



REGISTRAR'S OFFICE  
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**COCHISE COLLEGE**

**1974  
75**

# **CATALOG and ANNOUNCEMENTS**

**Academic Year 1974-75**

## **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**

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# **Cochise College Calendar**

**1974-75**

## **Fall Semester**

Full Counseling and Registration	August 22-23
Orientation	August 24, 25
Classes Begin	August 26
Labor Day — Holiday	September 2
Last Day for Adding Classes	September 6
Columbus Day — Holiday	October 14
Mid-Semester Examinations	October 15-18
Last Day to Drop Classes Without Penalty	October 30
Veterans Day — Holiday	November 11
Thanksgiving Recess	November 28, 29
Final Examinations	December 16-20
Classes End	December 20
Christmas Vacation	Dec. 23-Jan. 5

## **Spring Semester**

Spring Registration	January 13
Classes Begin	January 14
Last Day for Adding Classes	January 20
Washington's Birthday — Holiday	February 17
Mid-Semester Examinations	March 3-7
Last Day to Drop Classes Without Penalty	March 7
Spring Recess	March 24-28
Classes Resume	March 31
Final Examinations	May 12-15
Commencement	May 15

## **Professional Pilot Calendar**

The Professional Pilot Program does not operate on a standard semester basis. The Pilot Program is a continuing program and students may enter at any time at the discretion of the Aviation Department. The program leads to an Associate in Arts Degree. Refer to page 47 for complete details.

## **Airframe and Powerplant Calendar**

A new class starts every 20 weeks, with starting dates as follows:

1974 — March 18, Aug. 5,  
1975 — Jan. 6, May 26, Oct. 13

Vacations are limited to a week each at Christmas and Fourth of July. The Associate in Science (two-year) Degree may be awarded at the completion of this concentrated 50-week program. Although starting dates are shown, entrance into this program may be accomplished at any time at the discretion of the Aviation Division.



# TABLE OF CONTENTS

COLLEGE CALENDAR .....	3
ADMINISTRATION .....	4
FACULTY .....	6
GENERAL INFORMATION .....	10
History .....	10
Accreditation and Transfer .....	10
Philosophy of Education .....	10
Aims and Objectives .....	11
Degree .....	11
Advisory Committees .....	11
Continuing Education .....	12
Cochise College Foundation .....	12
Community Services .....	13
Learning Resources Center .....	13
ADMISSION PROCEDURES AND POLICIES .....	14
FEES .....	19
FINANCIAL AIDS .....	23
ACADEMIC PROCEDURES AND POLICIES .....	34
INSTRUCTIONAL PROGRAMS .....	45
College-parallel .....	45
Occupational .....	45
Cooperative Education .....	46
COURSE OFFERINGS .....	66
INDEX .....	107

# **FULL-TIME FACULTY**

## **AVIATION AND TECHNOLOGY DIVISION**

Harry R. Elkins, Division Chairman; BS, MEd. University of Illinois (1968)  
Robert W. Anderson, BS St. Cloud State College (1968)  
James H. Basinger, BS St. Louis University (1971)  
Wilmer Bassett, BS Brigham Young University (1968)  
Edgardo Bustamante, (1970)  
Robert Dunker, AS Western Iowa Tech., BS University of South Dakota (1972)  
Eldridge Estes, BGE University of Nebraska (1971)  
Robert F. Frias, (1973)  
Stanley Graf, AS North Dakota State School of Science, BS North Dakota State University (1973)  
Ken Harris, BA Walla Walla College, MA Arizona State University (1969-70, 1973)  
James B. Haxton, AA Cameron State Agriculture College (1968)  
Keith Jackson, BA, MEd University of Arizona (1969)  
Fred Johnson, AA Cochise College, BA University of Arizona (1969)  
Ralph R. Longnecker, AA Cochise College (1971)  
Lee Oppenheim, BA University of New Mexico (1968)  
Dewey Tally, BS Northern Arizona University (1969)  
Tom Waddoups, BS University of Idaho (1968)

## **BUSINESS DIVISION**

Ron Mortensen, Department Head; BS, MBA University of Utah (1973)  
Leon Holmes, Supervisor of Data Processing Center (1973)  
Larry Lucas, BA and MA University of Colorado (1973)  
Pat Oppenheim, BSEd University of New Mexico (1973)  
Ofelia Owen, BBA Texas Technological University (1973)

( ) Denotes year in which professor joined Cochise College faculty

## **COMMUNICATIONS, HUMANITIES AND FINE ARTS DIVISION**

Joe Gilliland, Division Chairman, BA, MA University of Texas (1964)  
Martin H. Behnke, BA, MA San Jose State College (1971)  
John Doty, AA Santa Monica City College, AB, MS University of Southern California,  
MA University of California at Los Angeles (1966)  
Larry Gunter, BA Indiana University, MA College of Holy Names (1968)  
Marjorie Holiman, BA, MA University of Arizona (1968)  
Arlo Janssen, BA, MA University of Arizona (1966)  
Ray Levra, BS Montana State College, MFA University of Oregon (1965)  
Jeanine Maio, AB Mt. St. Joseph-on-the-Ohio, MMed University of Colorado (1973)  
Alicya Malik, AB Wayne University, MA and MBA University of Michigan (1964)  
Allan Meyer, BA Nebraska University, MA Catholic University of America (1970)  
William D. Miller, BA Reed College, MA University of Oregon, MA UCLA (1971)  
Vern Mosher, AA Mesa College, BA University of Northern Colorado, MFA Arizona  
State College (1971)  
Betty Lou Porreca, BA, MA University of Arizona (1973)  
Frel Urreiztieta de Rivera, BA MA University of Arizona (1972)  
Warren Schofield, BA, MA Arizona State University (1966)  
Mary Lee Shelden, AA Phoenix College, BA, MA Northern Arizona University (1967)  
Baysol Turner, AA Phoenix College, BA, MA Arizona State University (1966)

## **COOPERATIVE EDUCATION**

Ray Willcox, Coordinator; BA University of Northern Colorado, MEd Colorado State  
University (1968)  
William Lent, AA Delta College, BA Arizona State University (1972)  
Robert McGreevey, BSEd California State College, Pa. (1973)  
Ronald Olson, AB University of Northern Colorado, MA Colorado State University  
(1972)

## **HEALTH, PHYSICAL EDUCATION, RECREATION AND ATHLETICS DIVISION**

Gerald Bequette, Division Chairman; BS, MS University of Arkansas (1968)  
Jack Furr, BSEd Northern Arizona University, MA University of Virginia (1974)  
Richard Atkinson, BS Kansas State College, MS Kansas State University (1966)

## **LEARNING RESOURCES CENTER**

Ida Ojeda, Director; BA Arizona State University, MA Northern Arizona University  
(1965)  
Alice J. Loyda, Assistant to the Director; BA George Williams College, MLS Texas  
Woman's University (1973)

## **NURSING DEPARTMENT**

Beverly Langley, Coordinator; AA Santa Barbara City College, BA Nursing Arizona State University, BSC Northern Arizona University, MAEd Arizona State University (1973)

June Barreras, BS Nurses Education College of Holy Names, MEd University of Arizona (1964)

Marge Belknap, BS Foote Memorial Hospital, BS Central Michigan University, MA Michigan State University (1970)

Marion Dormann, BS, RN Adelphi University (1969)

## **NURSING PROGRAM - RESOURCE MEDICAL PERSONNEL**

C. W. Ahl, MD, Douglas, Arizona

Guy B. Atonna, MD, Douglas, Arizona

A. V. de Guzman, MD, Douglas, Arizona

R. E. Montgomery, MD, Douglas, Arizona

Joseph Saba, MD, Bisbee, Arizona

George A. Spikes, MD, Douglas, Arizona

Mary Andrews, Dietitian, Cochise County Hospital, Douglas, Arizona

Alice Cloud, Director of Nursing, Cochise County Hospital, Douglas, Arizona

Mary Foppe, Supervisor of Surgery, Cochise County Hospital, Douglas, Arizona

Hazel Kayko, Director of Nursing, Douglas Hospital, Douglas, Arizona

Pat Kelsey, Physical Therapist, Cochise County Hospital, Douglas, Arizona

Betty Lucas, Operating Room Supervisor, Douglas Hospital, Douglas, Arizona

Miya Nakamura, In-service Director, Cochise County Hospital, Douglas, Arizona

Josephine Reidinger, Supervisor-Extended Care, Cochise County Hospital, Douglas, Arizona

Marcella Salem, Assistant Director of Nursing, Cochise County Hospital, Douglas, Arizona

Lucy Vasquez, Supervisor-ICU, Cochise County Hospital, Douglas, Arizona

Adolene Wedzik, Director of Nursing, Copper Queen Hospital, Bisbee, Arizona

Irene Welender, Operating Room Supervisor, Copper Queen Hospital, Bisbee, Arizona

Manual Zazueta, Lab Director, Cochise County Hospital, Douglas, Arizona

## **SCIENCE, SOCIAL SCIENCE AND MATH DIVISION**

George Huncovsky, Division Chairman, BS, MS University of North Dakota (1964)

Vivian Boysen, AB, MA University of South Dakota (1966)

Donald Campbell, AB San Jose State College, MA Stanford University (1964)

Esther Crampton, AB Colorado State College, MA University of Wisconsin, PhD American University (1967)

Charles Field, BS Cornell University, MAgr Purdue University (1967)

Mildred Galliher, BS, MS University of Arizona (1969)  
 John Monnett, BS University of Kansas, MA San Jose State (1973)  
 Richard Myers, Director of Archaeology Resource Center; BA University of New Mexico,  
 MA Northern Arizona University (1964)  
 David Pettes, AB Duke University, MAT Emory University (1968)  
 Gene Riggs, BS, MEd., MS Oklahoma State University (1966)  
 Keith Stuart, BSc, MSc University of Oregon (1964-67, 1970)  
 Del C. Willsey, BS University of Arizona, MNS Arizona State University (1970)

## **OFFICE OF STUDENT AFFAIRS**

James L. Young, Dean of Student Affairs; AA Pueblo College, BA and MA Western  
 State College, Ed.D. New Mexico State University  
 Dan Rehurek, Admissions & Placement Officer; BS University of South Dakota  
 Southern, MA University of Northern Colorado (1967)  
 Donald E. Fry, Coordinator of Student Activities and Housing; BS Ft. Hayes, Kansas,  
 College; MA University of Arkansas  
 Therman Healy, Head Counselor; AB Harding College, MEd University of Houston,  
 Specialist in Education, New Mexico State University (1967)  
 Sammie Howard, Chiricahua Residence Hall Officer (1971)  
 Harold Robison, Coordinator of Veterans Affairs; BS Troy State University MEd  
 University of Arizona (1973)  
 Richard Schultz, Counselor; BA Lawrence University, MEd University of Arizona (1973)  
 Monica Schwarzblatt, Counselor; BS Universidad Catolica de Chile; MS University of  
 Southern California (1973)  
 Ron Thies, Counselor-Financial Aids Officer; BS Missouri Valley College, MA University  
 of Missouri (1972)  
 Eleanor Torrey, Huachuca Hall Residence Hall Officer and College Nurse; RN Wesson  
 Memorial Hospital, Springfield, Mass.; BS Northern Arizona University (1971)

## **FORT HUACHUCA - SIERRA VISTA CENTER**

Roy Kane, Director, BA University of Maryland, MA University Northern Colorado  
 (1972)  
 Richard Seals, Assistant to the Director; BA, MA Adams State College (1973)  
 John Ziegler, PREP supervisor; BA, MA Sieton Hall (1973)

## **ADULT NON-CREDIT—COMMUNITY DEVELOPMENT**

Fred Mulcahy, Associate Director, Title I (HEA 1965); Adult Education Coordinator;  
 BSC Loyola University, (Chicago), MBA University of Arizona (1970)

## **SKILL CENTER — NEEDLE TRADES**

Armen Ramos, Coordinator (1969)  
 Margarita Ybarra, Instructor (1969)  
 Gloria Ramirez, Instructor (1969)

## **SPECIAL PROGRAMS**

Upward Bound, Joe Ortega, BA BusEd. Colorado State College, MA Guidance  
 Counseling, Colorado State University

# **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 Junior Colleges and by a five-man Governing Board elected from precincts in Cochise County. It is financed by legislative appropriation and a county wide 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 Committees**

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 any community in Cochise County.

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.

The Continuing Education effort in the northern part of Cochise county has been strengthened through appointment of a coordinator to serve the Benson, Wilcox, Sunsites, Bowie and San Simon areas. A coordinator has also been named for the Bisbee-Elfrida Douglas area. These will provide a closer link between the college and the people of these communities, another step in the College's effort to serve its entire community.

## **Cochise College**

### **Fort Huachuca-Sierra Vista Center**

The Fort Huachuca-Sierra Vista Center located on the grounds of Buena High School in Sierra Vista offers day and evening classes in college-parallel programs and in such occupational programs as Middle Management, Police Science and Secretarial Studies. A student may matriculate at the Center as a full-time student and complete the AA degree in a variety of college programs.

A full schedule of classes is also offered at Fort Huachuca Army Education Center.

For further information about classes and programs offered at the Fort Huachuca-Sierra Vista Center, write:



Director, Cochise College  
Fort Huachuca-Sierra Vista Center  
PO Box 1668, Sierra Vista, Arizona 85635  
or Telephone 458-7110

## **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, for five \$600 scholarships for the 1974-75 college year.

## **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 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, February and July as a service to county students who wish to take the test.

**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 married studio apartments 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.

**AVIATION AND NURSING PROGRAMS**

Airframe-Powerplant Technology, Professional Pilot and Associate Degree Nurse programs require personal interviews prior to acceptance to the respective program. Applicants are advised to complete all appropriate requirements for admission to the college. Upon receipt of the Letter of Admission, applicants for these special programs should make arrangements for a personal interview. Contact:

Chairman, Division of Aviation and Technology  
Cochise College  
Douglas, Arizona 85607  
(602) 364-3451 or (602) 432-5737  
  
Director of Nursing  
Cochise College  
Douglas, Arizona 85607

Arrangements for interviews with Aviation should be made prior to March 1 and November 1; Nursing prior to February 15. Applicants accepted into either aviation program will be notified 30 days prior to the appropriate program start date. Nursing applicants who have been accepted to the program will be notified by May 20.

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 .....	\$45
Associate Degree Nurse .....	\$90

**STUDENT CLASSIFICATION**

- Classified — Full time students registered for 12 units or more
- Classified, Part-time — 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 school. Able and ambitious high school students wishing to attend college are required to complete an Application for Admission only.

## **READMISSION**

Students having been absent from Cochise College for a regular semester or longer, must apply for readmission 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 junior 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, removes 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.

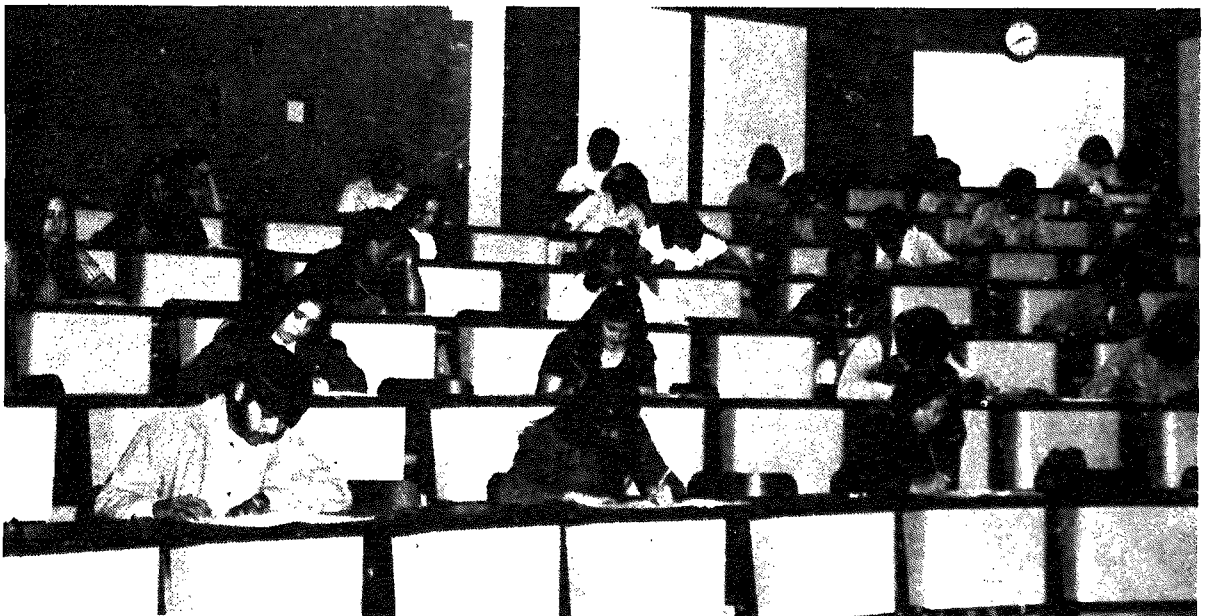
13. A person does not gain or lose in-state status by reason of his presence in any state or country while a member of the armed forces of the United States. Military personnel stationed in Arizona, their spouses and dependents shall be considered as in-state residents during the time the member of the 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. All veterans should confer with the Coordinator of Veterans Affairs regarding educational benefits.

By Arizona Statute, in determining the admissibility to the community college of a veteran, honorably discharged who has served in the armed forces of the United States for a minimum of two years and who was 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.

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.



College students participate in development of new testing program

# 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 1974-75 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

### A. Full-time Students (12 or more units):

*Per Semester*

- |   |           |
|---|-----------|
| 1. Residents of Cochise County .....  | No Charge |
| 2. Military personnel and their dependents living in<br>Cochise County .....                                      | No Charge |
| 3. Residents of counties without Community Colleges (home<br>county pays Cochise County \$510 per semester) ..... | No Charge |
| 4. Residents of Counties with Community Colleges<br>Graham, Maricopa, Pima, Pinal, Yavapai, Yuma .....            | No Charge |
| 5. Residents of other states, foreign countries .....   | \$600     |

### B. Part-time Students (1-11 units):

- |  |                  |
|--|------------------|
| 1. County residents including military personnel and<br>their dependents ..... | No Charge        |
| 2. Residents of other counties, states &<br>foreign countries                  |                  |
| 1 - 6 units .....  | No Charge        |
| 7 - 11 units - Retroactive to one unit .....                                   | \$50.00 per unit |

### C. Summer Session ..... \$15.00 per unit

## REGISTRATION FEE

- |   |      |
|---|------|
| A. Students carrying 10 or more units ..... | \$90 |
| B. Students carrying 1 to 9 units .....     | 35   |
| C. Summer Session .....                     | 10   |

## SEMESTER ROOM AND BOARD

### A. Room and Board Charges:

- |  |       |
|--|-------|
| 1. Regular students (17 weeks) .....                   | \$525 |
| 2. A & P students (10 weeks) .....                     | 315   |
| 3. Professional Pilot students                         |       |
| a. Phase I (July 9 - Dec. 31, 1973), (24 weeks) .....  | \$756 |
| b. Phase II (Jan. 14 - June 7, 1974), (20 weeks) ..... | 630   |

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.

## GRADUATION FEE

Every candidate for an Associate degree is required to pay a graduation fee of \$10; portions of this fee are used to cover the diploma and academic costume charges. Those completing certificate programs are not required to pay the \$10 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 . . . . . \$710.00
- 2. AT-82 2nd Phase Commercial Pilot . . . . . 715.00
- 3. AT-84 3rd Phase Commercial Pilot . . . . . 793.00
- TOTAL . . . . . \$2,218.00**

### B. Optional Fees

- 1. AT-86 Instrument Pilot . . . . . \$581.00
- 2. AT-88 Multi-Engine Pilot . . . . . 350.00
- 3. AT-89 Flight Instructor . . . . . 390.00
- 4. AT-90a Air Transport Pilot Rating . . . . . \$6/hr
- AT-90b Air Transport Pilot Rating . . . . . 288.00
- 5. AT-92 Instrument Flight Instructor . . . . . 304.00

## 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**
- Change of Course fee . . . . . \$2.00**
- Late Final Examination Fee, in any course . . . . . \$3.00**  
(Only when permission of instructor is granted in advance)
- Credit by Examination (Per Semester Hour) . . . . . \$7.50**
- CLEP Subject Examination per test . . . . . \$15.00**
- Transcript fee — First Free, Each Additional . . . . . \$1.00**
- Returned check fee (for each returned) . . . . . \$10.00**



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 to Friday of:	Two-Payment Plan \$262.50	Full Semester Payment \$525.00
1st Week	125.00	388.00
2nd Week	102.00	364.00
3rd Week	77.00	340.00
4th Week	53.00	315.00
5th Week	29.00	291.00
6th Week	4.00	267.00
7th Week	-0-	242.00
8th Week	-0-	219.00
9th Week	-0-	194.00
10th Week	-0-	170.00
11th Week	-0-	145.00
12th Week	-0-	121.00
13th Week	-0-	98.00
14th Week	-0-	73.00
15th Week	-0-	48.00
16th Week	-0-	25.00
17th Week	-0-	-0-

### **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.



Counselors, professors assist students at registration time

# **FINANCIAL AIDS**

Cochise College offers a variety of financial aids to full-time and part-time students. Types of financial aids available are scholarships, grants-in-aid, Supplemental Educational Opportunity Grants, Basic Educational Opportunity Grants, campus employment, Cochise College loans, Nursing Loans and Scholarships, College Work-Study, Federally Insured Student Loans, National Direct Student Loans, Law Enforcement Loans and Grants, Migrant Opportunity Program, Bureau of Indian Affairs, athletic grants-in-aid and a limited number of scholarship fee waivers.

## **APPLICATION PROCEDURE**

To apply for any type of financial aids, 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 original copy to ACT with the appropriate fee for processing. Allow four weeks for processing.
2. Send the work sheet of the FFS to the Cochise College Financial Aids Officer. The worksheet serves as the application for all types of financial aid. Priority will be given to applications received by March 1. Applications for all types of financial aids 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, from the American College Testing Program, P.O. Box 1000, Iowa City, Iowa 52240, or Cochise College.

**FINANCIAL AIDS COMMITTEE:** The committee is composed of eight members including the Financial Aids Officer (who acts as chairman), a fiscal officer from the Office of Business Affairs, four 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.

## **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.

These criteria are used in determination of scholarship recipients:

1. Stipulations of the donor take precedence in all cases.
2. Academic achievement and financial need will be of importance in the awarding of all scholarships.

## **SCHOLARSHIPS**

**AMERICAN COORDINATING COUNCIL FOR POLITICAL EDUCATION:** Provides four scholarships in the amount of \$50 each per year; two scholarships each semester to worthy applicants. Applicants may apply through the Financial Aids Officer, Cochise College.

**ARIZONA ASSOCIATION OF TEACHERS OF MATHEMATICS:** Provides a \$100 grant-in-aid to a bi-cultural freshman determined to have need. Applicant may apply through the Financial Aids Officer, Cochise College.

**ARIZONA BANK — Douglas:** Provides \$100 in a scholarship to this institution. The award is made each year to an entering freshman graduate of Douglas High School. Applicants may apply through Financial Aids Officer, Cochise College.

**ARIZONA TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, INC.:** Provides a scholarship up to \$300 to this institution. Applicants may apply through the Financial Aids Officer at the College.

**ARMED FORCES COMMUNICATION AND ELECTRONICS ASSOCIATION —** The Arizona Chapter has presented \$500 to the college scholarship fund in order to provide five scholarships to deserving students. The AFCEA scholarship fund at the college originated in 1969.

**ASSOCIATED STUDENT SCHOLARSHIPS — MIKE BREWSTER SCHOLARSHIP FUND:** Scholarship set up as a living memorial to Michael Brewster. Applicants may apply through Financial Aids Officer at the College.

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

**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: (1) Nurse; (2) Teacher; (3) Business. She must be in the top one-third of her class and the daughter of a Legionnaire or Veteran.

**MICHAEL BIALKOWSKI:** An award made to the College with the amount of the scholarship to be determined by the donor. Recipient is selected by the Financial Aids Committee.

**BISBEE BUSINESS & PROFESSIONAL WOMAN'S CLUB:** Two scholarships of \$60 are made to a Bisbee High School student. Financial Aids Committee chooses the recipient with the following requirements set by the donor: (1) Financial Need; (2) Scholarship.

**BISBEE ROTARY CLUB:** An annual award with the amount varying each year. Recipient of scholarship determined by the Financial Aids Committee of Cochise College.

**BISBEE WOMAN'S CLUB:** Annual award is made for a Bisbee High School girl graduate. Recipient selected by the Financial Aids Committee.

**BOWIE YUCCA GARDEN CLUB:** Annual amount for this award is determined by the donor. Recipients generally must be a graduate of Bowie High School.

**BUSHMASTERS CLUB OF BISBEE:** A \$200 scholarship presented to Cochise College for Bisbee High School boy and girl graduates, \$100 each. Recipients selected by the donor.

**BUSHMASTERS CLUB OF DOUGLAS:** Three scholarships in the amount of \$150 each awarded annually. Recipients must be graduates of Douglas High School. Applicants names are proposed by the donor, with final selection made by the Cochise College Financial Aids Committee.

**RAY DIAMOS BUSTAMANTE SCHOLARSHIP:** A memorial scholarship in the amount of \$480 established by Mrs. A. D. Kerson in July, 1971. This award is made to needy students of any school with the decision of the recipients being made by the Financial Aids Committee. There are three scholarships.

**CLUB ALBA:** Two annual scholarships in the amount of \$200 each. Recipients chosen by Club Alba.

**COCHISE COLLEGE ACTIVITIES SCHOLARSHIP:** This scholarship based on the following criteria: (1) Faculty advisors will recommend recipients; (2) Scholarships will be awarded at the end of the semester for activity during the semester.

**COCHISE COLLEGE FACULTY WIVES' ASSOCIATION:** Registration fee scholarships. Awarded to recipients recommended by the Cochise College Faculty Women's Association. Number of scholarships varies from year to year.

**COCHISE COLLEGE PROFESSIONAL ASSOCIATION AWARDS:** These three awards, two to outstanding sophomore graduates and one to an outstanding continuing freshman in the amount of \$150 each, are based on (1) scholastic ability, (2) contributions to Cochise College, (3) leadership.

**COCHISE COLLEGE FOUNDATION SCHOLARSHIPS —** Five scholarships totaling \$3,000 for the 74-75 school year. Scholarships are based solely on academic achievements, (grade point average), through the first 3½ years of high school. A list of students who meet the minimum scholarship requirement of 3.2 (B+) is submitted by the high school counselor to the Financial Aids Officer. Selection is made by the Financial Aids Officer after review of all applicants. The five eligible recipients each will be awarded a \$300 scholarship to be used in their first semester at Cochise College. The recipients may receive an additional \$300 scholarship in the Spring semester if final grades in the Fall semester are 3.2 or above.

**COCHISE COUNTY INDEPENDENT INSURANCE AGENTS:** Provides eight \$200 scholarships to needy college students. Recipients are chosen by the Cochise County Independent Insurance Agents.

**COCHISE COUNTY MEDICAL SOCIETY:** Provides three \$100 scholarships to the Nursing School at Cochise College to be used for students residing in Cochise County. Recipients are chosen by the Financial Aids Committee at the College.

**COPPER CITY WOMAN'S CLUB:** Provide two scholarships of \$50 each to a Bisbee High School graduate. The recipient is selected by the Financial Aids Committee of Cochise College.

**COPPER QUEEN MINER'S UNION Local No. 551:** Four scholarships are awarded in the amount of \$300 each. Recipients chosen by donor.

**DOUGLAS AMERICAN LEGION FRED HILBURN UNIT No. 11:** This is 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 college period. Recipients must receive highest graded score of achievement for Americanism.

**DOUGLAS ART ASSOCIATION:** A \$50 award is made annually to a Douglas High School graduate. The recipient must be an Art Student and is chosen by the Douglas Art Association Board of Directors from a list of qualified students submitted by the Financial Aids Officer.

**DOUGLAS ELKS LODGE No. 955:** Douglas Elks Lodge awards six scholarships in the amount of \$160 each. Recipients chosen by the donor.

**DOUGLAS EVENING LIONS CLUB:** This is a scholarship of \$150 established in July 1970. The following requirements are stipulated by the donor: (1) The recipient must be a Douglas High School graduate; (2) must be a Sophomore at Cochise College; (3) Equal value is placed on scholarship and need; (4) Selection of the recipient made by Financial Aids Committee.

**DOUGLAS GEM AND MINERAL CLUB:** The amount of this annual scholarship varies. Recipient is selected by the donor.

**DOUGLAS JUNIOR WOMEN'S CLUB:** Scholarship in the amount of \$100. Recipient is selected by the Financial Aids Committee of Cochise College.

**DOUGLAS KIWANIS:** Two scholarships of \$160 each awarded annually by Douglas Kiwanis Club. Recipients are selected by donor.

**DOUGLAS MUSIC CLUB:** Recipients are chosen by donor. This is an annual scholarship with the amount varying yearly.

**DOUGLAS NOBLEMEN CLUB:** A two-year scholarship in the amount of \$250. The recipient receives \$125 per year and is chosen by donor.

**DOUGLAS REPUBLICAN WOMEN SCHOLARSHIP:** An annual scholarship awarded to a recipient selected by the donor. Amount of this scholarship varies yearly.

**DOUGLAS TELEVISION COMPANY:** Annual awards are made by the Douglas Television Company with recipients selected by Douglas High School Counselors. Scholarships go 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. The awards are made to sophomore students registered in the Associate Degree Nursing Program.

**FIRST NATIONAL BANK OF ARIZONA:** Three annual scholarships are awarded by First National Bank. Requirements are: (1) Scholarship; (2) Need; (3) Must be residents of Arizona; (4) Must be majoring in Business; (5) Should be second-year students.

**GARDANIER SCHOLARSHIP:** An annual scholarship awarded to worthy recipients. Chosen by the Financial Aids Committee of Cochise College.

**INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.:** Scholarship of \$300 to be used over a two-year period. The recipient, chosen by the Financial Aids Committee, must meet the following requirements: (1) Must be a graduate of a Cochise or Santa Cruz County High School; (2) Must be enrolled in the Electronic Technology Program, or plan to transfer to a four-year college or university to pursue an upper division major in an engineering scientific field, (3) must maintain a grade point average of 3.0 (B) or better during the first year to maintain eligibility for assistance during the second year.

**MECHA COCHISE COLLEGE:** The amount of the scholarship varies. Recipient is chosen by the MECHA Club.

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

**PAUL LIME PLANT:** This is a yearly award made to Cochise College in the amount of \$200; two scholarships in the amount of \$100 each. Recipients are selected by Financial Aids Committee of Cochise College.

**NAACP CHAPTER, SIERRA VISTA:** Recipients are selected by donor and each receives \$250 for school year.

**NCO AND SPECIALISTS' WIVES CLUB:** Scholarship of \$500 is provided annually. Recipient is chosen by donor.

**REACT STUDENT COUNCIL SCHOLARSHIP:** Two scholarships in the amount of \$160 each to be awarded recipients chosen by REACT Student Council Members.

**SAN JOSE COMMUNITY ASSOCIATION:** Two scholarships in the amount of \$200 each. Recipients are chosen by the donor.

**SIERRA VISTA LIONS CLUB:** Two scholarships in the amount of \$200 each. Recipients are selected by the members of the Cochise College Financial Aids Committee.

**SIERRA VISTA WOMEN'S CLUB:** Annual \$200 scholarship awarded a worthy recipient chosen by the Cochise College Financial Aids Committee. Following criteria used in determining the recipient: (1) Buena High School graduate; (2) Need.

**SPANISH CLUB OF COCHISE COLLEGE:** Annual scholarship of \$160 provided over a two-semester period. Recipient is chosen by the club. Recipient must be a Douglas High School graduate, majoring in Spanish at Cochise College.

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

**UNITED PRESBYTERIAN WOMEN:** An award made by the United Presbyterian Church Women for two worthy Cochise College Students. The total of the award is \$250 for two scholarships of \$125 each.

**UNITED STEELWORKERS OF AMERICA Local No. 6305** These are two, two-year scholarships in the amount of \$200. The recipients are selected by the Financial Aids Committee of Cochise College with the following criteria used: (1) Recipient must be a Douglas High School graduate, (2) Need, (3) Must be a child of a member of the Steelworkers Union.

**XII LAMBDA CHAPTER BETA SIGMA PHI** An annual scholarship in the amount of \$160. Recipient is chosen by donor.

**ACADEMIC SCHOLARSHIPS** are available to freshmen applicants graduating from high schools within Cochise County. Scholarships are in the amount of \$80 or the prevailing rate of the semester registration fee.

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.



College's new computer gets "once over" from students



# **STUDENT AID PROGRAMS**

## **GRANTS**

Cochise College has a number of grants-in-aid available in the areas of athletics, art, music and journalism. Athletic grants are administered by the Coaching Staff. 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 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.

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 EDUCATIONAL 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 that the recipient must have received a college scholarship or must be willing to accept a National Direct Student Loan of an amount 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 student pursuing a course of study leading to a baccalaureate 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 monthly 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 College of Nursing. 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 monthly 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:** Loans are available to full-time students enrolled in a program directly related to law enforcement. Loans awarded to students may be cancelled at the rate of 25% per year for full-time service in public law enforcement. Otherwise, loans carry 7% interest and must be repaid in ten years or at a rate of \$50 per month, whichever is the shorter time period. Tuition grants are available to full-time employees of a publicly funded law enforcement agency who are enrolled in courses which are job-related. Students need not be degree candidates, but the courses must be creditable toward a degree. Grants may be made for tuition and mandatory fees related to the courses taken.

**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.

**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 Whatecott, Dr. T. C. Johnston, John Wilson, N. E. Womer. Other funds have been contributed by The Altrusa Club, Martin Gentry, Joseph Refsnes.

### **CAMPUS EMPLOYMENT**

Jobs are available in various areas. Applications are screened by the Financial Aids Officer. Students are then referred to department heads for interviews and final selection.

**COLLEGE WORK-STUDY:** This is a program for full-time students from low-income families who need employment to help defray educational expenses. Awards are made to deserving students who demonstrate financial need. They may work part-time while attending classes full-time, or a maximum of 40 hours weekly when classes are not in session and after approval by this office. 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 College. Interviews are conducted in the Financial Aid Office.

### **Counseling**

Each entering student is assigned a counselor who will assist him in planning his educational program and in his general growth and adjustments to college life. Career choice and related course sequence is of particular concern. Careful attention is offered each student to aid him in implementing the program of his 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.

## **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. Students interested in testing should see a counselor in the Student Affairs Office.

## **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 school. The information includes entrance requirements, majors offered, courses offered, expenses and general information about the institutions. Career information is available in the Student Affairs Office.

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 Student Affairs Division, will assist graduates in meeting contacts and arranging interviews with prospective employers in their fields of specialization. A counselor in the Student Affairs Office 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 that all 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.

Each room is comfortably furnished and includes wall-to-wall carpeting, individual room air conditioning and heating controls, showers, lavatory, desk, chair, dressers, closet and communication system with the main desk. In addition, each residence hall has a televi-

sion lounge, study rooms, lounge areas, washing and ironing rooms, conference room and an attractive quad area for lounging outside. The women's residence hall has added a kitchen for women who want to prepare a meal or bake something to entertain guests.

## **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 deposit which is refundable less any damage charges when the unit is vacated and \$110.00 per month rent. All utilities and benefits with the exception of telephone service are included in the \$110.00 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, guardians 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 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, Informal 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.

### **Public Events Board**

A subsidiary of the Associated Student Senate, the Public Events Board performs important programming functions for the Students. The PEB is made up of five members representing a cross-section of the student body. The chairman is elected by all-school election each spring. The PEB schedules dances, selects Sunday night movies, plans open-forums and mid-week "happenings". With the cooperation of faculty consultants, the PEB administers the Public Events Series. This series includes cultural events such as films and art exhibits in addition to appearances by popular personalities and groups.

### **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, Chess Club, Delta Epsilon (DECA), Drama Club, Epsilon Pi Epsilon (Police), Freshman Class Officers, Heliograph (Newspaper), International Club, Latter-day Saints Student Association, M.E.C.H.A., Radio Club, Med-Start Club, Spanish Club, Nurses Club, Phi Beta Lambda (Secretarial), Residence Hall Councils, Red Key Club (Leadership Honorary), Rodeo Club, Songleaders, Sophomore Class Officers, Starchuters, Women's Recreation Association (WRA), Veteran's 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 Executive Dean, the Dean of Liberal Arts, the Dean of Occupational Education, the Dean of Student Affairs, the Dean of Special Projects, 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**

<b>FRESHMEN:</b>	Students with fewer than 28 passing units of college credit.
<b>SOPHOMORES:</b>	Students with 28 or more passing units of college credit.
<b>FULL-TIME STUDENTS:</b>	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 to 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 3.000 or better will be placed on Honors.
2. Any student who completes six through 11 units in one semester, or phase, maintains a semester and cumulative GPA of 3.000 or better, and has 18 or more completed units in residency will be placed on 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 (4 or 5) 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.

## **College Level Examination**

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 Student Affairs Office.

## **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. If a student should want any of these courses applied toward a degree from Cochise, he or she must petition the Academic Council.

## **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 student's counselor. The student must attend all classes in which he originally enrolled until the change has been authorized by his counselor, the professors involved, and the Student Affairs Office.

Courses may not be added to a program after the first week of classes. When a course is added after registration and during the first week of classes, a \$2 fee will be assessed for each

course added unless it is determined that the change is due to administrative reason. 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.

## 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 request of the student, is available to another college or university, or to a prospective employer.

*to the student*  
Transcripts are forwarded by the Registrar's office ~~only~~ on ~~the written~~ request of the student. Transcripts to educational institutions will be sent directly by mail. Transcripts given directly to students are classified as ~~unofficial~~. The first transcript is issued without charge with additional transcripts issued at \$1 each.

## Transfer of Credit

*"issued to student"*

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. Only one credit per semester may be earned to fulfill this requirement.
2. A student who is physically unqualified for participation in physical education as certified 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.

### **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.
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 4, Introduction to Literature  
ENGL 6, Critical Evaluative Reading  
ENGL 8-9, Written Communications and Reports  
JOUR 1, Communications  
JOUR 2, Reporting  
JOUR 3, Advanced Reporting  
SPAN 1a-b, Elementary Spanish  
SPAN 3a-b, Intermediate Spanish  
SPAN 75a-b, Intermediate Composition and Conversation  
SPCH 2, Fundamentals of Speech  
SPCH 10, Public Speaking  
SPCH 25, Argumentation and Debate  
SPCH 36, Oral Interpretation of Literature

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 1-2, Acting  
DRAMA 3, Introduction to the Theater  
DRAMA 4, Principles and Techniques of Play Production  
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 50-51, Humanities  
MUS 1-2, Introduction to Music  
MUS 30, Keyboard Harmony  
MUS 32a-b, Music Theory  
MUS 50, Introduction to Jazz  
PHIL 11, Introduction to Philosophy  
PHIL 13, Introduction to Moral Philosophy  
PHIL 20, Philosophies of the East  
PHIL 21, Philosophy of Religion  
SPAN 75a-b, Intermediate Composition and Conversation  
SPAN 104a-b, 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 Cultures 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, Introduction to Museology  
 ANTH 85, Prehistoric Cultures of North America  
 ANTH 86, Historic Indian Tribes of North America  
 BUS 9, Survey of American Business  
 BUS 23, Personnel Psychology  
 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 4-5, History of Western Civilization  
 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 Constitution  
 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 37, Analysis of Archaeological Materials  
 ANTH 40, Introduction to Museology  
 AVIA 12, Applied Aero Math  
 AVIA 14, Aero Physics  
 BIOL 1-2, General Biology  
 BIOL 20, Microbiology  
 BIOL 34, 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, Introduction to Computer Programming  
 CHEM 1, Introduction to Chemistry  
 CHEM 2a-b, General Chemistry  
 D.T. 11, Blue Print Interpretation and Basic Drafting  
 D.T. 12, Technical Graphics I  
 D.T. 20, Technical Graphics II  
 E.T. 1, Introduction to Electronics  
 E.T. 10, Math for Electronic Technicians  
 E.T. 20, Advanced Math for Electronics  
 GEOL 1, Introduction to Geology  
 GEOL 51, Physical Geology  
 G.T. 1, Technical Math I  
 G.T. 2, Technical Math II

MATH 1X, Fundamentals of Math  
 MATH 2X, Elementary Algebra  
 MATH 3X, Plane Geometry  
 MATH 11, Intermediate Algebra  
 MATH 20, College Algebra  
 PHYS 1, Introduction to Physics  
 PHYS 2a-b, General Physics  
 PHYS 3a, Introductory Physics w/Calculus  
 ZOOL 1a-b, General Zoology  
 ZOOL 20a-b, 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, such as PREP, 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)**

PREP, established by Public Law 91-219, provides a program to help servicemen who lack a high school diploma to attain a high school equivalency or to provide remedial and refresher courses preparatory to pursuit of an educational or vocational training program at the college level. Servicemen may get further information about PREP by contacting the Fort Huachuca Education Center (538-2255) or the Cochise College Center in Sierra Vista (458-7110). PREP includes courses in English PX, English Fundamentals and Com-

munications; Soc Sci PX, Social Science Fundamentals; Eng PY, Reading Fundamentals; Math PX, Fundamental Mathematics. Guidance counseling and individual interest and achievement testing are also available to each student.

### **PREP Attendance:**

All absences are recorded. A student who is tardy six times in a month will be charged with a day of absence in addition to the tardies. Class cuts are charged as absences.

When absence affects progress or is excessive, the serviceman will be interrupted or terminated. Enrollment is at the discretion of the school. All sessions must be attended. When absences exceed 10% of the hours in the course, the serviceman will be terminated. When absence is extended for reasons beyond the control of the serviceman, he will be interrupted and enrolled in a subsequent class at the point reached before interruption. A master record of attendance is maintained for each student which is available to authorized persons.

### **PREP Refund:**

A serviceman who does not begin a class will have all advance tuition refunded. A serviceman who withdraws or is terminated prior to completion of the course will be charged the pro rata portion of the total tuition for the course that the completed portion bears to the total length.

### **MDTA-Manpower Development Training Act or successor 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  
Police Science 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



# **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.

## **Occupational Programs**

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

Occupational programs in Middle Management, Law Enforcement, Associate Degree Nursing (RN), Practical Nursing, Nursing Assistant, Office Careers, Medical Secretarial Studies, Construction Trades, 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 curricula, outlined in the following pages, include general education courses intended to broaden the student's understanding of himself and his world. It is assumed through such courses the student will develop a sense of personal and social responsibility and understanding appropriate to his vocation and community affairs.

**COOPERATIVE EDUCATION PROGRAM:** Cochise College students enrolled in any of the College's programs may be selected to participate in this program. This is a cooperative venture 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.

## **ARCHAEOLOGY AIDE — MUSEUM AIDE PROGRAMS FOR AMERICAN INDIANS**

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 a one-year program for the student desiring to receive a certificate.

A student planning to receive the AA Degree must meet the graduation 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, a minimum of 24 hours in anthropology is required for the Archaeology Aide or Museum Aide Program. The remaining 10 hours, to make the total of 60, is accumulated through elective subjects.

The student interested in the Certificate Program must complete the minimum of 24 hours in anthropology. Students enrolled in these programs will follow the 30 sequence in order.

### **FALL SEMESTER**

Anth 1 Origin & Antiquity  
of Man

Anth 35 Introduction to  
Archaeology

Anth 36 Archaeological  
Excavation

Anth 85 Prehistorical Cul-  
tures of North  
America

### **SPRING SEMESTER**

Anth 2 Development of  
Culture

Anth 37 Analysis of Arch-  
aeological Materials

\*Anth 40 Introduction to  
Museology

\*Anth 86 Historic Indian  
Tribes of North  
America

### **SUMMER SESSION**

\*Anth 38 Summer  
Archaeological  
Field Session

\*Anth 40 and 36 are required for Museum Aide. Anth 38 is required for Archaeology Aide.

# 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

July Phase		Units	
(25 weeks)	AT 80g-80f	Basic Flight	3-3
	AT 82g-82f	Intermediate Flight	3-3
	AT 84g-84f	Advanced Flight	3-3
		General Education	12
		TOTAL	30

### January Phase

(19 weeks)	AT 86g-86f	Instrument 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

July Phase			
(25 weeks)	AT 80g-80f	Basic Flight	3-3
	AT 82g-82f	Intermediate Flight	3-3
	AT 84g-84f	Advanced Flight	3-3
		General Education	6
		TOTAL	24

### January Phase

(19 weeks)	AT 86g-86f	Instrument 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**

**July Phase**

AT 80g-80f	Basic Flight	3-3
AT 82g-82f	Intermediate Flight	3-3
AT 84g	Advanced Flight	3
	General Education	3
		<hr/>
		18

**January Phase**

AT 84f	Advanced Flight	3
AT 86g-86f	Instrument Flight	3-3
	General Education	9
		<hr/>
		18

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
ENG 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 Instrumentation	4
AT 17	Shop Management Principles	3
AT 53	Hydraulic and Pneumatic Systems	5
AT 52	Aircraft Assembly, Rigging, and Inspection	7
		<hr/> 76

## 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, 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.

Freshman Year	Total Hours	Sophomore Year	With Intern- ship	Without Intern- ship
Gen. Educ. Requirements	18	Gen. Educ. Requirements	9	9
Area of Concentration	6	Area of Concentration	3	15
Mid-Management Core:		Mid-Management Core:		
Princ. of Marketing	3	Prob. of Management	3	3
Princ. of Management	3	Seminar — Trends & Prac- tices in Marketing & Management	3	3
	—	*Intern. in Coop. Educ.	12	0
	28		<hr/> 30	<hr/> 30

\* 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 on campus 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 3 Credit Hours per each semester.
4. No Internship — this is dependent upon the student's background experience and placement of student in a suitable employment experience.

The Mid-Management courses can be designed to accommodate students who have occupation goals. Two such options are as follows:

### **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):**

<b>First Semester</b>	<b>Total Hours</b>	<b>Second Semester</b>	<b>Total Hours</b>
Mid-Management Core:		Mid-Management Core:	
Princ. of Marketing	3	Prob. of Management	3
Princ. of Management	3	Seminar — Trends & Practices in Marketing & Management	3
Internship in Coop. Ed.	6	Internship in Coop. Ed.	6
*Seminar in Coop. Ed.	1	*Seminar in Coop. Ed.	1
	<hr/>		<hr/>
	12-13		12-13

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

## **SECRETARIAL STUDIES**

Recent advances in business have opened a variety of opportunities in office careers. Interesting secretarial positions are available in government, foreign service, transportation, television, manufacturing, banking, and professional areas.

In accordance with the recommendations of office administrators, the curriculum stresses mastery of office skills, English usage, and desirable personal traits.

In the program outlined, the student is advised to enter the skill classes which mark the present level of their proficiency in these fields. This career program is open to both men and women.

## FRESHMAN YEAR

General Education Requirements:	14 hrs
English Requirement (minimum of 6 hours of general education total)	
Secretarial Core:	18 hrs
Shorthand (6)	
Typewriting (6)	
Math for Business Machines (3)	
Accounting (3)	
Total hours	32 hrs

## SOPHOMORE YEAR

	With 6 hrs Coop	With 12 hrs Coop	Without Coop
General Education Requirements:	14 hrs	11 hrs	17 hrs
Business Administration Courses:	6 hrs	3 hrs	9 hrs
Shorthand (3)			
Personnel Psychology (3)			
Secretarial Studies Core:	6 hrs	6 hrs	6 hrs
Business Communications (3)			
College Secretarial Procedures (3)			
Internship in Coop Education	6 hrs	12 hrs	0 hrs
Total Hours	32 hrs	32 hrs	32 hrs

Internship (on-the-job) training may be taken on a full-time basis during the student's fourth semester (12 hours) or part-time during the student's third and/or fourth semester (6 hours per semester). It is suggested that students enrolling for only one semester choose the fourth semester.

## BILINGUAL SECRETARY

A demand for the properly educated bilingual secretary exists in Southern Arizona. Special courses have been developed which will provide interested students with secretarial skills in English and Spanish. Law offices, insurance and real estate firms, government agencies and other employers are continually searching for secretarial graduates with this type of background.

### BILINGUAL SECRETARIAL PROGRAM

(One-year Certificate)

First Semester	Total Hours
Intermediate Typing	3
Intermediate Shorthand	3
Spanish	3
English	3
Business Communications (Bilingual)	3
Second Semester	
Advanced Typing	3
Advanced Shorthand and Transcription	3
Spanish	3
English	3
Sec. Procedures (Bilingual)	3
	30

## BILINGUAL CLERICAL PROGRAM

<b>First Semester</b>	<b>(One-year Certificate)</b>	<b>Total Hours</b>
Intermediate Typing		3
Spanish		3
English		3
Business Communications (Bilingual)		3
Math for Business Machines		3
<b>Second Semester</b>		
Advanced Typing		3
Accounting		3
Spanish		3
English		3
Sec. Procedure (Bilingual)		3
		<hr/>
		30

## BILINGUAL SECRETARIAL PROGRAM

<b>First Semester</b>	<b>(Two-year Certificate)</b>	<b>Total Hours</b>
*Intermediate Typing		3
*Intermediate Shorthand		3
Spanish		3
English		3
General Electives		3
<b>Second Semester</b>		
Advanced Typing		3
Advanced Shorthand and Transcription		3
Spanish		3
English		3
General Electives		3
		<hr/>
<b>Third Semester</b>		30
Math for Business Machines or Accounting		3
Economics or Business Law		3
Spanish		3
Business Communications (Bilingual)		3
General Electives		3
<b>Fourth Semester</b>		
Sec. Procedures (Bilingual)		3
*Internship		6-12
*General Electives		6
		<hr/>
		30

\* Internship or on-the-job training may be taken during the student's third or fourth semester. This is dependent upon the student being placed in a bilingual position.



## SECRETARIAL STUDIES CERTIFICATE PROGRAM

For those who wish to spend a shorter time in preparation for a clerical or stenographic career, Cochise College offers a one-year secretarial studies certificate program. The student receives training in typewriting, English skills, chooses from a number of business areas and selects from a large number of other courses in acquiring a background for a beginning in the business office.

Required Core Program — Areas A and B required. Select one area from C, D, or E.

		Course	Cr.
A.	Bus 6	Elementary Typing	
	Bus 7	Intermediate Typing	6
	Bus 8	Advanced Typing	
B.	English 1		
	Bus Comm, or English 8		3
C.	Bus 4	Math for Business Machines	
	Bus 1a	Accounting	6
	Bus 1b	Accounting	
		or	
D.	Bus 10	Elementary Shorthand	
	Bus 11	Intermediate Shorthand	6
	Bus 12	Avanced Shorthand & Transcription	
		or	
E.	Bus 4	Math for Business Machines	
	Bus 18	Accounting	6
	Bus 62	Office Procedures	
		TOTAL UNITS in Core Program	15
		Elective Program — Select units from other Business, English, or Economics courses not taken in Core Program	15
			—
		TOTAL Units in Program	30

## 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 to fill their drafting job openings are employing only graduates who have received specialized training in Design and Drafting from Junior 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.

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	Drafting for Electronics	3 hrs.
ET-1	Electronic Foundations	3 hrs.
GT-1	Technical Mathematics I	3 hrs.
GT-5	Manufacturing Materials and Processes I	3 hrs.
		15 hrs.

#### **Second Semester**

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**

### **1 Year Certificate Program**

## **FRESHMAN YEAR**

#### **First Semester**

DT-11	Blue Print 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 that are 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:	
DT 31 Drafting for Electronics Technicians .....	3 hrs
Electronics Technology Core .....	15 hrs
ET 1 Introduction to Electronics .....	(6)
ET 22 Semiconductors and Transistors .....	(4)
ET 25 Electronic Circuits and Systems .....	(5)
<hr/>	
	33 hrs

## SOPHOMORE YEAR

General Education Requirements .....	11 hrs
Science Requirements (Minimum of 3 hrs of	
General Education total)	
Electronics Technology Core: .....	21 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)
<hr/>	
	32 hrs

## MEDICAL SECRETARY

With continued expansion and improvement of health care for people of all ages, opportunities for medical secretaries are increasing.

The student who selects this career program will increase her basic secretarial competencies while studying medical terminology and medical transcription, anatomy, and general education subjects. The second year student will serve an internship in a hospital. Graduates may find employment as medical secretaries or related workers with insurance companies, hospitals, or medical clinics.

<b>First Semester</b>		<b>Cr.</b>
Eng 1	English	3
Zoo 20a	Human Anatomy and Physiology	3
Bus 7	Intermediate Typing	3
PE 1	Physical Education	1
	Elective	6
		<hr/>
		16

<b>Second Semester</b>		<b>Cr.</b>
Spch 2	Speech	3
Zoo 20b	Human Anatomy and Physiology	3
PE 2	Physical Education	1
Bus 4	Business Math	
		or
Bus 1a	Principals of Accounting	3
Bus 81	Medical Terminology	3
	Elective	3
		<hr/>
		16

<b>Third Semester</b>		<b>Cr.</b>
Bus 62	Office Procedures	3
Bus 23	Personnel Psychology	3
Soc 1	Introduction to Sociology	
		or
Psych 2	Elementary Psychology	3
Bus 83	Medical Transcription	3
	Fine Arts Elective	3
		<hr/>
		15

<b>Fourth Semester</b>		<b>Cr.</b>
Bus 95	Internship as Medical Secretary	16

Suggested Electives: Biology 20 and Business 11

# HEALTH TECHNOLOGIES: NURSING

**Nurse Assistant**

**Practical Nurse**

**Associate Degree Nurse**

Cochise College offers an open-ended curriculum in nursing that allows the student to travel at his own pace, get on and off the curriculum ladder as needed.

The nursing curriculum is a basic core in which the student can elect to take all or part. It is so devised 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 a year, the student will have the necessary requirements to apply for State Board exams to become a Licensed Practical Nurse. At the end of two years, 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 Registered 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 school. In addition, courses in general education are provided for all students in the program.

**Nurse Assistants:** Qualified nurse assistants are in constant need so function as members of the hospital or community health team. Primary functions of nurse's assistants are to care for subacutely ill patients and to assist other members of the health team. A 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 .....	6 unit
ZO 20A Anatomy & Physiology .....	(4)
MA10 Measurement of Drugs & Solutions .....	(2)
HT 56 Nursing I .....	10 units
<hr/>	
16 unit	

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

## Second Semester

General Education Requirements .....	7 units
ZO 20B Anatomy & Physiology .....	(4)
EN 10 Written Communications .....	(3)
HT 57 Nursing II .....	11 units
<hr/>	
18 unit	

Student may apply for licensure as a Practical Nurse.

## Third Semester

General Education Requirements .....	9 unit
PY 1 Elementary Psychology .....	(3)
Communications .....	(3)
CH 10 Basic Science .....	(4)
HT 58 Nursing III .....	8 unit
<hr/>	
18 units	

## Fourth Semester

General Education Requirements .....	9 units
Fine Arts or Humanities .....	(3)
Anthro 25 or Sociology I .....	(3)
Elective .....	(3)
HT 59 Nursing IV .....	8 units
<hr/>	
17 unit	

## SUGGESTED ELECTIVES

Spanish

Microbiology

NOTE: The following course work is integrated throughout the Nursing program:

Community and Mental Health Nursing

Care of Children with Physical and Mental Illness

Nutrition and Diet Therapy

Pharmacology

## **POLICE SCIENCE**

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 challenging 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 over-emphasized 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 Police Science	3 hrs
PS 21	Introduction to the Criminal Justice System	3 hrs.
PS 22	Police Patrol Functions I	3 hrs
PS 24	Police Patrol Functions II	3 hrs
PS 27	Rules of Evidence	3 hrs
PS 30	Juvenile Procedures	3 hrs
		<hr/>
		31 hrs

## **SOPHOMORE YEAR**

	General Education	3-6 hrs
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 49	Constitutional Law	3 hrs
PS 52	Accidents, Citations, Disorders	3 hrs
	Elective (or) General Education Course	3 hrs
		<hr/>
		30 hrs

## **Teacher Aide Program**

A program for those students majoring in Education and for those seeking employment as teacher-aides. Enables the student to gain actual on-the-job experience through the college's cooperative education program. The teacher-aide trainees will be placed in local schools on a part-time basis. Credit is granted based on amount of actual experience gained.

# 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. Y 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 and Spring, is the official list of courses offered.

## Agriculture

5 OK

### RANGE MANAGEMENT I

3 UNITS

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.

## Anthropology

### 1 THE ORIGIN AND ANTIQUITY OF MAN

3 UNITS

**Prerequisite:** None.

A survey of human biological origins based upon paleontological and archaeological records including recent developments in physical anthropology.

### 2 THE DEVELOPMENT OF CULTURE

3 UNITS

**Prerequisite:** None.

An introduction to elements of cultural anthropology. The study of man's cultural progress from Lower Paleolithic to historic periods.



## **SOCIETY AND CULTURE**

**3 UNITS**

**Prerequisite:** None.

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.

## **NON-LITERATE SOCIETIES OF THE WORLD**

**3 UNITS**

**Prerequisite:** None.

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.

## **INTRODUCTION TO ARCHAEOLOGY**

**3 UNITS**

**Prerequisite:** None.

A basic study of archaeological theory and technique. Field trips and laboratory work are important aspects of the course.

36b

## **ARCHAEOLOGICAL EXCAVATION**

**3-3 UNITS**

**Prerequisite:** None.

Practical experience through scientific excavation of an archaeological site. Sessions held in the field and laboratory.

46

## **THE ANALYSIS OF ARCHAEOLOGICAL MATERIALS**

**3 UNITS**

**Prerequisite:** Permission of Instructor.

Experience in scientifically analyzing materials recovered in archaeological excavation. Lectures, laboratory sessions and field trips.

## **ARCHAEOLOGICAL SUMMER SESSION**

**6 UNITS**

**Prerequisite:** None

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.

46

## **INTRODUCTION TO MUSEOLOGY**

**3 UNITS**

**Prerequisite:** None. Anthropology courses are recommended for background.

An introduction to museum management, organization, function, conservation and exhibits. Lecture, laboratory and field trips.

## **PREHISTORIC CULTURES OF NORTH AMERICA**

**3 UNITS**

**Prerequisite:** None.

A survey of prehistoric cultures of Canada, the United States and Northern Mexico. Field trips.

## **HISTORIC INDIAN TRIBES OF NORTH AMERICA**

**3 UNITS**

**Prerequisite:** None.

A survey of Native American Tribes from the Arctic to the Mexican Sierra Madre. Field trips.

## **INDIVIDUAL STUDIES**

**1-4 UNITS**

**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.

## **INTRODUCTION TO ART**

**3 UNITS**

**Prerequisite: None.**

Introduction of art elements and principles. A study of the developments of ideas, materials and techniques. Lecture 2 hours, lab 4 hours.

## **BASIC DESIGN**

**3 UNITS**

**Prerequisite: None.**

A study of the basic elements of visual perception and organization. Lecture 2 hours, studio 4 hours.

## **BASIC DRAWING**

**3 UNITS**

**Prerequisite: None.**

An introduction to representational drawing and expressive pictorial design. Lecture 2 hours, studio 4 hours.

## **SURVEY OF WORLD ART**

**3 UNITS**

**Prerequisite: None.**

A study of the development of the art and architecture of western civilization from pre-historic times through the Gothic era. Lecture 3 hours.

## **SURVEY OF WORLD ART**

**3 UNITS**

**Prerequisite: None.**

A continuation of Art 7 through the modern era. Lecture 3 hours.

## **TWO DIMENSIONAL DESIGN**

**3 UNITS**

**Prerequisite: Art 3.**

An introduction of the theory and practice of two dimensional composition and design. Lecture 2 hours, studio 4 hours.

## **THREE DIMENSIONAL DESIGN**

**3 UNITS**

**Prerequisite: Art 3.**

An introduction to methods of sculpture, pottery, and jewelry. Lecture 2 hours, studio 4 hours.

## **BEGINNING FIGURE DRAWING**

**3 UNITS**

**Prerequisite: Art 6 or permission of professor.**

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.

## **BEGINNING COMMERCIAL DESIGN**

**3 UNITS**

**Prerequisite: Art 3.**

The principles of commercial design and techniques of advertising layout, concentrating on practical applications. Lecture 2 hours, studio 4 hours.

## **CERAMICS**

**3 UNITS**

**Prerequisite: Art 3, Art 31, or permission of professor.**

An introduction to clay and glaze techniques through hand-built, wheel-thrown, and sculptural techniques. Student involvement from raw material through fired product. Lecture 2 hours, studio 4 hours.

## **BEGINNING PAINTING**

**3 UNITS**

**Prerequisite:** 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.

## **SCULPTURE**

**3 UNITS**

**Prerequisite:** Art 3, Art 31, or permission of professor.

An introduction to sculptural medias and techniques through wood, plaster, metal, plastic, clay, paper, and stone. Student involvement from raw material to finished product. Lecture 2 hours, studio 4 hours.

## **Aviation Technology**

### **AIRFRAME AND POWER PLANT UPGRADE**

**6**

A review of the total A & P program curriculum designed for the military aircraft mechanic who has 30 or more months experience. Upon completion of the 90 hours of lecture-discussion for 6 units of credit (3 units airframe, 3 units power plant) the student will be qualified to take FAA written, oral and practical examinations.

### **AIRCRAFT MATERIALS AND PROCESSES**

**4 UNITS**

Exploration of the common as well as the newer and more sophisticated materials of the aviation industry to provide general foundation for practices and techniques which will be refined during the laboratory work involved in the Airframe and Powerplant Maintenance Program.

### **APPLIED AERO MATH**

**3 UNITS**

A rapid review of high school algebra, plane geometry and arithmetic manipulations directly applicable to the Aviation Mechanic Technician's everyday problems.

### **AERO PHYSICS**

**3 UNITS**

A basic physics course with emphasis on electrical concepts, mechanical leverages, and pressure problems, discussion and problems realistically oriented toward the common problems of the Aviation Mechanic Technician.

### **AERONAUTICS DRAFTING**

**4 UNITS**

A course in basic drafting skills with emphasis on blueprint interpretation and sketching with considerable practice in tracing electrical circuits on schematic drawings.

### **THEORY OF FLIGHT AND INSTRUMENTATION**

**4 UNITS**

A study of the theory of flight as it relates to the maintenance technician with particular emphasis on the associated instrumentation in an aircraft.

### **SHOP MANAGEMENT PRINCIPLES**

**3 UNITS**

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.

**BASIC AIRCRAFT POWERPLANTS****11 UNITS**

An introductory course in powerplants of various kinds specialized for aircraft use, a foundation for AT-30.

**AIRCRAFT PROPELLER SYSTEMS****3 UNITS**

A study of the complex nature of sophisticated propeller systems used on modern aircraft, including propellers used with turbine power.

**ADVANCED AIRCRAFT POWERPLANTS****11 UNITS**

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.

**BASIC AIRFRAME STRUCTURES****5 UNITS**

An introductory course in actual structures and repair procedures applicable to same.

**AIRCRAFT ELECTRICAL SYSTEMS****4 UNITS**

A study of the entire electrical system, as well as the component parts, with trouble-shooting and repair as objectives.

**ADVANCED AIRFRAME STRUCTURES****6 UNITS**

A continuation of AT-40 with emphasis on more sophisticated repairs to larger aircraft primarily in the laboratory.

**AIRCRAFT ASSEMBLY, RIGGING AND INSPECTION****7 UNITS**

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 Federal Aviation Regulations.

**HYDRAULIC AND PNEUMATIC SYSTEMS****5 UNITS**

A study of aircraft hydraulic and pneumatic systems in depth with laboratory experience oriented toward trouble-shooting and repair.

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

**BASIC FLIGHT****3-3 UNITS**

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.

**INTERMEDIATE FLIGHT****3-3 UNITS**

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.

**ADVANCED FLIGHT****3-3 UNITS**

The student will become proficient in all the commercial maneuvers and in controlling the aircraft solely by reference to instruments. He will be in-

troduced to instrument procedures. Commercial rating will be awarded upon successful completion of AT 84.

**g-86f** **INSTRUMENT TRAINING** **3-3 UNITS**  
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.

**g-88f** **MULTI-ENGINE** **1-2 UNITS**  
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.

**g-89f** **FLIGHT INSTRUCTOR** **3-2 UNITS**  
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.

**90a-90b** **AIRLINE TRANSPORT RATING PROGRAM** **9-6 UNITS**  
Designed to meet minimum requirement for an Airline Transport Rating as set forth in Federal Aviation Regulations.

**92g-92f** **INSTRUMENT FLIGHT INSTRUCTOR** **1-2 UNITS**  
**Prerequisites:** Successful completion of AT80, 82, 84, 86 and 89 or permission of the Chief Flight Instructor.  
Development of teaching skills and knowledge required of a Certified Instrument Flight Instructor. Ground School 1 unit, Flight 2 units.

**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.

## **Biology**

**DEVELOPMENTAL SCIENCE** **3 UNITS**  
**Prerequisite:** None.  
A survey science course for the non-science oriented student. The main theme of aspects of human diseases includes areas of biology, chemistry, mathematics and physics with laboratory experiences using science equipment.

**GENERAL BIOLOGY** **4 UNITS**  
**Prerequisite:** None.  
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.

**GENERAL BIOLOGY** **4 UNITS**  
**Prerequisites:** 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 UNIT**

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

A survey of microbic life and fundamental biological peculiarities. The characteristics of bacteria as prototypes of all microorganisms; characteristic 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 UNIT**

**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**

1

## **GENERAL BOTANY**

**4 UNITS**

**Prerequisite:** Completion of a semester of high school or college chemistry or college biological science. 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**

**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.

## **Business**

1a-1b

## **PRINCIPLES OF ACCOUNTING**

**3-3 UNITS**

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

The recording of transactions, the theory of debit and credit, the classification of accounts and the preparation and interpretation of financial statements as applied to sole proprietorships, partnerships, and corporations. Various questions, problems, and examinations will be given.

2a-2b

## **INTERMEDIATE ACCOUNTING**

**3-3 UNITS**

**Prerequisite:** Business 1b.

Basic process and concepts of accounting; form and content of income statements and balance sheets, accounting for stockholder's equity, theory and

problems involved in accounting assets and liabilities, income determination, analysis, and interpretation of financial statements.

## **MATH FOR BUSINESS MACHINES**

**3 UNITS**

**Prerequisite:** None.

Fundamentals of business mathematics and the ability to communicate with the "number language" of today's business world through use of business machines. Students advance at own rate, benefiting from increased speed and efficiency of learning, higher achievement levels, possible enrichment of their work, and an opportunity to gain complete and thorough mastery of subject matter and machines.

## **BUSINESS MATH (Programmed)**

**3 UNITS**

**Prerequisite:** None

Fundamentals of business mathematics and the ability to communicate with the "number language" of today's business world. Student advances at own rate, benefiting from increased speed and efficiency of learning, higher achievement levels, possible enrichment of his work, and an opportunity to gain complete and thorough mastery of subject matter.

## **TYPING REVIEW**

**1 UNIT**

**Prerequisite:** Prior typing experience.

Through individualized instruction, case problems, and production work, the student will review skills and mechanical functions of the typewriter, review letter format, and practice tabulation and manuscripts. Course begins at midterm.

## **ELEMENTARY TYPING**

**3 UNITS**

**Prerequisite:** None.

Development of basic typewriting skills and techniques. Introduction to letter styles and forms, tabulations and manuscript writing through individual case problems and production projects. Students who have had typing in high school should enroll in Business 5 or 7.

## **INTERMEDIATE TYPEWRITING**

**3 UNITS**

**Prerequisite:** Business 6, or high school typing, or ability to type 30 w.p.m., or permission of the professor.

Improvement of typewriting skills including technique and accuracy in problem typing, as well as demonstrating an increase in words per minute in timed writings. Production work would include styles of business letters and business forms.

## **ADVANCED TYPING**

**3 UNITS**

**Prerequisite:** Business 7, or ability to type 50 w.p.m. or permission of the professor.

Additional typewriting skills in special, more demanding problems in business letters, manuscripts, tabulation, and various business forms. Introduction to actual business situations and demands faced by office typists. Additional speed will also be acquired.

## **SURVEY OF AMERICAN BUSINESS**

**3 UNITS**

**Prerequisite:** None.

Fundamental characteristics and functions of modern business, with emphasis on possible career opportunities.

## **ELEMENTARY SHORTHAND**

**3 UNITS**

**Prerequisite:** Business 6 or equivalent, minimum grade of C in English, or permission of the professor.

Emphasis on Gregg Shorthand theory. Students are expected to attain minimum speed of 60 words a minute on familiar material. Students with high school shorthand should enroll in Business 11 or 13.

## **INTERMEDIATE SHORTHAND**

**3 UNITS**

**Prerequisite:** One year of shorthand in high school, or Business 10 with a grade of C or better, or permission of the professor.

Improvement of shorthand skills and development of dictation speed to minimum of 80 words a minute on new material.

## **ADVANCED SHORTHAND AND TRANSCRIPTION**

**3 UNITS**

**Prerequisite:** Business 11, with grade of C or better, or two years of shorthand in high school, or permission of the professor.

Emphasis on dictation, vocabulary development, and transcription. Students are expected to attain a minimum skill of 100 words a minute on new material.

## **SHORTHAND REVIEW**

**1 UNIT**

**Prerequisite:** Previous shorthand experience, ability to communicate in written English.

Reinforcement of previous ability to write shorthand, through the review of principles and theory of Gregg Shorthand. Students become acquainted with Diamond Jubilee Shorthand changes, and will be able to transcribe practiced material at 60 words a minute for admission to Business 11. Course begins at midterm.

## **BILINGUAL SHORTHAND — TYPING I**

**3 UNITS**

(English-Spanish)

**Prerequisites:** Spanish proficiency at the second year level, or by permission of the instructor, and have finished or currently enrolled in Business 7 or 8 and/or 11 and 12. It is also recommended that the student have completed or be enrolled in Spanish 75a.

For students interested in qualifying as a bilingual (English-Spanish) stenographer. Dictation in both English and Spanish shorthand, to be transcribed into mailable copy in both English and Spanish. Minimum dictation rate will be 60 words a minute, typing rate of 40 words a minute, with transcription speed of 15 words a minute.

## **BILINGUAL SHORTHAND — TYPING II**

**3 UNITS**

(English-Spanish)

**Prerequisite:** Business 14 and have finished or are currently enrolled in Spanish 75a or 75 b.

Continuation of Business 14. Further development of speed and accuracy in typing forms, telegrams, reports, minutes of a meeting, and manuscript in Spanish.



## **NOTEHAND**

**3 UNITS**

### **Prerequisite: None**

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, not vocational training.

## **CALCULATING MACHINES**

**2 UNITS**

### **Prerequisite: None**

Development of fundamental skill in operating rotary calculators, 10-key and printing calculators, electronic computation equipment.

## **BUSINESS STATISTICS**

**3 UNITS**

### **Prerequisite: Business math or permission of the professor.**

Descriptive statistics, averages, dispersion, elementary statistical inference, index numbering, time series, correlations, chi-square testing, point and interval estimation, with application on business and economic problems in workbook assignments and tests.

## **TAXATION PRINCIPLES AND PROCEDURES**

**3 UNITS**

### **Prerequisite: Business 1a, 1b or permission of the professor.**

Tax laws, accounting procedures and preparation of required United States and Arizona Income Tax Returns as they apply to individuals and business. This course is intended for those who do not anticipate specialization beyond the junior college level, but is of college level and may in some cases be accepted for transfer.

## **PERSONNEL PSYCHOLOGY**

**3 UNITS**

### **Prerequisite: None.**

Human behavior as it occurs in business and industry, psychological views as they pertain to selection, training, evaluation, promotion, and supervision of employees. Evaluation of consumer behavior through various methods in an attempt to better realize the effects of consumer research, advertising and selling.

## **BUSINESS LAW**

**3 UNITS**

### **Prerequisite: None.**

Basic legal principles involved in laws of contracts, negotiable instruments and property and business organizations to assist in meeting daily problems of management, ownership or employment in business.

## **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.

## **ANALYZING FINANCIAL STATEMENTS\***

**3 UNITS**

### **Prerequisite: Permission of the instructor.**

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.

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

## **REAL ESTATE**

**3 UNITS**

**Prerequisite: None.**

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.

## **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.

## **INSURANCE**

**3 UNITS**

**Prerequisite: None.**

Principles and practices of insurance including coverage available, buying methods, procedures for settling claims, and analysis of contracts and forms purchased by the average individual.

## **PRINCIPLES OF MANAGEMENT**

**3 UNITS**

**Prerequisite: Business 55 or permission of professor.**

Principles involved in the management of organizations with emphasis on functions, processes, decision making and human relations at the first-line supervisory level.

## **SALESMANSHIP**

**3 UNITS**

**Prerequisite: None.**

Career opportunities in sales work, practical and psychological factors in selling, development of desirable sales personality, correct techniques in conducting sales campaigns. Members of the class will engage in practical sales demonstrations.

## **PRINCIPLES OF MARKETING**

**3 UNITS**

**Prerequisite: Approval of Mid-Management professor.**

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.

## **PROBLEMS OF MANAGEMENT**

**3 UNITS**

**Prerequisite: Business 55 and 52, or permission of professor.**

Problems which first-line supervisors face in achieving the goals of their departments with emphasis on practical solutions to technical and human relations problems.

## **HOTEL-MOTEL MANAGEMENT**

**2-21 UNITS**

**Prerequisite: Permission of professor.**

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

## **PRINCIPLES OF ADVERTISING**

**3 UNITS**

**Prerequisite: None.**

Role of advertising in distribution, including advertising media, advertising organizations, advertising copy, layout, and production.

**COLLEGE SECRETARIAL PROCEDURES (Bilingual) 3 UNITS**

A course for students who wish to become bilingual secretaries, conducted in Spanish and in English. The student will develop office vocabulary in both Spanish and English and will learn and experience general office procedures, including duties of office workers, staff members and management that will enable her to function as a member of an office staff.

**COLLEGE SECRETARIAL PROCEDURES 3 UNITS**

**Prerequisite: Business 11 or permission of instructor.**

Office organization and layout, workflow, procedures, standards, personnel policies, and supervision procedures through progressive job situations.

**OFFSET LITHOGRAPHY 3 UNITS**

**Prerequisite: Business 6 or equivalent.**

Development of skill in the operation of the offset machine, including preparation of direct image masters, presensitized offset plates, and artwork for the preparation of negatives.

**BUSINESS COMMUNICATIONS 3 UNITS**

**Prerequisites: English 1, Business 6**

Development of skills and techniques used in communicating facts and ideas in business.

**BUSINESS COMMUNICATIONS (Bilingual) 3 UNITS**

**Prerequisites: English 1, Business 6, and Spanish proficiency at the second year level, or by permission of the instructor.**

Emphasis is on the development of skills and techniques needed by a bilingual (Spanish-English) office worker to communicate facts and ideas in both languages.

**KEY PUNCH 1 UNIT**

**Prerequisite: Business 6, or high school typing, or permission of the professor.**

Development of key punch machine operation to job entry level skill.

**INTRODUCTION TO DATA PROCESSING 3 UNITS**

**Prerequisite: None.**

An overview of data processing, including the history and use of tabulating machines and electronic computers. Role of the punched card, functions of various machines, elementary procedural flow charts, and programs for electronic computers.

**INTRODUCTION TO COMPUTER PROGRAMMING 3 UNITS**

Exploration of various computer systems with emphasis on flow-charting, input and output of data and learning to develop arithmetic algorithms. A "hands on" approach.

**MEDICAL TERMINOLOGY 3 UNITS**

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

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

33	<b>MEDICAL TRANSCRIPTION</b> <b>3 UNITS</b> <b>Prerequisites:</b> Business 81, Zoology 20a and Zoology 20b, ability to type 50 wpm or permission of professor. Transcribing histories, physicals, admission and discharge notes, and surgical dictation through extensive practice on transcription equipment.
3	<b>SEMINAR — TRENDS AND PRACTICES IN MARKETING AND MANAGEMENT</b> <b>3 UNITS</b> <b>Prerequisite:</b> Business 52, 55, 57. Designed to dovetail theory and practice. Problems encountered by students in their training stations will be discussed. To be taken concurrently with Internship in Marketing, Business 9 lab.
95	<b>INTERNSHIP AS MEDICAL SECRETARY</b> <b>16 UNITS</b> <b>Prerequisite:</b> Business 81, 83 Dovetailing theory and practice with experience in a medical record department or similar facility and discussion of problems encountered in the particular training station. Lecture-Laboratory experience.
99	<b>INDIVIDUAL STUDIES</b> <b>1-4 UNITS</b> <b>Prerequisite:</b> Approval of Division Chairman and the Professor. Solving a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.
Chemistry	
1	<b>INTRODUCTION TO CHEMISTRY</b> <b>4 UNITS</b> <b>Prerequisite:</b> None. 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	<b>GENERAL CHEMISTRY</b> <b>4 UNITS</b> <b>Prerequisites:</b> One year of high school chemistry or 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	<b>GENERAL CHEMISTRY</b> <b>4 UNITS</b> <b>Prerequisite:</b> 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	<b>BASIC SCIENCE: HEALTH AND MEDICAL CONCEPTS</b> <b>4 UNITS</b> <b>Prerequisite:</b> None. A one-semester laboratory course dealing with a number of basic science concepts but emphasizing 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.

**Developmental Program****1-12 UNITS**

The Developmental Program concentrates on teaching students how to earn credits in college classes and on advising students about possible careers and graduation requirements. Reading, notetaking and test-taking skills are emphasized. Courses in the program include History 15, Science X, Reading Y, Math 2X, Speech 2, Psychology 1, Humanities 1, Composition 1. (See individual catalog descriptions.)

Interested students should contact the college before the beginning of the fall or spring semesters.

**Drafting Technology**

11

**BLUEPRINT INTERPRETATION & BASIC DRAFTING****4 UNITS****Prerequisite: None.**

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.

### **TECHNICAL GRAPHICS I**

**3 UNITS**

**Prerequisite:** None.

Emphasis on orthographic and axonometric projection, geometric forms, graphs, basic dimensioning and elements of descriptive geometry. Two lectures, 4 hours laboratory.

### **TECHNICAL GRAPHICS II**

**3 UNITS**

**Prerequisite:** DT 12

Study of auxiliary and oblique surfaces, intersections, detailing standards, fasteners, materials, and dimensioning. Elements of descriptive geometry are stressed. Two lectures, 4 hours laboratory.

### **SPATIAL RELATIONSHIPS**

**3 UNITS**

**Prerequisite:** DT 12

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.

### **DRAFTING FOR ELECTRONICS**

**3 UNITS**

**Prerequisite:** DT 12 or concurrent with.

Concentration on the developmental skill in mechanical drafting as it applies to electricity and electronics. Demonstration of the ability to delineate electronic component symbols, block diagrams, wiring diagrams, schematics and miniaturized circuitry. Two lectures, 4 hours laboratory.

### **DRAFTING FOR MANUFACTURING**

**4 UNITS**

**Prerequisite:** DT 12 and GT 1.

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.

### **CONSTRUCTION DRAFTING**

**4 UNITS**

**Prerequisite:** DT 12 and GT 1.

Principles and applications of architectural and structural details as they apply to the residential and structural building industry. Two lectures, 6 hours laboratory.

### **TOPOGRAPHICAL DESIGN AND DRAFTING**

**4 UNITS**

**Prerequisites:** DT 12 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 area. Elements of descriptive geometry, technical math, and material and processes of industry are used in solving design problems. Two lecture - 6 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.

**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. Lecture 3 hours.

**10 THEATER WORKSHOP**

**1 UNIT**

**Prerequisite:** Permission of professor (audition).

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.

A study of the fundamental characteristics of American capitalism, the basic areas of economics analysis, the economic theories and practical applications to current economic problems. Lecture 3 hours.

**2** **PRINCIPLES OF ECONOMICS** **3 UNITS**  
**Prerequisite: Economics 1.**  
 A study of price theory for the product market models, agricultural economics, monopolistic competition, the distribution of income, labor economics, the problems of poverty and insecurity, the public sector and taxation, the international economy and gold and current balance of payments problems, the economics of change and comparative economics. Lecture 3 hours.

**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.

## Education

**11** **INTRODUCTION TO EDUCATION** **3 UNITS**  
**Prerequisite: Sophomore standing or permission of Professor.**  
 The significance of our educational institutions in the development of our society; an introduction to the cultural and social influences on educational theory and practice. Lecture 3 hours.

## Electronics Technology

**1** **ELECTRONICS FOUNDATIONS** **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, iodes and bridge circuits will also be introduced to give the student a general concept of the field of electronics.

**2** **INTRODUCTION TO ELECTRONICS** **7 UNITS**  
**Prerequisite: ET 10 or equivalent (ET 10 may be taken concurrently).**  
 An introduction to basic electronic problems, coverage of Ohms law, magnetism, network resistances, capacitances and inductances and analysis and testing of direct current and alternating current circuits.

**10** **MATHEMATICS FOR ELECTRONIC TECHNICIANS** **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 electronic 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.

**20** **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.



**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.

**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.

**PULSE CIRCUITS****5 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.

**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.

**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.

**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 second class FCC radio-telephone examination.

**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.

**COMMUNICATION ELECTRONICS I****4 UNITS****Prerequisite:** ET20 and ET 22 (ET 20 may be taken concurrently).

Resonant circuits, coupled circuits, voltage and power amplifiers and os-

oscillators will be studied and analyzed in this course. Stress on practical application and problem solving.

47

## **COMMUNICATION ELECTRONICS II**

**4 UNITS**

**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.

60

## **ACTIVE CIRCUITS**

**4 UNITS**

**Prerequisite:** Permission of Instructor.

Analysis and design of linear active circuits with emphasis on solid-state devices and circuits. Starting with a background of linear circuits, solid state components will be described in terms of characteristic curves. The h-parameter and hybrid pi model will be developed and used extensively. Small signal and large signal uncompensated amplifiers will be studied.

62

## **WAVE GENERATION AND SHAPING**

**3 UNITS**

**Prerequisite:** Permission of Instructor.

Passive and active devices and circuit configuration used for generation and processing of pulse, digital, and switching waveforms will be studied. Techniques and analysis of wave shaping circuits, logic gates, timing and sweep circuits, memory elements, and oscillators will be emphasized.

This course will familiarize the student with circuitry and signals used extensively in computers, control systems, digital instrumentation, pulse communications, radar, telemetry, television, and in many areas of experimental research.

## **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**

**Prerequisites:** 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**

**2-3 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-skanning 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.

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 4-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. 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 by writing three library papers. Some emphasis will be placed on critical and evaluative reading.

3

### **ADVANCED COMPOSITION**

**3 UNITS**

**Prerequisite:** English 2.

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 3.

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. The student will not receive credit for English 4 if he 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.

## **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.

## **CREATIVE WRITING**

**3 UNITS**

**Prerequisites:** English 1 and permission of professor.

A three hour lecture and workshop in creative writing with emphasis on composition of poetry, short story, essay and description.

## **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.

## **WRITTEN COMMUNICATIONS AND REPORTS**

**3 UNITS**

**(Police Science 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 police science.

Concentrated practice in the form of police reports, including vocabulary study and exact observation of cases.

## **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.

## **GRAMMAR, USAGE, AND PUNCTUATION**

**3 UNITS**

A general review of modern English punctuation, grammatical structure, diction, and modern American English usage. Lecture 3 hours.

## **THE STUDY OF ENGLISH WORDS**

**2-2 UNITS**

Designed to assist the student to increase his command of modern English. Emphasis is primarily on words defined from Latin (15a) and Greek (15b). Etymological meanings and modern meaning will be considered along with the semantic and phonetic changes involved. 15a is not prerequisite to 15b.

## **STUDY OF WORLD LANGUAGES**

**3 UNITS**

**Prerequisite:** None

Designed to acquaint the student with material from which he will induce the

phonological and grammatical processes that are common to a variety of languages. Students will be able to perform phonetic and grammatical analyses from a language corpus. Student will also learn information about the major language families of the world.

### **BRITISH LITERATURE**

**3 UNITS**

**Prerequisites:** Six units of freshman English or permission of professor.

The student will discuss major themes in English literature, examine the literary genres, and use basic critical skills to evaluate literature.

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**3 UNITS**

**Prerequisite:** Six units of freshman English or permission of professor.

The student will discuss major themes 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.

### **INTRODUCTION TO SHAKESPEARE**

**3 UNITS**

**Prerequisites:** 6 units of freshman English.

An introduction to the major comedies, histories and tragedies of Shakespeare. Taught spring semester only.

### **BRITISH LITERATURE**

**3 UNITS**

**Prerequisites:** Six units of freshman English or permission of professor.

The student will discuss major themes in English literature, examine the literary genres, and use basic critical skills to evaluate literature.

### **BRITISH LITERATURE**

**3 UNITS**

**Prerequisite:** Six units of freshman English or permission of professor.

The student will discuss major themes 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.

### **INTRODUCTION TO SHAKESPEARE**

**3 UNITS**

**Prerequisites:** 6 units of freshman English.

An introduction to the major comedies, histories and tragedies of Shakespeare. Taught spring semester only.

### **AMERICAN LITERATURE**

**3 UNITS**

**Prerequisites:** Six units of freshman English or professor's permission.

A critical study of selected study of selected prose and poetry in America from the Colonial Period to 1860.

### **AMERICAN LITERATURE**

**3 UNITS**

**Prerequisite:** Six units of freshman English or professor's permission.

A critical study of selected American prose and poetry 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 professor.  
 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, and Shakespeare.
- 27 WORLD LITERATURE 3 UNITS**  
**Prerequisite:** Six units of freshman English or permission of professor.  
 A study of eight major literary works from the Renaissance to the present, including selections of Voltaire, Goethe, Stendahl, Dickens, Dostoevsky, Turgenev, Flaubert, and Mann. English 26 is not a prerequisite to English 27.
- 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.

## Environmental Studies

- 1 GENERAL ENVIRONMENTAL STUDIES 3 UNITS**  
**Prerequisites:** 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 environmental degradation.
- 10 WILDERNESS LIVING 3 UNITS**  
**Prerequisites:** PE 33 or permission of instructor.  
 A study of man's relation to the wilderness through direct wilderness experience and through selected works of Thoreau, Muir, Leopold, Dubos and other wilderness philosophers. Students will also learn how to use backpacking equipment and how to live in harmony with a wilderness environment. Two hours lecture-discussion a week and a minimum of four backpacks. Students must furnish their own equipment. (Same as PE 43).

## French

- 1a-1b ELEMENTARY FRENCH 3-3 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.

## **TECHNICAL MATHEMATICS II**

**3 UNITS**

**Prerequisite:** GT 1.

A comprehensive study of trigonometry as applied to electronics and drafting industrial situations with an introduction into calculus.

## **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.

## **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.

## **Geography**

### **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.

### **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.

### **POLITICAL GEOGRAPHY**

**3 UNITS**

**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.

### **ECONOMIC GEOGRAPHY**

**3 UNITS**

**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.

**11**                    **GEOGRAPHY OF MEXICO AND CENTRAL AMERICA**                    **3 UNITS**  
**Prerequisite: None.**  
 An introductory study of the culture, environment, and economic activities of Mexico, the Central American Republics and the Caribbean Islands.

**12**                    **GEOGRAPHY OF SOUTH AMERICA**                    **3 UNITS**  
**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.

**99**                    **INDIVIDUAL STUDIES**                    **1-4 UNITS**  
**Prerequisites: 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.

## Geology

**1**                    **INTRODUCTION TO GEOLOGY**                    **4 UNITS**  
**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.

**51**                    **PHYSICAL GEOLOGY**                    **4 UNITS**  
**Prerequisite: None.**  
 Principles of physical geology for students who plan to major in geology, hydrology, engineering, and agriculture. 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.

## German

**1a-1b**                    **ELEMENTARY GERMAN**                    **3 UNITS**  
**Prerequisite: 1a is a prerequisite for 1b.**  
 A study of grammar, reading skills, comprehension of the spoken language, pronunciation, composition, and conversation for those students with no previous training in German or with limited experience in the language.

## Group Dynamics

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



## PERSONAL HEALTH

3 UNITS

**Prerequisite:** None.

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.

## FIRST AID AND SAFETY

3 UNITS

**Prerequisite:** None.

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.

## SCHOOL AND COMMUNITY HEALTH

3 UNITS

**Prerequisite:** Sophomore standing or permission of professor.

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.



Cheerleaders add zip to college activities, particularly basketball

## Health Technologies

(HT)

### Associate Degree Nurse

#### 56 NURSING I 10 UNITS

**Prerequisite:** Admission to the ADN program.

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 therapeutic techniques are presented through lecture demonstration and supervised clinical practice. Legal and ethical aspects of nursing practice will be studied. Lecture 6 hours, Laboratory 12 hours.

#### 57 NURSING II 11 UNITS

**Prerequisite:** 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 student is assigned total patient care of a few selected patients under the direction of the clinical instructor. Pharmacology and diet therapy will be integrated throughout the course. Lecture 7 hours, Laboratory 12 hours.

### Completion of the Practical Program

#### 58 NURSING III 8 UNITS

**Prerequisite:** HT 56, HT 57, ZO 20A, ZO 20B, MA 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 will be 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 will integrate understandings to further the family-centered perspective; supervised clinical practice in caring for mothers, newborn and children; participation in clinics, nursery-school and other child-care agencies. Lecture 4 hours, Laboratory 12 hours.

#### 59 NURSING IV 8 UNITS

**Prerequisite:** HT 56, HT 57, HT 58

Advanced nursing skills will be 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 and psychiatric concepts are integrated. Basic supervisory skills and techniques will be taught. Legal and ethical considerations, history of nursing, nursing organizations and current trends are explored. Lecture, discussion, demonstration and audio-tutorial aids will be used. Lecture 4 hours, Laboratory 12 hours.

# 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**  
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.

## **SEMINAR AND FIELD STUDIES IN THE HISTORY OF THE SOUTHWEST**

**6 UNITS**

A composite study of the American Southwest from the Spanish period until 1920 with field excursions to provide historical and geographic background so the student will more fully understand and appreciate the heritage of the area. Offered in the summer only.

99

## **INDIVIDUAL STUDIES**

**1-4 UNITS**

**Prerequisites:** 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.

## **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 those students electing to submit critiques of required lectures, plays, motion pictures, concerts, and art exhibits.

50

### **HUMANITIES**

**4 UNITS**

**Prerequisite:** 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**

**Prerequisite:** 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.

## **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, and studying the principles and problems of mass communications. Taught spring semester only.

2

### **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.

**3 ADVANCED 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. Credit towards 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 1X.  
 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.

## **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.

## **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 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

## **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.

## **SLIDE RULE**

**1 UNIT**

**Prerequisite:** Permission of the professor.

Multiplication and division, ratio and proportion, combined operations, square root, cube root, logarithms, trigonometric functions, theory and practice of placing decimal point in all operations. Lecture 1 hour.

## **COLLEGE ALGEBRA AND TRIGONOMETRY**

**5 UNITS**

**Prerequisites:** High school plane geometry or Math 3X, together with two years of high school algebra or Math 11.

Includes sets, logic of 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.

## **ANALYTICAL GEOMETRY WITH CALCULUS**

**5 UNITS**

**Prerequisites:** 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 continuity; definition and application of the derivative, antiderivative, and definite integral; differentiation of algebraic functions; trigonometry; and conic sections. Lecture 5 hours.

## **ANALYTICAL GEOMETRY WITH CALCULUS**

**5 UNITS**

**Prerequisite:** Math 51 with a grade of C or better.

Differentiation of trigonometric and exponential functions and their inverses; parametric equations; arc length; polar coordinates; formulas, methods, and applications of integration; solid analytical geometry, and vectors in a plane. Lecture 5 hours.

- 53 ANALYTICAL GEOMETRY WITH CALCULUS 3 UNITS**  
**Prerequisite:** Math 52 with grade of C or better.  
 Vectors in three dimensions, elements of infinite series, partial differentiation and multiple integration. Lecture 3 hours.
- 54 DIFFERENTIAL EQUATIONS 3 UNITS**  
**Prerequisite:** Math 53 with grade of C or better.  
 Special types of first order differential equations by methods of variables separable, homogeneous functions, exact differentials, integrating factors, Bernoulli and Clairaut, and inspection; simple higher order equations; general higher order linear differential equations having constant or variable coefficients with emphasis on obtaining a particular solution by methods of undetermined coefficients, variation of parameter, and differential operations; solutions of simultaneous differential equations; LaPlace Transformation and use of series, and applications of differential equations to physical problems. Lecture 3 hours.
- 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.  
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- Music**
- 1 INTRODUCTION TO MUSIC 3 UNITS**  
**Prerequisite:** None.  
 An introduction to musical form with emphasis on listening to recorded music of the 18th Century through the 20th Century. Lecture 2 hours, studio 1 hour.
- 2 INTRODUCTION TO MUSIC 3 UNITS**  
**Prerequisite:** None.  
 A continuation of Music 1 with emphasis on style characteristics of music from the Renaissance to the present. Lecture 2 hours, studio 1 hour.
- 10(B) BAND 1 UNIT**  
**Prerequisite:** Audition.  
 Study and performance of outstanding musical literature transcribed from orchestral repertory or composed for band. May be repeated for credit. Daily rehearsal.
- 10(C) CHOIR 1 UNIT**  
**Prerequisite:** Audition.  
 Study and performance of outstanding literature from various periods of musical composition. May be repeated for credit. Daily rehearsal.
- 13 (I) a-b INSTRUMENT - INDIVIDUAL INSTRUCTION 1-1 UNITS**  
**Prerequisite:** Permission of the professor.  
 Student prepares recital literature for jury examination. Weekly lesson.

20(I)	<b>ENSEMBLE</b> <b>Prerequisites:</b> Audition and two years playing experience. 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.	1 UNIT
20(V)	<b>ENSEMBLE</b> <b>Prerequisites:</b> Audition and two years singing experience. Study and performance of vocal literature appropriate to duets, trios, or larger vocal ensembles. Rehearsal 3 hours per week.	1 UNIT
30	<b>KEYBOARD HARMONY</b> <b>Prerequisite:</b> To be taken concurrently with Music 32. Special work on ear training, keyboard harmonization, and application of musical theory to the keyboard. Studio 2 hours.	1 UNIT
32a-32b	<b>MUSIC THEORY</b> <b>Prerequisite:</b> 32a is a prerequisite for 32b. A systematic study of the rules of music with emphasis on ear training and sight singing. Lecture 3 hours.	3-3 UNITS
50	<b>INTRODUCTION TO JAZZ</b> <b>Prerequisite:</b> None. A study of the history and development of jazz music in the United States from 1900 to the present.	3 UNITS

## Philosophy

11	<b>INTRODUCTION TO PHILOSOPHY</b> <b>Prerequisites:</b> English 2 and sophomore standing. An introduction to philosophical method 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.	3 UNITS
13	<b>INTRODUCTION TO MORAL PHILOSOPHY</b> <b>Prerequisite:</b> None. An introduction to the major ethical and moral problems with emphasis on contemporary questions of morality and ethics.	3 UNITS
20	<b>PHILOSOPHIES OF THE EAST</b> <b>Prerequisite:</b> English 2 and sophomore standing. An introduction to the thought of Hinduism, Buddhism, Taoism, and Confucianism with emphasis on their roles in the modern world. Lecture 3 hours.	3 UNITS
21	<b>PHILOSOPHY OF RELIGION</b> <b>Prerequisite:</b> English 2 and sophomore standing. Introduction to the nature of religion, nature and existence of God, and major religious tenets of western thought.	3 UNITS



## Physical Education

- |           |  |               |
|-----------|--|---------------|
| <b>10</b> | <b>BEGINNING COED GYMNASTICS</b><br><b>Prerequisite: None.</b><br>Beginning and intermediate skills on all the basic pieces of gymnastics apparatus.   | <b>1 UNIT</b> |
| <b>11</b> | <b>INTERMEDIATE COED GYMNASTICS</b><br><b>Prerequisite: PE 10 or permission of professor.</b><br>Further development of previously acquired gymnastic skills on all pieces of gymnastics apparatus.                                      | <b>1 UNIT</b> |
| <b>12</b> | <b>WEIGHT TRAINING/WRESTLING (Men Only)</b><br><b>Prerequisite: None.</b><br>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 (Women Only)</b><br><b>Prerequisite: None.</b><br>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><br><b>Prerequisite: None.</b><br>Badminton and volleyball with emphasis on the mastery of fundamentals.   | <b>1 UNIT</b> |
| <b>15</b> | <b>BEGINNING COED BOWLING</b><br><b>Prerequisite: None.</b><br>Development of beginning skills of bowling with emphasis on mastery of fundamentals.  | <b>1 UNIT</b> |
| <b>16</b> | <b>INTERMEDIATE COED BOWLING</b><br><b>Prerequisite: PE 15 or permission of professor.</b><br>Further development of previously acquired bowling skills.   | <b>1 UNIT</b> |
| <b>17</b> | <b>BEGINNING COED TENNIS</b><br><b>Prerequisite: None.</b><br>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><br><b>Prerequisite: PE 17 or permission of professor.</b><br>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><br><b>Prerequisite: None.</b><br>Development of beginning skills of golf with emphasis on mastery of fundamentals.  | <b>1 UNIT</b> |

- 20** **INTERMEDIATE COED GOLF** **1 UNIT**  
**Prerequisite:** 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.
- 21** **COED SQUARE AND SOCIAL DANCE** **1 UNIT**  
**Prerequisite:** None.  
 Introduction to the various ballroom steps in social dancing with the opportunity to master traditional American square dances. Taught fall semester only.
- 22** **COED ARCHERY** **1 UNIT**  
**Prerequisite:** None.  
 Target archery and clout shooting with opportunity for improvement of existing skills.
- 23** **BEGINNING HANDBALL/WEIGHT TRAINING** **1 UNIT**  
**Prerequisite:** None.  
 Development of basic skills of handball through instruction, participation and intra-class competition and execution of basic weight training exercises.
- 24** **BEGINNING SWIMMING** **1 UNIT**  
**Prerequisite:** None.  
 For the non-swimmer, guidance through primary phases of learning to swim with the final objective of the course the ability to swim 30 yards.
- 25** **INTERMEDIATE COED SWIMMING** **1 UNIT**  
**Prerequisite:** PE 24 or permission of professor.  
 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.
- 26** **ADVANCED COED SWIMMING AND WATER SPORTS** **1 UNIT**  
**Prerequisite:** PE 25 or permission of professor.  
 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.
- 27** **COED LIFE SAVING** **1 UNIT**  
**Prerequisite:** PE 26 or permission of professor.  
 Development to meet the requirements of the Standard Red Cross course leading to certification in Senior Life Saving. Taught spring semester only.
- 28** **COED ADAPTED PHYSICAL EDUCATION** **1 UNIT**  
**Prerequisite:** Written statement from a licensed physician requiring a limited activities program.  
 A personalized program of physical education consistent with the recommendation of private physician.

- 29 TRAMPOLINING/BODY CONDITIONING (Men Only) 1 UNIT**  
**Prerequisite: None.**  
 Development of the basic and intermediate skills of trampolining and practice in several activities for body dynamics using a variety of pieces of equipment.
- 30 TRAMPOLINING/BODY DYNAMICS (Women Only) 1 UNIT**  
**Prerequisite: None.**  
 Development of the basic and intermediate skills of trampolining and practice in several activities for body dynamics, using a variety of pieces of equipment.
- 31 VARSITY SPORTS 1 UNIT**  
**Prerequisite: Permission of Professor.**  
 Membership in class based on participation as members of a varsity collegiate team.
- 32 SONG AND CHEERLEADING (Fall Only) 1 UNIT**  
**Prerequisite: Permission of Profesosor.**  
 Membership in class based on participation on the songleading or cheerleading 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.
- 33 HIKING 1 UNIT**  
**Prerequisite: None.**  
 The student will participate in the wilderness trail and off-trail hiking and will learn the care of equipment, the use of maps, the care and protection of wilderness trails, the use of emergency first aid and the importance of physical conditioning.
- 34 COED BILLIARDS 1 UNIT**  
**Prerequisite: None.**  
 The student will be introduced to the skills of billiards with attention to rules, etiquette and proper playing techniques.
- 35 COED SCUBA DIVING 1 UNIT**  
**Prerequisite: 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 BEGINNING COED YOGA 1 UNIT**  
**Prerequisite: 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 BEGINNING COED JUDO 1 UNIT**  
**Prerequisite: 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.

## **WILDERNESS CAMPING**

**3 UNITS**

**Prerequisite:** PE 33 or permission of instructor.

A study of practical backpacking and wilderness camping techniques with emphasis on man's place in the wilderness. The student will study selected works of wilderness philosophers and develop a wilderness ethic. Two hours of lecture a week and a minimum of four backpacks. Students must furnish their own backpacking equipment. Students may receive one unit of an activity credit to meet Physical Education requirement. (Same as ES 10).

## **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.

## **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.

## **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.

## **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.

## **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.

## **GENERAL PHYSICS**

**4-4 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, and atomic and nuclear physics. Designed for the more interested liberal student. Lecture 3 hours, Laboratory 3 hours.

**Prerequisite: Math 51.**

Lectures, demonstrations and problem solving at the calculus level in classical physics — mechanics, heat and thermodynamics, sound, light, electricity and magnetism and atomic and nuclear physics. Designed for engineers, scientists and mathematicians. Lecture 3 hours, Laboratory 3 or.

**99****INDIVIDUAL STUDIES****1-4 UNIT****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

**Police Science****20****INTRODUCTION TO POLICE SCIENCE****3 UNIT****Prerequisite: None.**

The history of police science 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 analysis of current law enforcement books and periodicals, and application of basic criminal procedures of the judicial system to problems similar to those encountered in police work.

**21****INTRODUCTION TO THE CRIMINAL JUSTICE SYSTEM 3 UNIT****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), the process 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 the police to correctional personnel — psychiatrists and social workers, their duties, responsibilities and functions are studied in detail.

**22****POLICE PATROL FUNCTIONS I****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.

**22****POLICE PATROL FUNCTIONS I****3 UNIT****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.

## **POLICE PATROL FUNCTIONS II**

**3 UNITS**

**Prerequisite:** PS 22.

A study of the organization of the patrol division, including the structure and special problems of patrol administration in depth. Emphasis upon the organization and functions of the chain of command, and span of control exerted by the supervisory and command officers of the patrol division.

## **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.

## **RULES OF EVIDENCE**

**3 UNITS**

**Prerequisite:** None.

Examination of the field of evidence from a practical standpoint directed to give a workable and understandable discourse on the field of evidence, with emphasis on those areas of interest and importance to the police officer in his daily work.

## **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.

## **CRIMINAL LAW I**

**3 UNITS**

**Prerequisite:** None.

Seminar discussions on the criminal procedure from arrest to acquittal or release including examination of the various officers, such as the magistrate, coroner, and county attorney, as to their functions and duties in the criminal process and civilian and military legal jurisdiction.

## **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.

## **PHYSICAL EVIDENCE: PHOTOGRAPHY I**

**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.

36

**PHYSICAL EVIDENCE: RECOGNITION, COLLECTION, PRESERVATION****3 UNITS****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".

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.

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.

49

**CONSTITUTIONAL LAW****3 UNITS****Prerequisite: PS 20, PS 27, and PS 33.**

A comprehensive study of the development of the Federal Constitution and a history of the Bill of Rights, emphasis on the first, eighth and the fourteenth amendments as related to corresponding state provisions and recent Supreme Court interpretations and trends. Study of numerous cases in depth.

52

**ACCIDENTS, CITATIONS, DISORDERS****3 UNITS****Prerequisite: None.**

Study of various types of accident situations (automobile, airplane, and other vehicles), methods of handling, reporting, and scale recording of accidents, emphasis on citations — what they are, their function, their forms, and their place in traffic enforcement. Study of various kinds of civil disorders, police methods of containment, dispersing and arresting participants, equipment used by the police, and legal aspects of disorder.

54

**PSYCHOLOGY IN LAW ENFORCEMENT****3 UNITS****Prerequisite: PS 20 or permission of Professor.**

Study of the basic 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.

56

**CRIMINOLOGY****3 UNITS****Prerequisite: Sociology 1 or permission of Professor.**

Methods of collecting information regarding crime, the organization and

systemization of such information, and the drawing conclusions from such data; the examination of facts of crime and delinquency and relating them to the differential association and differential social organization theories. The factual data examined include variations of crime and delinquency rates with age, sex, race, poverty, educational status, urbanization and other variables.

## **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:** Consent of Instructor.

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 CONSTITUTION**

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

## **Psychology**

### **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.

### **ELEMENTARY PSYCHOLOGY**

**3 UNITS**

**Prerequisite:** Psychology I.

A more intensive study of the realm of psychology with emphasis on the psychobiological basis of behavior, intelligence, sensation, perception, higher mental processes, personality and adjustment, abnormal psychology, and social psychology.



- 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.
- 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.

## Social Science

- X SOCIAL SCIENCE 3 UNITS**  
**Prerequisite: None.**  
 An introduction to the several disciplines in the social sciences — anthropology, geography, history, political science, psychology, sociology — with an emphasis on how to read and interpret materials within each discipline.
- 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. Freshmen are encouraged to enroll in this class to discover what discipline interests them for continuation. Accepted as an elective for AA degree.
- 5 MEXICAN HERITAGE 3 UNITS**  
**Prerequisite: None.**  
 Mexican-American culture from the anthropological, historical, and sociological viewpoint with emphasis upon prehistoric periods through the 19th century.
- 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.

## 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.

## **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."

## **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 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.

**2a, 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.

**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**

### **INTRODUCTION TO SPANISH LITERATURE**

**3-3 UNITS**

**104b**

**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.

## 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 UNIT

**Prerequisite:** None.

Study of fundamental techniques of public speaking, experience in construction and delivery of speeches of various types, and 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 forms of oral interpretation of literature.

Participation in intraclass competition and in one or more intercollegiate contests.

### 36 THE ORAL INTERPRETATION OF LITERATURE

3 UNIT

**Prerequisite:** Speech 2 or permission of Professor.

Application of a variety of interpretive techniques to impart orally the intellectual and emotional meaning of the printed page: poetry, prose and drama.

T15

**WELDING****3 UNITS****Prerequisite:** None.

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.

T17

**WELDING****3 UNITS****Prerequisite:** T1 5.

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.

T18

**SEWING MACHINE MAINTENANCE****3 UNITS****Prerequisite:** None.

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.

T140

**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.

T141

**ELEMENTS OF PRODUCTION MANAGEMENT****3 UNITS****Prerequisite:** T1 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.

**Zoology**

a-1b

**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 vertebrate groups. Principles of genetics, ecology, and embryology. 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.

A 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)

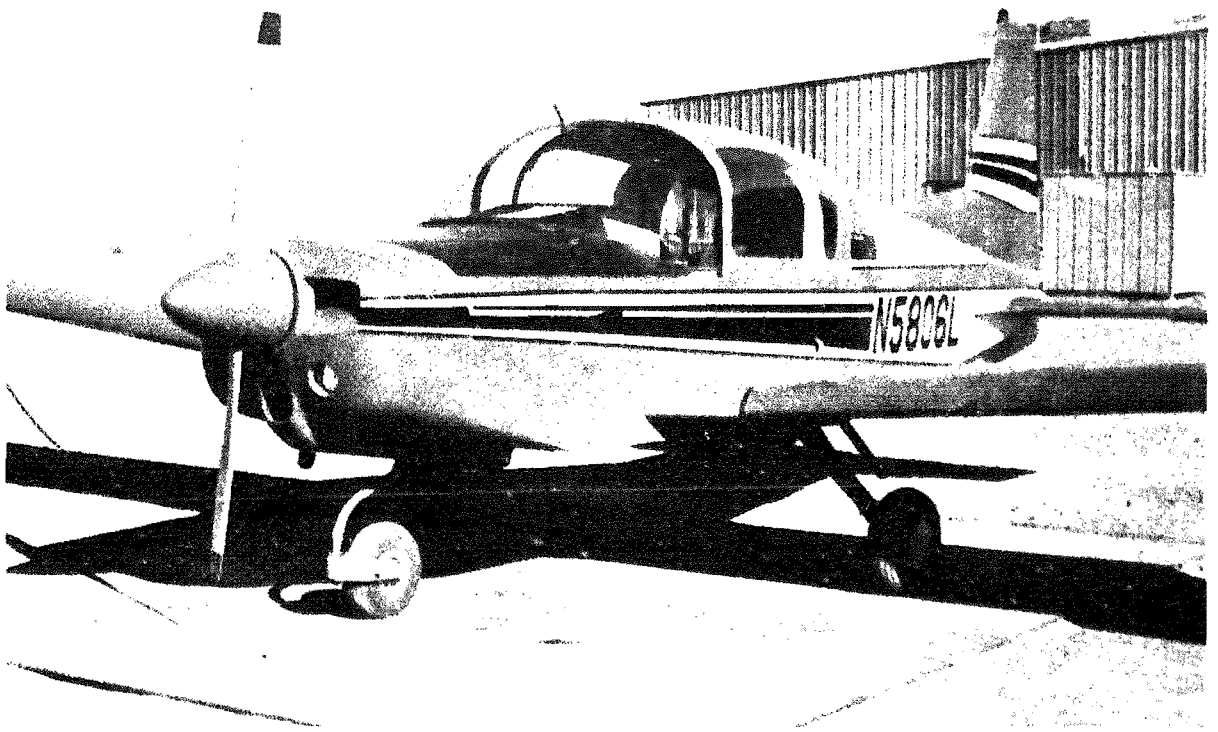
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### **INDIVIDUAL STUDIES**

**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



One of the birds in the Cochise College Professional Pilot Program