerequisite for 15b.
- 20 BRITISH LITERATURE 3 UNITS**  
**Prerequisite: Six units of freshman English or permission of instructor.**  
The student will read major works in English literature, examine the literary genres and use basic critical skills to evaluate literature.
- 21 BRITISH LITERATURE 3 UNITS**  
**Prerequisite: Six units of freshman English or permission of instructor.**  
The student will read major works in English literature, examine the literary genres and use basic critical skills to evaluate literature. Different works of literature are used in English 20 and 21. English 20 is not a prerequisite for English 21.
- 22 INTRODUCTION TO SHAKESPEARE 3 UNITS**  
**Prerequisite: Six units of freshman English.**  
An introduction to the major comedies, histories and tragedies of Shakespeare.
- 24 AMERICAN LITERATURE 3 UNITS**  
**Prerequisite: Six units of freshman English or instructor's permission.**  
A critical study of selected prose and poetry in the United States from the Colonial Period to 1860.
- 25 AMERICAN LITERATURE 3 UNITS**  
**Prerequisite: Six units of freshman English or instructor's permission.**  
A critical study of selected prose and poetry in the United States from 1860 to the present. English 24 is not a prerequisite to English 25.
- 26 WORLD LITERATURE 3 UNITS**  
**Prerequisite: Six units of freshman English or permission of instructor.**  
A study of some of the master works of literature through the Renaissance, including selections by Homer, the Greek tragic writers, Virgil, Dante, Rabelais, Cervantes, Shakespeare.
- 27 WORLD LITERATURE 3 UNITS**  
**Prerequisite: Six units 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, Mann. English 26 is not a prerequisite to English 27.
- 99 INDIVIDUAL STUDIES 1-4 UNITS**  
**Prerequisite: Approval of Division Chairman and instructor.**  
The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.

## Environmental Studies

- 1 GENERAL ENVIRONMENTAL STUDIES 3 UNITS**  
**Prerequisite: None.**  
A general study of man's impact upon the environment, its pollution problems and possible solutions related to population and basic ecological principles, providing a heightened awareness of man's interdependence with nature and an informed, balanced understanding of the current trends of environment degradation.
- 10 WILDERNESS LIVING 3 UNITS**  
**Prerequisite: Permission of Instructor.**  
A study of man's relation to the wilderness through direct experience and through readings in and discussion of related works of Thoreau, Muir, Leopold and others. Students will learn how to use backpacking equipment and how to live in harmony with a wilderness environment by going on three backpacking trips. Students must furnish their own equipment.

## Fire Science Technology

- 1 INTRODUCTION TO FIRE SCIENCE 3 UNITS**  
**Prerequisite: None.**  
A course designed to study the historical and scientific background of the Fire Protection field. Its development in American History will be studied along with its expanding future role. Governmental, industrial and private fire protection organizations will be examined. Modern methods in fire prevention and protection will be explored with students being introduced to the employment and promotional opportunities presently available in the Fire Protection Field. 3 hours Lecture; 2 hours Laboratory.
- 6 FUNDAMENTALS OF FIRE PREVENTION 3 UNITS**  
**Prerequisite: None.**  
A course designed to survey the basic principles of Fire Prevention with special emphasis being placed on the interpretation and enforcement of fire regulations. Hazards dealing with ordinary and special occupancies will be studied and supplemented with special problems and field trips. 3 hours Lecture.
- 10 FIRE OPERATIONS I 3 UNITS**  
**Prerequisite: None.**  
A course developed to introduce to the student those operations and individual skills involved in the extinguishment of fire. Different areas of fire operations will be studied along with an actual hands-on approach to the use of different types of fire equipment. 2 hours Lecture; 2 hours Laboratory.
- 11 FIRE OPERATIONS II 3 UNITS**  
**Prerequisite: Fire Operations I.**  
A continuation of FIRE OPERATIONS I with additional emphasis placed on community fire defense systems, use of ropes, hoses, ladders and breathing apparatus in fire service. Problems in fire extinguishment, ventilation, salvage and overhaul will be reviewed utilizing classroom and field exercises. 2 hours Lecture; 2 hours Laboratory.

- 12 FIRE SERVICE HYDRAULICS-FIRE OPERATIONS III 3 UNITS**  
**Prerequisite:** FST 10 (Fire Operations I) and FST 11 (Fire Operations II)  
 Included in this course are a review of basic math, hydraulic laws and formulas as applied to the fire service; application of formulas as applied to the fire service, application of formulas and mental calculations to hydraulic problems, water supply problems and underwriters requirements and pumps. 2 hours Lecture; 2 hours Laboratory.
- 13 INTRODUCTION TO FIRE SUPPRESSION 3 UNITS**  
**Prerequisite:** None  
 Course stresses characteristics and behavior of fire, fire-hazard properties of ordinary materials, extinguishing agents, fire-suppression organization and equipment, basic fire-fighting tactics and public relations as affected by fire suppression. 2 hours Lecture, 2 hours Laboratory.
- 15 HAZARDOUS MATERIALS I 3 UNITS**  
**Prerequisite:** None.  
 A review of the fundamentals of chemistry used in fire service, types of chemicals and processes, laws at Federal, State and local levels pertaining to use, storage and transportation of chemicals. 2 hours Lecture; 2 hours Laboratory.
- 16 HAZARDOUS MATERIALS II 3 UNITS**  
**Prerequisite:** FST15.  
 This is the second semester of the review of fundamentals of chemistry used in fire science. The topics covered include hazards of radio-actives; precautions to observe in fighting fires involving hazardous materials and laboratory demonstrations in incompatibles. 2 hours Lecture; 2 hours Laboratory.
- 20 FIRE APPARATUS AND EQUIPMENT 3 UNITS**  
**Prerequisite:** FST 1, FST 6,  
 A course designed to instruct students in the selection, care, construction, operation and maintenance of fire department equipment. The basic principles of equipment, trouble-shooting and testing will be investigated. 2 hours Lecture; 2 hours Laboratory.
- 22 RESCUES PRACTICES 3 UNITS**  
 Included in this course are life-saving practices pertaining to the fire company, training for rescuator squads, rescue equipment; the Fire Department's role in Civil Defense and other disaster acts. Chemicals and diseases that affect breathing and breathing apparatus. 2 hours Lecture; 2 hours Laboratory.
- 24 FIRE FIGHTING TACTICS AND STRATEGY 3 UNITS**  
**Prerequisite:** FST 13.  
 This is a course in the art of using manpower, equipment and apparatus on the fire ground. Included are practical methods of how to attack, control and extinguish structural, oil and other types of fires. The course will include field exercises. 2 hours Lecture; 2 hours Laboratory.
- 26 FIRE INVESTIGATION 3 UNITS**  
**Prerequisite:** Current employment with a fire department or permission of the instructor.  
 The student will be introduced to fire-cause determination (accidental, suspicious, incendiary). Arson and incendiarism will be presented with related procedures for handling each situation. 2 hours Lecture, 2 hours Laboratory.

## French

1a, 1b

### ELEMENTARY FRENCH

4-4 UNITS

**Prerequisite:** 1a is a prerequisite for 1b.

A course for beginning students with stress on conversation, comprehension of the spoken language, pronunciation, grammar, reading skills and composition.

## General Technology

1

### TECHNICAL MATHEMATICS I

3 UNITS

**Prerequisite:** One year of high school algebra and one year of Plane Geometry or permission of Professor.

A review of arithmetic and the study of algebraic principles, from an applied point of view necessary for the student to function in a technical employment situation and provide a firm background for advanced studies. Fractions, decimals, fundamental concepts of algebra, scientific notation, the slide rule, graphing and linear equations will be presented. 3 hours Lecture.

2

### TECHNICAL MATHEMATICS II

3 UNITS

**Prerequisite:** Tech Math I or Equivalent.

A continuation of Technical Mathematics I with an introduction to basic trigonometry. Practical applications to industrial problems will be stressed.

5

### MANUFACTURING MATERIALS AND PROCESSES I

3 UNITS

**Prerequisite:** None.

An understanding of present-day manufacturing processes is of extreme importance to students in Design Drafting Technology. This course is designed to provide a background of knowledge covering the various manufacturing methods employed in the hot and cold working of metals and non-metals, with the emphasis placed on their relationship to drafting and design. 3 hours Lecture.

6

### MANUFACTURING MATERIALS AND PROCESSES II

3 UNITS

**Prerequisite:** GT 5.

This course is designed to provide a background of knowledge covering the various types of machining processes and automated manufacturing techniques used in industry. The emphasis will be placed on the interrelationship of these processes with design and drafting. 3 hours Lecture.

## Geography

1

### PHYSICAL GEOGRAPHY

3 UNITS

**Prerequisite:** None.

An introduction to the various features of the earth's physical environment in which man lives, consisting of a study that includes the origin and development of landforms, the composition of the earth's crust, weather, climate, vegetation, soils and the mineral resources used by man.

2

### CULTURAL GEOGRAPHY

3 UNITS

**Prerequisite:** None.

A study of the culture regions of the world surveying the important world geographical characteristics, culture and problems of the world's major regions.

- 4

**POLITICAL GEOGRAPHY**  
**Prerequisite: None.**  
 Political Geography will consist of a study of political phenomena (nation, country, state, empire, colony, enclave, exclave . . .) from place to place in conjunction with the variations created by physical features (mountains, rivers, oceans, shore line configurations, passes, valleys, swamps . . .) of the earth's landscape. Included in these phenomena will be the political forces and ideas that generate these forces.

3 UNITS
- 5

**ECONOMIC GEOGRAPHY**  
**Prerequisite: None.**  
 A study of the world's economies: subsistence economic activities, commercial gathering of animals and plants, commercial bioculture, mining, manufacturing, transportation and trade, and tertiary economic activities. This course centers around these basic economies and their relationship to the natural resources of the area involved and the relationship of the physical features — climate, soil, vegetation, and topography — to carrying out these activities.

3 UNITS
- 11

**GEOGRAPHY OF MEXICO AND CENTRAL AMERICA**  
**Prerequisite: None.**  
 An introductory study of the culture, environment and economic activities of Mexico, the Central American Republics and the Caribbean Islands.

3 UNITS
- 12

**GEOGRAPHY OF SOUTH AMERICA**  
**Prerequisite: None.**  
 An introduction to the culture and economic activities of the peoples and nations of South America; with emphasis on the physical patterns, urban growth, industry, agriculture and mineral resources.

3 UNITS
- 99

**INDIVIDUAL STUDIES**  
**Prerequisite: Approval of the Division Chairman and Professor.**  
 The student with demonstrated academic ability will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.

1-4 UNITS

## Geology

- \$10 LAB FEE

1

**INTRODUCTION TO GEOLOGY**  
**Prerequisite: None.**  
 Current theories on earth processes, the applications of these processes to understanding man's physical environment and the problems that remain to be solved. Lecture 3 hours, Laboratory 3 hours.

4 UNITS
- 51

**\*PHYSICAL GEOLOGY**  
**Prerequisite: None.**  
 Principles of physical geology for students who plan to major in geology, hydrology, engineering and agriculture. Credit for Geology 51 will not be granted if the student has taken Geology 1. Lecture 3 hours, Laboratory 3 hours.

4 UNITS
- 99

**INDIVIDUAL STUDIES**  
**Prerequisites: Approval of Division Chairman and Professor.**  
 The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.

1-4 UNITS



## German

<b>1a-1b</b>	<b>ELEMENTARY GERMAN</b>	<b>3 UNITS</b>
Grammar, reading skills, comprehension of the spoken language, proper pronunciation, composition, and conversation. 3 hours Lecture.		

## Group Dynamics

<b>1</b>	<b>GROUP DYNAMICS</b>	<b>1 UNIT</b>
<b>Prerequisite: None.</b>		
Development of self-understanding through group interaction and testing under the direction of a member of the counseling staff.		

## Health

<b>42</b>	<b>PERSONAL HEALTH</b>	<b>3 UNITS</b>
<b>Prerequisite: None.</b>		
A survey of body functions in health and disease; common diseases and their early symptoms, consideration of personal, physical and mental health; effect of exercise and fatigue, selection of proper foods, marriage and parenthood.		
<b>70</b>	<b>FIRST AID AND SAFETY</b>	<b>3 UNITS</b>
<b>Prerequisite: None.</b>		
The standard and advanced Red Cross course in first aid with emphasis on practical application of theory in bandaging, litter-bearing, artificial respiration and other types of emergency care in case of sudden accident or illness.		
<b>71</b>	<b>SCHOOL AND COMMUNITY HEALTH</b>	<b>3 UNITS</b>
<b>Prerequisite: Sophomore standing or permission of professor.</b>		
A study of the basic plan of the school health program: health services, health instruction and healthful school environment. Analysis of the role of the teacher in relation to the school health program and the community health program. Taught spring semester only.		

## Health Technologies

<b>10</b>	<b>DRUGS, DOSAGES AND CALCULATIONS</b>	<b>2 UNITS</b>
<b>Prerequisite: HT 56.</b>		
Covers the mathematics and the systems of measurement used in ordering, preparing and administering drugs and medicines. The student may only obtain credit for this course by successfully passing the final examination.		
<b>50</b>	<b>INTRODUCTION TO HEALTH CARE</b>	<b>3 UNITS</b>
<b>Prerequisite: None.</b>		
This introductory course provides the student opportunities to acquire knowledge of health science fundamentals and explore health care delivery concepts and applications common to all health workers. The course introduces health as an individual, community and world service and relates these concepts to health careers and delivery. Required by allied health programs through SARAHHELP. 3 hours Lecture; field trips.		

## Associate Degree Nurse

<b>56</b>	<b>NURSING I</b>	<b>10 UNITS</b>
<b>Prerequisite: Admission to the ADN program.</b>		
An introduction to comprehensive patient-centered nursing utilizing a conceptual framework of basic human needs, major health problems and the nursing process. The knowledge and skills necessary for carrying out nursing care measures and the apteptic techniques are presented through lecture demonstration and supervised clinical practice. Basic skills in psychiatric nursing are focused on, with emphasis on communication skills. Legal and ethical aspects of nursing practice studied. Lecture 6 hours, Laboratory 12 clock hours.		

<b>57</b>	<b>NURSING II</b>	<b>10 UNITS</b>
	<b>Prerequisite:</b> HT 56, ZO 20A.	
	This course is built upon the foundations presented in Nursing I. Emphasis is placed on identifying the needs of the physically and mentally ill adult or child and planning for patient care. The beginning theory and clinical experience in Maternal Child Health is incorporated. The student is assigned total patient care of a few selected patients under the direction of the clinical instructor. Pharmacology and diet therapy are integrated throughout the course. Lecture 6 hours, Laboratory 12 hours.	

## Completion of the Practical Program

<b>58</b>	<b>NURSING III</b>	<b>8 UNITS</b>
	<b>Prerequisite:</b> HT 57, HT 10.	
	A study of physical and emotional changes in mothers during normal maternity cycle, normal growth and development of child from birth to adolescence. Medical management principles and techniques of nursing care are presented pertaining to the normal maternity cycle, care of the newborn and care of the child during common illnesses in relation to growth and developmental factors. Conferences integrate understandings to further the family-centered perspective; supervise clinical practice in caring for mothers, newborn and children; participation in clinics, nursery-school and other child-care agencies. The advanced psychiatric nursing theory with clinical experience in the field is integrated into the course. Lecture 4 hours, Laboratory 12 hours.	
<b>59</b>	<b>NURSING IV</b>	<b>8 UNITS</b>
	<b>Prerequisite:</b> HT 58.	
	Advanced Medical-Surgical nursing skills are presented along with patient evaluation, problem solving and planning for patient care. Supervised clinical practice in the doctors offices, hospitals, homes and outpatient clinics. Community health is integrated. Basic supervisory skills and techniques are taught. Lecture, discussion, demonstration and audio-tutorial aids are used. Lecture 4 hours, Laboratory 12 hours.	
<b>60</b>	<b>TRENDS AND LEADERSHIP</b>	<b>1-2 UNITS</b>
	<b>Prerequisite:</b> HT 56, HT 57, HT 58.	
	A seminar discussion course in which the role of the nurse and her relationship with other health-providers is emphasized. Legal and ethical considerations, cultural backgrounds, nursing organization, historical and current trends are discussed.	
<b>74</b>	<b>EMERGENCY MEDICAL TRAINING</b>	<b>6 UNITS</b>
	<b>Prerequisite:</b> None.	
	This is a required core course for consortium programs in the following: operating room technology, ophthalmic dispensing technology, radiologic technology, respiratory therapy. The Basic Emergency Medical Technician course covers all techniques of emergency medical care currently considered as responsibilities of the Emergency Medical Technician. Skills are developed in recognizing symptoms of illness and injury and proper procedures of emergency care. Includes study of anatomy, physiology, triage, assessment and stabilization of patients in shock. The Basic EMT course is offered through the community college system.	

## History

- 1 HISTORY OF THE UNITED STATES TO 1865 3 UNITS**  
**Prerequisite: None.**  
A study of the development of American characteristics and nationality from the founding of the New World to the preservation of the Union in 1865, emphasizing the factors and forces which produced the Revolution, Constitution, westward expansion, sectionalism and the Civil War.
- 2 HISTORY OF THE UNITED STATES SINCE 1865 3 UNITS**  
**Prerequisite: None.**  
A study of the social, economic and political forces that moved the United States through the periods of Reconstruction and industrialization, and into the position of a world power, focusing on both domestic and foreign affairs in the country's last century of development.
- 4 SURVEY OF WESTERN CIVILIZATION FROM ANCIENT TIMES TO THE REFORMATION 3 UNITS**  
**Prerequisite: None.**  
Discussion of the major historical trends from primitive man and the emergence of ancient civilization through the Protestant Reformation including such topics as the Aegean, Grecian, Roman, Medieval and Renaissance civilizations with special emphasis upon the social, economic, political and intellectual developments which characterize each historical era. Stress on the relationships of these developments to subsequent history.
- 5 MAJOR WORLD DEVELOPMENTS SINCE 1850 3 UNITS**  
**Prerequisite: None.**  
A study of the major developments taking place in the world arena since the Industrial Revolution of the mid-19th century including events within Europe, Asia, Russia, China and the Middle East which have helped shape and are shaping our present-day world.
- 6 INTRODUCTION TO THE HISTORY OF THE SOVIET UNION 3 UNITS**  
**Prerequisite: None.**  
A survey of Russian history since 1917, emphasizing revolutionary movements leading to the Bolshevik triumph, the early Soviet governments, the Stalin Era, Russia in WW II and the USSR in the contemporary world.
- 15 SURVEY OF THE AMERICAN WEST 3 UNITS**  
**Prerequisite: None.**  
A survey of the methods of penetration and the patterns of westward expansion and settlement of the Great American West including the nature of exploitation, the contribution of minority groups and the significance of the frontier in American history, with emphasis on the Southwest.
- 16 AFRO-AMERICAN HISTORY 3 UNITS**  
**Prerequisite: None.**  
A survey of Afro-American history since the first century with emphasis on the rise and fall of slavery and the Afro-American contributions to the United States.
- 17 AFRO-AMERICAN HISTORY II 3 UNITS**  
**Prerequisite: None.**  
A survey of Afro-American History since the Civil War, highlighting the significant historical events and major forces that shaped the history of Black Americans.
- 99 INDIVIDUAL STUDIES 1-4 UNITS**  
**Prerequisite: Approval of Division Chairman and professor.**  
The student with demonstrated academic ability will solve a problem under the

direction of a faculty member with the approval of the Division Chairman.

## Honors Program

See Discovery and Challenge on page 41 for details.

## Humanities

- 1 HUMANITIES IN CONTEMPORARY LIFE 3 or 4 UNITS**  
**Prerequisite: Reading Y or equivalent.**  
A study of contemporary thought, literature and art as they occur in mass media: journalism, television and motion pictures. Four units of credit will be granted for students electing to submit critiques of required lectures, plays, motion pictures, concerts and art exhibits.
- 5 APPRECIATION OF MEXICO (See Spanish 55 for details).**
- 10 INTRODUCTION TO FILM 3 UNITS**  
**Prerequisite: none**  
A study of film as an art form and as a medium for the expression of ideas and an introduction to the principles of film criticism.
- 15 MEXICAN-AMERICAN CULTURE OF THE SOUTHWEST 3 UNITS**  
**Prerequisite: None.**  
A survey of Mexican-American culture in the Southwest emphasizing the significant elements, events, customs and historical figures that have contributed to the formation of the culture. Taught in English and Spanish.
- 50 HUMANITIES 4 UNITS**  
**Prerequisites: English 2 and sophomore standing.**  
A study of the development of art, literature and music in the western world from classical times to the late Middle Ages with particular emphasis on the development of concepts of freedom and justice. Lecture 3 hours, studio 2 hours.
- 51 HUMANITIES 4 UNITS**  
**Prerequisites: English 2 and sophomore standing.**  
A continuation of Humanities 50 to the contemporary period. May be taken independently of Humanities 50. Lecture 3 hours, studio 2 hours.
- 99 INDIVIDUAL STUDIES 1-4 UNITS**  
**Prerequisite: Approval of Division Chairman and Instructor.**  
The student with demonstrated academic ability will do independent research and reading and will present a paper or papers fulfilling agreed-upon objectives.

## Journalism

- 1 COMMUNICATIONS 3 UNITS**  
**Prerequisites: Eligibility for English 1, completion of English 1 with a C or better or permission of Professor.**  
An introduction to mass communications media with emphasis on defining and applying the basic concepts of gathering, writing and evaluating news for newspapers, magazines, radio, television, business publications and house

publications; studying the principles and problems of mass communications. Taught spring semester only.

- 2 BASIC REPORTING 3 UNITS**  
**Prerequisites:** Completion of Journalism 1 with a C or better or permission of professor.  
Practical experience in producing accurate, fair and condensed news coverage through actual reporting for *The Heliograph*. Intended for sophomore students.  
  
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- 3 INTERMEDIATE REPORTING 3 UNITS**  
**Prerequisites:** Completion of Journalism 2 with a C or better or permission of professor.  
Improvement and development of skills through specialized reporting, rewriting, headline writing, feature writing, copyreading, proofreading and independent study with emphasis on the student's prospects and aptitude toward journalism as a career. Intended primarily for sophomore students.
- 10 PUBLICATIONS WORKSHOP 1 UNIT**  
**Prerequisite:** Permission of professor.  
Participation in some phase of reporting, writing, photography, art, layout through work on College publications. Students in scheduled journalism classes may not enroll. No student shall be awarded more than FOUR such journalism units at Cochise College.

## Mathematics

- 1X FUNDAMENTAL MATHEMATICS 3 UNITS**  
**Prerequisite:** Indicated mathematics deficiency.  
Emphasizes basic arithmetic concepts and drill in skills and techniques of computation. Designed for students with low scores on mathematics placement tests. Includes number systems, number bases, fundamental operations with whole numbers, fractions and decimals, measurement, percentage, approximate numbers, areas, volume. Math IX-TA is the course designation for mathematics fundamentals for teacher aides which emphasizes methods of instruction as well as content. Credit toward Associate degree only. Lecture 3 hours.
- 2X ELEMENTARY ALGEBRA 3 UNITS**  
**Prerequisite:** Acceptable score in placement examination or grade of C or better in Math IX.  
Covers the content of a complete first-year high school algebra course for students who have not earned credit in elementary algebra. Includes fundamental operations on integers, powers and exponents, special products and factoring of polynomials, algebraic fractions, functions, graphs, equations, quadratic formula. Credit toward Associate degree only. Lecture 3 hours.
- 3X PLANE GEOMETRY 3 UNITS**  
**Prerequisite:** One year high school algebra or Math 2X.  
Covers the content of a complete high school plane geometry course for students who have not earned credit in plane geometry. Includes elementary logic, congruence, parallelograms, circles, inequalities, similar polygons, loci, constructions, area. Credit toward Associate degree only. Lecture 3 hours.

- 11 INTERMEDIATE ALGEBRA 3 UNITS**  
**Prerequisite:** One year of high school algebra and one year of high school geometry or Math 3X.  
 Includes real number system, polynomials, fractions, first and second degree equations, radicals, functions and graphs, simultaneous systems. This course may not be transferable for credit at the universities. One should check the catalog of the university he intends to attend. Lecture 3 hours.
- 12 BASIC CONCEPTS OF NUMBER 3 UNITS**  
**Prerequisite:** Two years of high school mathematics, not including general mathematics, or one year of college mathematics, not including Math 1X.  
 The nature of number and systems of enumeration, the logical structure of arithmetic, informal and formal geometry. Emphasis is on developing a basis for understanding the common processes of arithmetic and the metric and non-metric relations in geometry. Lecture 3 hours.
- 20 COLLEGE ALGEBRA 3 UNITS**  
**Prerequisites:** High school plane geometry or Math 3X together with one and one-half years of algebra in high school or Math 11 with a grade of C or better.  
 Includes sets, logic of algebra, inequalities, absolute values, functions and graphs, linear and quadratic functions, determinants, polynomial functions, inverse functions, permutations and combinations, binomial theorem, mathematical induction, exponential and logarithmic functions, and complex numbers. Lecture 3 hours.
- 24 PLANE TRIGONOMETRY 3 UNITS**  
**Prerequisite:** Math 20 or approval of the professor.  
 Includes trigonometric functions, identities, related angles, radian measure, graphs, functions of two angles, equations, logarithms, right and oblique triangles, inverse functions, complex numbers. Lecture 3 hours.
- 35 FINITE MATHEMATICS 3 UNITS**  
**Prerequisite:** College Algebra (Math 20) or permission of instructor.  
 A nonrigorous yet mathematically sound introduction to finite mathematics, the branch of mathematics **not** involving infinite sets, limits and continuity. Topics include logic, vectors and matrices, probability, statistics, linear programming and game theory. Examples are taken from business and the social sciences. 3 hours Lecture.
- 36 CALCULUS FOR BUSINESS 3 UNITS**  
**Prerequisite:** College Algebra (Math 20) or equivalent.  
 Elementary topics in analytic geometry, differential and integral calculus with business applications. 3 hours Lecture.
- 44 COLLEGE ALGEBRA AND TRIGONOMETRY 5 UNITS**  
**Prerequisite:** High school plane geometry or Math 3X, together with two years of high school algebra or Math 11.  
 Includes sets, logic or algebra, inequalities, absolute values, functions and graphs, circular functions, linear and quadratic functions, determinants, polynomial functions, inverse functions, permutations and combinations, binomial theorem, mathematical induction, exponential and logarithmic functions, applications of circular functions, complex numbers. Lecture 5 hours.
- 51 ANALYTICAL GEOMETRY WITH CALCULUS 5 UNITS**  
**Prerequisite:** Four years of high school mathematics with permission of the professor or Math 20 and Math 24 or Math 44.  
 Absolute value and inequality, relations, functions and graphs, limits and con-

<b>13(V) a, b</b>	<b>VOICE - INDIVIDUAL INSTRUCTION</b> <b>Prerequisite: Permission of the professor.</b> Student prepares recital literature for jury examination. Weekly lesson.	<b>1-1 UNITS</b>
<b>20(I)</b>	<b>ENSEMBLE</b> <b>Prerequisites: Audition and two years playing experience.</b> Study and performance of music appropriate to duets, trios, quartets or larger ensembles of mixed or like instruments. May be repeated for credit. Rehearsal 3 hours per week.	<b>1 UNIT</b>
<b>20(V)</b>	<b>ENSEMBLE</b> <b>Prerequisites: Audition and two years singing experience.</b> Study and performance of vocal literature appropriate to duets, trios or larger vocal ensembles. Rehearsal 3 hours per week.	<b>1 UNIT</b>
<b>30</b>	<b>KEYBOARD HARMONY</b> <b>Prerequisite: To be taken concurrently with Music 32.</b> Special work on ear training, keyboard harmonization and application of musical theory to the keyboard. Studio 2 hours.	<b>1 UNIT</b>
<b>32a-32b</b>	<b>MUSIC THEORY</b> <b>Prerequisite: 32a is a prerequisite for 32b.</b> A systematic study of the rules of music with emphasis on ear training and sight singing. Lecture 3 hours.	<b>3-3 UNITS</b>

### Philosophy

<b>11</b>	<b>INTRODUCTION TO PHILOSOPHY</b> <b>Prerequisites: English 2 and sophomore standing.</b> An introduction to philosophical methods and a study of the major concepts of western philosophy with emphasis on an examination of the nature of reality, meaning and right conduct. Lecture 3 hours.	<b>3 UNITS</b>
<b>13</b>	<b>ETHICS</b> <b>Prerequisite: English 1 or permission of Instructor.</b> An introduction to major ethical and moral problems with emphasis on contemporary questions of morality and ethics.	<b>3 UNITS</b>
<b>20</b>	<b>PHILOSOPHIES OF THE EAST</b> <b>Prerequisite: English 2 and sophomore standing.</b> An introduction to the thought of Hinduism, Buddhism, Taoism and Confucianism with emphasis on their roles in the modern world. Lecture 3 hours.	<b>3 UNITS</b>
<b>21</b>	<b>PHILOSOPHY OF RELIGION</b> <b>Prerequisite: English 2 and sophomore standing.</b> Introduction to the nature of religion, nature and existence of God and major religious tenets of western thought.	<b>3 UNITS</b>

### Physical Education

<b>10</b>	<b>BEGINNING COED GYMNASTICS</b> <b>Prerequisite: None.</b> Beginning and intermediate skills on all the basic pieces of gymnastics apparatus.	<b>1 UNIT</b>
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<b>11</b>	<b>INTERMEDIATE COED GYMNASTICS</b> <b>Prerequisite:</b> PE 10 or permission of professor. Further development of previously- acquired gymnastic skills on all pieces of gymnastics apparatus.	<b>1 UNIT</b>
<b>12</b>	<b>WEIGHT TRAINING/WRESTLING</b> <b>Prerequisite:</b> None. The basic skills and knowledge necessary in weight training and wrestling with opportunity for competitive intraclass wrestling. Taught fall semester only.	<b>1 UNIT</b>
<b>13</b>	<b>MODERN DANCE</b> <b>Prerequisite:</b> None. Individual and group physical exercises and opportunity for expression through modern dance interpretations. Taught spring semester only.	<b>1 UNIT</b>
<b>14</b>	<b>COED BADMINTON/VOLLEYBALL</b> <b>Prerequisite:</b> None. Badminton and volleyball with emphasis on the mastery of fundamentals.	<b>1 UNIT</b>
<b>15</b>	<b>BEGINNING COED BOWLING</b> <b>Prerequisite:</b> None. Development of beginning skills of bowling with emphasis on mastery of fundamentals.	<b>1 UNIT</b>
<b>16</b>	<b>INTERMEDIATE COED BOWLING</b> <b>Prerequisite:</b> PE 15 or permission of professor. Further development of previously acquired bowling skills.	<b>1 UNIT</b>
<b>17</b>	<b>BEGINNING COED TENNIS</b> <b>Prerequisite:</b> None. Introduction to the beginning skills of tennis with emphasis on mastery of fundamentals.	<b>1 UNIT</b>
<b>18</b>	<b>INTERMEDIATE COED TENNIS</b> <b>Prerequisite:</b> PE 17 or permission of professor. Further development of previously-acquired tennis skills including the basic strategy of competitive tennis.	<b>1 UNIT</b>
<b>19</b>	<b>BEGINNING COED GOLF</b> <b>Prerequisite:</b> None. Development of beginning skills of golf with emphasis on mastery of fundamentals	<b>1 UNIT</b>
<b>20</b>	<b>INTERMEDIATE COED GOLF</b> <b>Prerequisite:</b> PE 19 or permission of professor. Further development of previously-acquired golf skills, including chipping, putting, pitching and driving. Introduction of "special shots" and different forms of competition.	<b>1 UNIT</b>
<b>21</b>	<b>COED SQUARE AND SOCIAL DANCE</b> <b>Prerequisite:</b> None. Introduction to the various ballroom steps in social dancing with the opportunity to master traditional American square dances. Taught fall semester only.	<b>1 UNIT</b>



<b>22</b>	<b>COED ARCHERY</b> <b>Prerequisite: None.</b> Target archery and clout shooting with opportunity for improvement of existing skills.	<b>1 UNIT</b>
<b>23</b>	<b>BEGINNING HANDBALL/WEIGHT TRAINING</b> <b>Prerequisite: None.</b> Development of basic skills of handball through instruction, participation and intra-class competition, execution of basic weight training exercises.	<b>1 UNIT</b>
<b>24</b>	<b>BEGINNING SWIMMING</b> <b>Prerequisite: None.</b> For the non-swimmer, guidance through primary phases of learning to swim with the final objective of the course ability to swim 30 yards.	<b>1 UNIT</b>
<b>25</b>	<b>INTERMEDIATE COED SWIMMING</b> <b>Prerequisite: PE 24 or permission of professor.</b> Opportunity to improve on skills in the four fundamental strokes — crawl, breast, back and side — with final objective of the course the ability to swim continuously for five minutes on front, side and back.	<b>1 UNIT</b>
<b>26</b>	<b>ADVANCED COED SWIMMING AND WATER SPORTS</b> <b>Prerequisite: PE 25 or permission of professor.</b> Development of variations of the four fundamental strokes and other miscellaneous water skills. Introduction to water polo, synchronized swimming and other aquatic activities. Taught fall semester only.	<b>1 UNIT</b>
<b>27</b>	<b>COED LIFE SAVING</b> <b>Prerequisite: PE 26 or permission of professor.</b> Development to meet the requirements of the standard Red Cross course leading to certification in Senior Life Saving. Taught spring semester only.	<b>1 UNIT</b>
<b>28</b>	<b>COED ADAPTED PHYSICAL EDUCATION</b> <b>Prerequisite: Written statement from a licensed physician requiring a limited activities program.</b> A personalized program of physical education consistent with the recommendation of private physician.	<b>1 UNIT</b>
<b>29</b>	<b>TRAMPOLINING/BODY CONDITIONING (Men Only)</b> <b>Prerequisite: None.</b> Development of the basic and intermediate skills of trampolining and practice in several activities for body dynamics using a variety of pieces of equipment.	<b>1 UNIT</b>
<b>30</b>	<b>TRAMPOLINING/BODY DYNAMICS (Women Only)</b> <b>Prerequisite: None.</b> Development of the basic and intermediate skills of trampolining and practice in several activities for body dynamics, using a variety of pieces of equipment.	<b>1 UNIT</b>
<b>31</b>	<b>VARSITY SPORTS</b> <b>Prerequisite: Permission of professor.</b> Membership in class based on participation as members of a varsity collegiate team.	<b>1 UNIT</b>
<b>32</b>	<b>SONG AND CHEERLEADING (Fall Only)</b> <b>Prerequisite: Permission of professor.</b> Membership in class based on participation on the songleading or cheerleading	<b>1 UNIT</b>

squads, with emphasis on individual and group physical exercise stunts, and dances with demonstration of these skills at rallies and games. Taught fall semester only.

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|----|---|----------------|
| 33 | <b>HIKING</b>   | <b>1 UNIT</b>  |
|    | <b>Prerequisite:</b> None.  |                |
|    | The student will participate in the wilderness trail and off-trail hiking and will learn care of equipment, use of maps, care and protection of wilderness trails, use of emergency first aid and importance of physical conditioning.  |                |
| 34 | <b>COED BILLIARDS</b>   | <b>1 UNIT</b>  |
|    | <b>Prerequisite:</b> None.  |                |
|    | The student will be introduced to the skill of billiards with attention to rules, etiquette and proper playing techniques.  |                |
| 35 | <b>COED SCUBA DIVING</b>  | <b>1 UNIT</b>  |
|    | <b>Prerequisite:</b> Student should be able to swim.  |                |
|    | The student will be introduced to all aspects of scuba diving fundamentals and techniques with actual experience in the ocean. NAUI certification may be achieved upon successful completion of the course.   |                |
| 36 | <b>BEGINNING COED YOGA</b>  | <b>1 UNIT</b>  |
|    | <b>Prerequisite:</b> None.  |                |
|    | The student will be introduced to the beginning and intermediate postures of yoga, with a brief introduction to the advanced postures. Lecture and participation two hours per week.  |                |
| 37 | <b>BEGINNING COED JUDO</b>  | <b>1 UNIT</b>  |
|    | <b>Prerequisite:</b> None.  |                |
|    | The student will be introduced to the beginning and intermediate skills of judo, with a brief introduction to the advanced skills. Lecture and participation two hours per week.  |                |
| 38 | <b>TEAM ROPING</b>  | <b>1 UNIT</b>  |
|    | <b>Prerequisite:</b> Some basic riding experience. No former knowledge of roping is necessary.  |                |
|    | Provides opportunity for student to practice for pleasure as well as for later competition in rodeo activities. An opportunity to learn the sport correctly.  |                |
| 39 | <b>WESTERN HORSEMANSHIP</b>   | <b>1 UNIT</b>  |
|    | <b>Prerequisite:</b> None.  |                |
|    | Enables students who own or intend to buy a pleasure horse to handle and care for the animal in the Western tradition. Student learns to handle Western saddle, select appropriate equipment, to evaluate pleasure horse before purchase, to care for general well-being of animal. |                |
| 40 | <b>MEXICAN FOLK DANCE</b>   | <b>2 UNITS</b> |
|    | <b>Prerequisite:</b> Conversational proficiency in Spanish, permission of instructor.   |                |
|    | A course designed to give an introduction to the basic Mexican Folk Dances. The meaning, importance, theory, history, and general characteristics of Mexican Folklore Dances will be studied and learned. All students will learn to dance five main Mexican folk dances.           |                |
| 41 | <b>BEGINNING BASKETBALL</b>   | <b>1 UNITS</b> |
|    | <b>Prerequisite:</b> None.  |                |
|    | An introduction to the game of basketball. Rules, basic skills and fundamen-  |                |

tals of a popular sports activity.

- 43      BACKPACKING      1 UNIT**  
**Prerequisite:** PE 33 or permission of instructor.  
Practical backpacking and wilderness camping techniques, emphasis on preservation of wilderness areas, proper expedition behavior, selection and care of equipment. One group backpack, one individual backpack. Students must furnish their own equipment.
- 45      BEGINNING COED KARATE      1 UNIT**  
**Prerequisite:** None  
A beginning karate class for men and women. The basic data, etiquette, language and techniques for Korean-style karate.
- 46      INTERMEDIATE COED YOGA      1 UNIT**  
**Prerequisite:** Beginning Coed Yoga or permission of instructor.  
The student will practice beginning, intermediate and advanced postures of yoga, continuing where beginning Coed Yoga stops. 2 hours Lecture, demonstration and participation per week.
- 47      INTERMEDIATE COED JUDO      1 UNIT**  
**Prerequisite:** PE 37 or permission of instructor.  
The student will be introduced to the intermediate skills of Judo, with a brief introduction to the advanced skills. Lecture and participation two hours a week.
- 55      ORIENTATION TO PHYSICAL EDUCATION      3 UNITS**  
**Prerequisite:** None.  
An introduction to the nature and scope of physical education, its historical development, basic philosophy and objectives, changing concepts, scientific foundations and professional opportunities. Taught spring semester only.
- 171      ORIENTATION TO RECREATION      2 UNITS**  
**Prerequisite:** None.  
Analysis of the nature and scope of the field of recreation, its historical development, philosophy and objectives, changing concepts, scientific foundations and professional opportunities, recreation in American life, roles of various levels of government in recreation, relationships between physical education, health, camping and outdoor recreation. Taught fall semester only.
- 189      ELEMENTARY SCHOOL PHYSICAL EDUCATION      3 UNITS**  
**Prerequisite:** None.  
A study of the scope and values of physical education and movement education in the elementary school including the teaching designs for primary and intermediate grades pertaining to physical education as well as knowledge necessary to evaluate physical education programs. Course designed for prospective elementary education teachers, physical education majors and minors. Taught fall semester only.
- 190      SPORTS OFFICIATING      3 UNITS**  
**Prerequisite:** None.  
A lecture and laboratory course which will develop the art and skill of officiating several sports including basketball, football, baseball and volleyball. Completion of the course will qualify a person for trainee and/or probationary status with the Arizona Interscholastic Association. Taught fall semester only.

## Physics

1

### INTRODUCTION TO PHYSICS

4 UNITS

**Prerequisite:** None.

A survey course in the basic concepts of physics. Limited emphasis on mathematical applications. Lecture 3 hours, Laboratory 3 hours.

2a-2b

### GENERAL PHYSICS

44 UNITS

**Prerequisite:** Math 11 or equivalent high school background. 2a is a prerequisite for 2b.

Lectures, demonstration and problems in mechanics, properties of matter, heat, sound, light, electricity and magnetism, atomic and nuclear physics. Lecture 3 hours, Laboratory 3 hours.

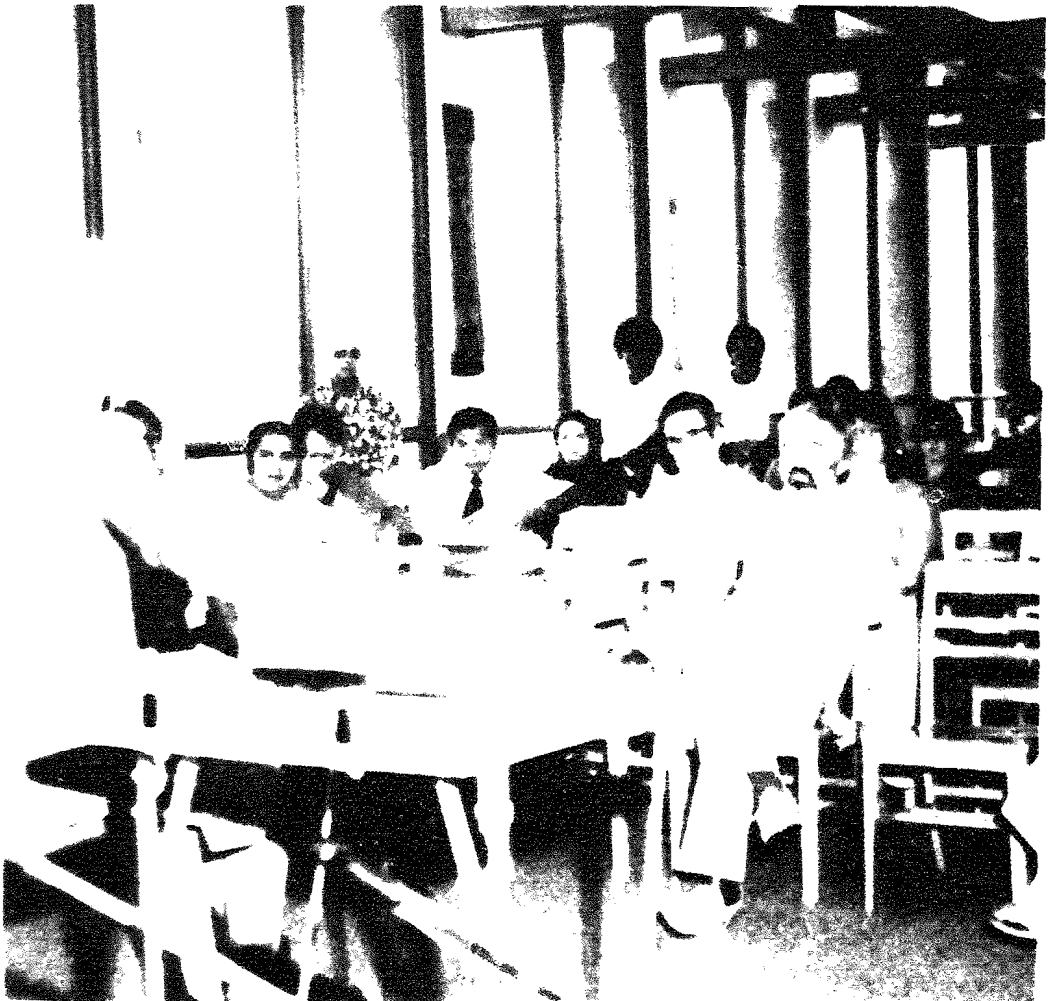
99

### INDIVIDUAL STUDIES

14 UNITS

**Prerequisite:** Approval of Division Chairman and Professor.

The student will solve a problem or work on a project under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.



**FACULTY ORIENTATION** Prior to commencing semesters the faculty takes part in orientation programs. Part of the faculty is seen during one such session in the Learning Resources Center when audiovisual equipment was being discussed and demonstrated

## Political Science

- 2**                    **AMERICAN NATIONAL GOVERNMENT**                    **3 UNITS**  
**Prerequisite: None.**  
A study of the modern political systems of the United States including such topics as Constitution, voting, political parties, campaigns and elections, pressure groups, Congress, the Presidency, the federal bureaucracy and the federal judiciary to increase the student's understanding of the political arena in which he lives. Not open to students with credit in Political Science 57. The course fulfills the Federal Constitution requirement for an Arizona Teaching Certificate.
- 50**                    **INTRODUCTION TO INTERNATIONAL RELATIONS**                    **3 UNITS**  
**Prerequisite: None.**  
An introduction to the international system of relations between nation-states of the world, with primary emphasis on capability, ends and means of policy and the struggle for world order. Not open to first semester freshmen
- 57**                    **NATIONAL AND ARIZONA CONSTITUTIONS**                    **3 UNITS**  
**Prerequisite: Sophomore standing.**  
A study of the governments of the United States and Arizona through the interpretation of the Constitution of each political entity. This course is approved for teacher certification. Teachers needing only Arizona Constitution may take the Arizona portion of the course for 1 unit of credit. Students majoring in Political Science should take Political Science 2. Not open to Freshmen.
- 99**                    **INDIVIDUAL STUDIES**                    **1-4 UNITS**  
**Prerequisite: Approval of Division Chairman and Professor.**  
The student with demonstrated academic ability will solve a problem under direction of a faculty member with approval of the Division Chairman. May be repeated for credit.

## Psychology

- 1**                    **ELEMENTARY PSYCHOLOGY**                    **3 UNITS**  
**Prerequisite: None.**  
A survey of the fundamental methods and principles of psychology with major emphasis on growth and development, learning and conditioning principles, psychological measurements — testing, motivation and emotion.
- 2**                    **ELEMENTARY PSYCHOLOGY**                    **3 UNITS**  
**Prerequisite: Psychology I.**  
A more intensive study of the realm of psychology with emphasis on the psychological basis of behavior, intelligence, sensation, perception, higher

mental processes, personality and adjustment, abnormal psychology and social psychology.

- 3 PERSONALITY AND ADJUSTMENT 3 UNITS**  
**Prerequisite: None.**  
A study of normal and abnormal adjustments that people make and how these adjustments affect personality development. 3 hours lecture.
- 10 INTRODUCTION TO SOCIAL PSYCHOLOGY 3 UNITS**  
**Prerequisite: None.**  
An introduction to basic theories and concepts necessary to the study of social psychology with emphasis on culture and group situations as they are related to the individual.
- 13 CHILD PSYCHOLOGY 3 UNITS**  
**Prerequisite: None.**  
A study of human maturation through an analysis of the inter-relationships of biological and psychological development from infancy to adulthood.
- 99 INDIVIDUAL STUDIES 1-4 UNITS**  
**Prerequisite: Approval of Division Chairman and Professor.**  
The student with demonstrated academic ability will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.

## Science

- X DEVELOPMENTAL SCIENCE 3 UNITS**  
**Prerequisite: None**  
A survey course, including laboratory experience, designed to acquaint students with science in general and to study in particular certain aspects of astronomy, physics, chemistry, biology and ecology. Also deals with scientific topics of current interest. 2 hours Lecture, 3 hours Laboratory.
- 1 INTRODUCTION TO ELEMENTARY SCHOOL SCIENCE TEACHING 3 UNITS**  
**Prerequisite: None.**  
A course designed to introduce the student to some of the methods and techniques of science and to relate them to elementary science instruction. A variety of equipment, teaching materials and associated activities will be utilized to present current trends in elementary school science teaching. Lecture 2 hours, laboratory 2 hours.

## Social Science

- 1 INTRODUCTION TO SOCIAL SCIENCES 3 UNITS**  
**Prerequisite: None.**  
An introduction to the several disciplines in the social sciences — anthropology, psychology, sociology, economics, political science and international relations — using a systems approach. Freshmen are encouraged to enroll in this class to discover what discipline interests them for continuation. Accepted as an elective for AA degree.
- 6 THE CHICANO IN CONTEMPORARY SOCIETY 3 UNITS**  
A survey of the Chicano culture, traditions, attitudes and ideals from the historical and sociological viewpoints with emphasis upon contemporary

problems and conditions. Special attention will be given to social, cultural, economic, political and educational developments of the Chicano in the Southwest.

**7 INTRODUCTION TO SOCIAL WELFARE 3 UNITS**  
**Prerequisite: None.**

An introduction to our social welfare and social insurance systems. Designed to acquaint the student with various programs available to the general public through legislation and/or private means. 3 hours Lecture.

**54 INTRODUCTION TO MEXICO 2 UNITS**  
**SPANISH 54 1 UNIT**

**Prerequisite: None**

This course is designed to familiarize the student with terms in Spanish used in contemporary Mexico which are necessary for the business man, traveler and student or includes field trips into Mexico to actively participate in related activities. Explanations of the development of the industry, tourism, trade and history of Mexico are part of course. The course is conducted in English with unit of Spanish credit available.

**Sociology**

**1 INTRODUCTION TO SOCIOLOGY 3 UNITS**  
**Prerequisite: None.**

An overview of the controversial aspects of sociology through major concepts of writers and presentation of verifiable social facts about group phenomena with student experience in selected social research.

**2 SOCIAL PROBLEMS 3 UNITS**  
**Prerequisite: Sociology 1.**

A study of contemporary major social problems through selected writings of various authors to provide "the means for understanding the source, nature, and possible resolution of them."

**99 INDIVIDUAL STUDIES 1-4 UNITS**  
**Prerequisite: Approval of Division Chairman and Professor.**

The student with demonstrated academic ability will solve a problem under the direction of a faculty member with the approval of the Division Chairman.

**Spanish**

**1X,2X CONVERSATIONAL SPANISH 3-3-3-3 UNITS**  
**3X,4X Prerequisites: 1X for 2X, 2X for 3X, 3X for 4X or the satisfactory performance upon a written and oral exam in lieu of any one of the courses in this series.**

The student goals are the same as for Spanish 1a and 1b, however, classes will meet fewer hours per week, and will as a result cover less material in a semester. 1X and 2X will be considered the equivalent of 1a, 3X and 4X the equivalent of 1b. Credit will be transferable upon the completion of 4X.

**1a, 1b ELEMENTARY SPANISH 4-4 UNITS**  
**Prerequisite: 1a is a prerequisite of 1b.**

For students with less than two years of high school Spanish, those who took

Spanish but have been away from it for two or more years, and students with no experience. Comprehension of the spoken language, proper pronunciation, grammar, reading skills, composition and conversation will be stressed. Lecture 4 hours, lab 2 hours arranged.

- 3a, 3b**      **INTERMEDIATE SPANISH**      **4-4 UNITS**  
**Prerequisites:** Spanish 1b or two years of high school Spanish taken not earlier than one year prior to registration at Cochise and completed with average grade or better, or competency as demonstrated to the satisfaction of the professor.  
Review of grammar, reading, writing and speaking; introduction to simple literature (short stories, novels, plays of selected Spanish authors). Lecture (Spanish) 4 hours, lab 2 hours. Course is conducted primarily in Spanish with only those explanations in English necessary for comprehension.
- 11**      **SPANISH ORTHOGRAPHY**      **1 UNIT**  
**Prerequisite:** None.  
A concentrated course on Spanish spelling. Emphasis will be placed on a step-by-step procedure that will take the student from the simplest Spanish words to the correct spelling of almost any word in the language. Special attention will be given to the use of the accent mark, particular colloquial and popular in-corrections and to areas of specific spelling problems. 1 hour lecture, 2 hours lecture.
- 25**      **SPANISH FOR TEACHERS**      **3 UNITS**  
**Prerequisite:** 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.
- 55**      **APPRECIATION OF MEXICO**      **3 UNITS**  
**Prerequisite:** None.  
This course is designed for students who have an interest in Mexico, its people and culture. The program of study includes a 9-11 day tour in the interior of Mexico. Places visited include the metropolitan and rural areas of the country with special emphasis upon archeology, architecture, history, anthropology and contemporary life. The course is conducted in English with Spanish instruction available. Included are Mexico D.F. and surrounding areas with accommodations in hotels, guide service and all transportation included. A written report upon the conclusion of the tour and additional sessions are required for credit. A special enrollment fee is required 30 days prior to departure of tour. Also credits for Social Science 55, Humanities 5.
- 75a, 75b**      **INTERMEDIATE COMPOSITION AND CONVERSATION**      **3-3 UNITS**  
**Prerequisite:** Spanish 3b or completion of course similar to Spanish 3b (Mexican schooling above 6th grade, four years of high school Spanish).  
Topic-centered composition and discussion. Application of grammar and increased vocabulary from a variety of readings, class discussions and individual presentations. Course conducted in Spanish.
- 104a**  
**104b**      **INTRODUCTION TO SPANISH LITERATURE**      **3-3 UNITS**  
**Prerequisite:** Spanish 3b and permission of professor or completion of course similar to Spanish 3b (Mexican schooling above 6th grade or four years of high school Spanish) and permission of professor.  
An introduction to the works of representative Spanish authors from the



beginnings of literary works in Spain to the present. A general knowledge of the history and development of the arts in Spain will be acquired. Emphasis is placed on reading, understanding and analyzing Spanish literary works, through the literary ideas which originated in Spain that later spread to the rest of the Hispanic World. Course is conducted completely in Spanish.

**107a** **INTRODUCTION TO MEXICAN LITERATURE** **3-3 UNITS**  
**107b** **Prerequisites: Intermediate Spanish and permission of the instructor.**

An introduction to the works of many representative Mexican authors and a historical look at the literature of Mexico during the Colonial period and the period of Independence. Taught in Spanish

**99** **INDIVIDUAL STUDIES** **1-4 UNITS**  
**Prerequisites: Approval of Division Chairman and Professor.**

Problem solution under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit

**Speech**

**2** **FUNDAMENTALS OF SPEECH** **3 UNITS**  
**Prerequisite: None.**

Study of fundamental techniques of public speaking, experience in construction and delivery of speeches of various types, evaluation of speeches of other members of the class and the speeches of famous speakers

**10** **PUBLIC SPEAKING** **3 UNITS**  
**Prerequisite: Speech 2 or permission of instructor.**

Brief review of the fundamentals of public speaking, with delivery of various types of speeches and evaluation of speeches of others. Practice in and out of class toward improvement of quality and use of voice with participation in discussions and demonstrations of parliamentary procedure and public discussion

**15** **ARGUMENTATION AND DEBATE** **3 UNITS**  
**Prerequisite: Speech 2 or permission of Professor.**

A study of skills of practical reasoning and of how to appraise and use evidence, recognize fallacies and learn to apply debate forms and oral style of argumentation. Evaluation on the basis of participation in class discussion, presentation of speeches and participation in debates. Intercollegiate debate optional for class members

**25** **FORENSICS** **1 UNIT**  
**Prerequisite: None, although Speech 2 or high school speech will be beneficial.**

Development of skills in one or more of the following

- a. debate
- b. original oration
- c. extemporaneous speaking
- d. impromptu speaking
- e. dramatic reading and various form of oral interpretation of literature

Participation in intraclass competition and in one or more intercollegiate contests

## Trade and Industrial

5	<p><b>*\$10 LAB FEE</b></p> <p><b>*WELDING</b></p> <p><b>Prerequisite: None.</b></p> <p>The basic processes of oxy-acetylene and arc welding including safety, selection of electrodes, welding joints, types of beads and development of basic skills. Emphasis is on welding mild steel in flat and horizontal positions, fusion welding of light-gauge steel, and brazing. 1 hour Lecture, 3 hours Laboratory.</p>	<b>3 UNITS</b>
7	<p><b>*WELDING</b></p> <p><b>Prerequisite: TI 5.</b></p> <p>Stress on the electric arc welding processes covering joints and beads on light-gauge steel and heavy structural steel in vertical and overhead positions. Tungsten inert gas welding (Heliarc) on aluminum and stainless steel is practiced. Bronze, cast iron, brazing, hard-surfacing, cutting, and pipe welding are emphasized in the fusion and oxy-acetylene portion of this course. 1 hour Lecture, 3 hours Laboratory.</p>	<b>3 UNITS</b>
8	<p><b>SEWING MACHINE MAINTENANCE</b></p> <p><b>Prerequisite: None.</b></p> <p>A complete maintenance, servicing, adjustment and set-up of industrial sewing machines currently in common usage. This course is designed to provide the factual information and manipulative skill necessary to set up any commonly-used industrial sewing machine that has been used, abused or otherwise requires maintenance or set-up for a particular fabric. Particular emphasis will be placed upon trouble-shooting and preventative maintenance. 1 hour Lecture, 3 hours Laboratory.</p>	<b>3 UNITS</b>
9	<p><b>GENERAL MECHANICS - AUTOMOTIVE I</b></p> <p>Classroom theory and supporting laboratory experience for routine automotive maintenance to develop entry-level skills for auto tuneup, electrical systems, fuel systems, cooling systems, lubrication systems and oils, transmissions and clutches, brake systems and accessories, such as air conditioning. 1 hour Lecture, 3 hours Laboratory.</p>	<b>3 UNITS</b>
11	<p><b>GENERAL MECHANICS II</b></p> <p><b>Prerequisite: None.</b></p> <p>Classroom theory and supporting laboratory experience for routine automotive maintenance to develop entry-level skills for carburetor overhaul, valve system, emission controls, basic welding, brake system service, alternator and regulator service, battery, starter system service, circuit trouble-shooting, basics of electricity as related to the automobile, safe use of basic shop equipment, use of miscellaneous equipment - hydraulic press, port-a-power, etc., and the use of tuneup test equipment. 3 hours lecture.</p>	<b>3 UNITS</b>
13	<p><b>GENERAL MECHANICS - AUTOMOTIVE "KNOW YOUR AUTOMOBILE"</b></p> <p><b>Prerequisite: None.</b></p> <p>Cochise College offers other course work for those interested in developing entry level automechanic 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</p>	<b>3 UNITS</b>

of battery, starter, and charging system theory, ignition system and basic emission control system theory, ignition system service, diagnosis - what to do if the car won't start, selecting a used car. 3 hours lecture.

- 14      REFRIGERATION-FUNDAMENTAL THEORY      6 UNITS**  
**PLUS AUTOMOTIVE**  
This is the basic course in mechanical refrigeration. Theory and principles will be taught plus the technique of servicing a wide variety of automotive refrigeration installations. 2 hours Lecture, 6 hours Laboratory.
- 15      REFRIGERATION-COMMERCIAL      6 UNITS**  
This is a second course in refrigeration in which the student will study theory, techniques and practices pertinent to controls, ducting and total operation of commercial units. Study and "hands-on" practice in servicing small freezers, air conditioners and coolers will be provided. 2 hours Lecture, 6 hours Laboratory.
- 40      PRINCIPLES OF INDUSTRIAL MANAGEMENT      3 UNITS**  
**Prerequisite: None.**  
This course is designed to give the student insight into the fundamental principles of management and the problems he is likely to encounter if employed in a supervisory capacity. Solutions to real-life, actual labor and management problems are studied in lecture discussion-type classes. The course requires the student to investigate a problem situation and write a report with alternate solutions. Special emphasis is given to labor relations and dealing with union organizations. The psychology of dealing with people is considered a necessary facet of this course. 3 hours Lecture.
- 41      ELEMENTS OF PRODUCTION MANAGEMENT      3 UNITS**  
**Prerequisite: TI 40.**  
Elements of Production Management will provide a complete study of decision-making based on cost data associated with production systems and processes. There will also be in-depth study relating to plant layout problems relevant to motion and time study. Particular emphasis will be placed upon production planning and control, including inventory and production standards.
- 50      WATER AND WASTE WATER PLANT OPERATION      3 UNITS**  
**Prerequisite: None.**  
This course is 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 Water or Waste Water Plant Operator. 2 hours Lecture; 12 hours Laboratory; field trips.
- 60      RADIO AND TV SERVICING, FUNDAMENTALS      6 UNITS**  
In this course the student shall become competent in the trouble-shooting, repair and servicing of household AM radios and black and white television sets. 2 hours Lecture, 6 hours Laboratory.
- 62      RADIO AND TV SERVICING, COMPLEX UNITS      6 UNITS**  
**AND SYSTEMS**  
Designed to provide competence in trouble-shooting, repair, servicing and installation of stereo systems, color TV, public address systems, and antenna systems. 2 hours Lecture, 6 hours Laboratory.

## Zoology

1a-1b

**\*\$10 LAB FEE**

**\*GENERAL ZOOLOGY**

**4-4 UNITS**

**Prerequisite:** High school Chemistry or Chemistry 2a or Chemistry 1 or concurrent enrollment in Chemistry 2a or Chemistry 1. 1a is a prerequisite to 1b except by special permission of the Professor.

An introduction to animal biology, structure and classification and a survey of animal phyla with an emphasis on invertebrate groups first semester and vertebrate groups second semester. Principles of genetics, ecology, physiology, embryology, taxonomy and evolution theories will be covered. Dissections of specimens representative of major phyla including dissection of typical vertebrates. Lecture 2 hours, Laboratory 6 hours.

20a-20b

**\*HUMAN ANATOMY AND PHYSIOLOGY**

**4-4 UNITS**

**Prerequisites:** Zoology 20a with a passing grade is prerequisite for 20b, or permission of the instructor.

An integrated study of the physical, structural and functional features of the cells, tissues, organs, and systems of the human body. Lecture 3 hours, Laboratory 3 hours, Discussion period 1 hour (optional).

99

**INDIVIDUAL STUDIES**

**1-4 UNITS**

**Prerequisite:** Approval of Division Chairman and Professor.

The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.



**GOVERNING BOARD REORGANIZED** The start of a new year calls for reorganization of the college governing board. Elected by the group as leaders for 1976 are two members in the front row, Dr. Charles Di Peso, Dragoon, left, chairman, and Charles O. Bloomquist, Douglas, secretary. Standing are the two remaining members of the board when the picture was taken, Ed Donnelly, Wilcox, and Matthew Borowiec, Bisbee. Mrs. Mary Krausman, appointed to Governing Board March 11, 1976.