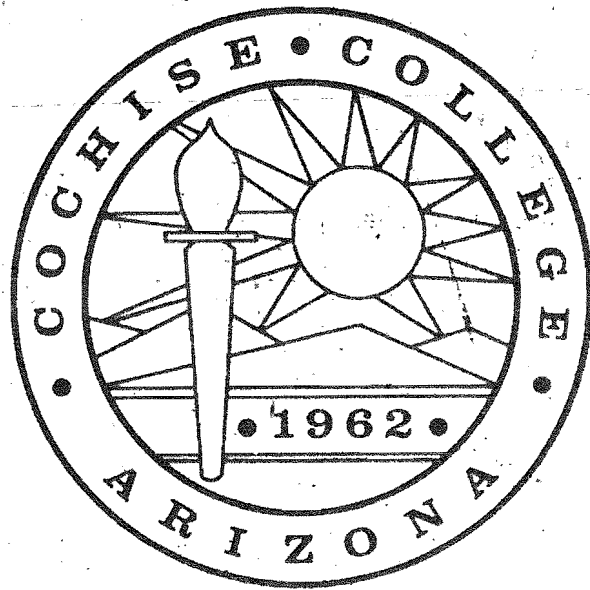


# **COCHISE COLLEGE**

## **Biennial Catalog**



**1970-71 • 1971-72**

**A two-year Community College**

# **CATALOG and ANNOUNCEMENTS**

**Academic Years**

**1970-71**

**1971-72**

## **Cochise College**

**Douglas, Arizona 85607**

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

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# COCHISE COLLEGE CALENDAR

1970-71 — 1971-72

1970-71	FALL SEMESTER	1971-72
Aug. 17-Sept. 11	Fall Counseling & Registration	Aug. 16-Sept. 10
September 11-12	Orientation	September 10-11
September 14	Classes Begin	September 13
September 18	Last day for adding classes	September 17
October 25	Veterans Day — holiday	October 24
November 2-6	Mid-semester exams	November 1-5
November 13	Last day to drop classes without penalty	November 12
November 26-27	Thanksgiving recess	November 25-26
Dec. 19-Jan. 3	Christmas recess	Dec. 18-Jan. 2
January 4	Classes resume	January 3
January 18-22	Final examinations	January 17-21

## SPRING SEMESTER

January 4-22	Spring Counseling & Registration	January 3-21
February 1	Classes begin	January 31
February 5	Last day for adding classes	February 4
March 15-19	Mid-semester examinations	March 13-17
March 26	Last day to drop classes without penalty	March 24
April 3-11	Spring recess	Mar. 25-April 2
April 12	Classes resume	April 3
May 24-28	Final examinations	May 22-26
May 28	Commencement	May 26

# ADMINISTRATION

## GOVERNING BOARD

Charles O. Bloomquist	Chairman
Matthew Borowiec	Secretary
Dr. Charles Di Peso	Member
Ed. J. Donnelly	Member
Fred Dunsmore	Member

## ADMINISTRATION

John R. Edwards, Ph.D.	President
Don R. Johnson, M.A.	Dean of Liberal Arts
Donald McClanahan, M.S.	Dean of Occupational Education
Irvin Von Destinon, M.A.	Business Manager
Jack Corkery, M.A.	Dean of Students
Charles Guerrero, M.A.	Director of Student Union Activities
Miss Ida Ojeda, M.A.	Director of Learning Resources
Knox Talley, M.Ed.	Director of Continuing Education

The Governing Board reserves the right to change or withdraw without notice courses, curriculums, policies, tuition or any other matters contained in this catalog.

# ADMISSION PROCEDURES AND POLICIES

Prospective students are encouraged to visit the campus and discuss their educational objectives with the Director of Admissions. The Office of Admissions, located in the Student Personnel Office on the west side of the campus, is open throughout the year, Monday through Friday, 9:00 AM to 5:00 PM. Admissions counseling is also available on Saturday mornings, but by appointment only.

All high school graduates are admitted to Cochise College. Non-high school graduates 19 years of age or older who demonstrate to the satisfaction of College authorities that they are able to profit by the instruction may also be admitted.

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

- |                                      |                      |
|--------------------------------------|----------------------|
| 1. Application for Admission         | 1, 2, 3, & 4 Are Re- |
| 2. High School Graduation Transcript | quired of All Appli- |
| 3. ACT Scores                        | cants for Full-time  |
| 4. Medical – Cochise College Form    | Admission.           |
|                                      | Also FAA medical if  |
|                                      | in Flight Training.  |
| 5. \$40.00 Room Reservation Deposit  | 5, 6, & 7 Are Re-    |
| 6. College Transcript(s) if          | quired if They Apply |
| Transfer Student                     | to You.              |
| 7. \$5.00 Application Fee for        |                      |
| Out-of-State and Foreign Students    |                      |

1. APPLICATION FOR ADMISSION – The Application for Admission should be sent to the College immediately, so that the admission and counseling folder can be prepared for your credentials, which will usually arrive later. Superior seniors in high school

may be admitted for course work upon the recommendation of the high school principal.

An application blank may be obtained from your high school counselor or by writing or calling the College Admissions Office. Applicants should submit applications and transcripts well in advance of the beginning date of the semester for which they wish to be admitted.

**2. HIGH SCHOOL TRANSCRIPT** — Request your high school to send your graduation transcript directly to the Director of Admissions at Cochise College. June graduates can expect their transcript to reach the College by July 1.

**3. ACT SCORES** — The American College Test is a college admission and counseling test, administered nationally on specific test dates in the months of October, December, February, April, and July. See your local high school counselor and make arrangements to take the test before you graduate. Many test centers do not give the test in July, and a July test will delay your admission until September. You will not pass or fail the ACT. Rather, you should consider it a valuable counseling tool to be used in planning your academic program. Your ACT scores will be sent directly to Cochise College, if you so indicate (Cochise College code number is 0089) on the test form.

**4. MEDICAL** — The Cochise College Medical Form is to be completed by your family doctor and signed by you. In addition, if you are under 21, the Form must also be signed by your parent or guardian. The form may be obtained from the College or Cochise County high school counselors. Students in Flight Training are advised to have Cochise College medical and FAA medical completed at the same time by an FAA-licensed physician.

**5. \$40.00 ROOM RESERVATION DEPOSIT** — All single students under the age of 21 are required to live in campus residence halls and have their meals in the College dining hall, if they are not commuting from the home of parents, legal guardian or relative. Applicants for admission who will be living on campus are

required to submit a \$40.00 Room Reservation Deposit with the Application for Admission. Please make checks payable to Cochise College. **The deposit is refunded only after a student has completed a full semester or semesters. Any room damage is deducted from the deposit.**

**6. COLLEGE TRANSCRIPT IF TRANSFER STUDENT —** Students who have previously attended another college will request that a transcript(s) of all previous college work be sent directly to the Director of Admissions at Cochise College. Students with a cumulative grade point average below C or 2.000 on a four-point scale will be admitted on Academic Probation. Transfer students who have been placed on Academic Suspension or Dismissal in June are not eligible to enter Cochise College until the following February.

**7. \$5.00 APPLICATION FEE FOR OUT-OF-STATE STUDENTS —** A non-refundable application fee is required of out-of-state and foreign students. Please make check payable to Cochise College. You may combine the application fee and room reservation deposit in one check for \$45.00.

**AVIATION AND NURSING PROGRAMS —** Since there are usually more applicants than spaces, admission to the College does not guarantee admission to these programs. After admission to the College, applicants are interviewed in mid-July, and then informed of admission to the aviation and nursing programs.

**FINANCIAL AIDS (See also "Financial Aids" in Index) —** Students applying for financial aid, which includes scholarships, loans, grants and campus jobs, will submit the following to the Financial Aids Officer of Cochise College by the deadline of March 1:

1. Application for Admission
2. Financial Aids Application — Arizona College Form
3. ACT Family Financial Statement
4. Seventh Semester High School Transcript

If you apply for financial aids, you need not send a second Application for Admission to the Director of Admissions. However,



your high school graduation transcript must be sent to the Director of Admission in June. Secure the necessary financial aids application forms from your high school counselor in December, so you can meet the March 1 deadline.

**PART-TIME STUDENTS** -- College housing and financial aids are not available for part-time students. The ACT and medical are not admission requirements for part-time students.

Admission requirements are similar for both full-time and part-time students. However, students wishing to enroll only for part-time classes follow different admission **procedures** and should secure a **Schedule of Classes** for detailed instructions.

## Readmission

Any student who previously attended Cochise College and who is returning to the College after an absence of one semester or more must arrange for an appointment with an Admissions counselor. If a student has attended any other educational institution since previous attendance at this College, transcripts must be supplied for all academic work for which the student enrolled in the period since last attending Cochise College.

## Registration

Counseling and registration take place during the month prior to the opening of classes of each semester (see the Calendar at the front of the catalog). Students register only after receiving program approval from a counselor. Registration after the first week of instruction will not be permitted. See the **Schedule of Classes** for detailed information.

**SUMMER NEWSLETTER** — The College sends a Summer Newsletter and The Schedule of Classes to new and returning students in mid-August, and they contain detailed information on counseling, registration, housing, activities and items of interest.

**COLLEGE ADDRESS** – Send admissions communications to:  
Director of Admissions  
Cochise College  
Douglas, Arizona 85607  
Douglas Phone: (602) 364-3451  
Bisbee Phone: (602) 432-5737

## **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 Junior 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 Junior College**

Students residing in counties in Arizona that maintain a junior college may enroll in Cochise College but must pay the tuition established by the State Board of Directors for Junior Colleges.

### **Out-of-State Students**

Out-of-state students may enroll in Cochise College but must pay the tuition established by the State Board of Directors for Junior Colleges for non-residents and an application fee of \$5.

## **Foreign Students**

Foreign students are welcome at Cochise College. To be admitted, foreign students should provide evidence of the equivalent of high school graduation, demonstrate adequate proficiency in English to profit from regular college classes, and show evidence of sufficient funds to pay all expenses for one academic year, including out-of-state tuition.

## **Veterans**

Cochise College has been approved for veterans training under all federal and Arizona laws. The Registrar acts as the veterans' coordinator. Veterans should confer with the Registrar at the time of registration concerning educational benefits. Veterans must carry 14 contact hours to be considered a full-time student.

# FEES

All semester fees will 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*

Residents of Cochise County . . . . .	No Charge
Military personnel and their dependents living in Cochise County . . . . .	No Charge
Residents of counties other than Graham, Maricopa, Pinal, Yavapai, Yuma, Pima (home county pays Cochise College \$476.00 per semester) . . . . .	No Charge
Residents of Graham, Maricopa, Pinal, Yavapai, Yuma, Pima Counties (these counties have their own two-year college). . . . .	\$476
Residents of other states & foreign countries. . . . .	\$500

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

County residents including military personnel and their dependents . . . . .	No Charge
Residents of other countries, states & foreign countries:	
1 – 6 units . . . . .	No Charge
7 – 11 units . . . . .	\$35.00 per unit

### C. Summer Session . . . . . \$15 per unit

\*See "REFUNDS" concerning Refund Schedule.

## Semester Room and Board

Room and Board . . . . .	\$395
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All full-time resident students who are single and under 21 years of age are required 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.

Room Deposit . . . . . \$40

The room deposit of \$40, which does not apply toward room and board fees, should accompany the Application for Admission of those who plan to live in college housing.

**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.

The board payment provides a seven (7) day meal ticket for the semester with twenty (20) meals each week when classes are in session.

**Other Fees and Charges**

**Educational Services Fee**

- A. Full-time Students (12 or more units): . . . . . \$60
- B. Part-time Students (1-11) units):
  - 1 — 6 units . . . . . \$20
  - 7 — 11 units . . . . . \$40

**Graduation**

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.

### **Miscellaneous Fees**

**Out of State Application fee** ..... \$5.00

(This fee must accompany the Application for Admission)

**Late Registration.** ..... 5.00

**Graduation fee** ..... 10.00

**Late Payment of fees** ..... 5.00

**Change of Course fee** ..... 2.00

**ACT (Residual testing)** ..... 12.00

**Late Aptitude test** ..... 5.00

**Late Final Examination Fee, in any course** ..... 3.00

(Only when permission of instructor is granted in advance)

**Greens fee (Per Semester)** ..... 10.00

**Bowling fee (Per Semester)** ..... 20.00

**Credit by Examination (Per Semester Hour)** ..... 5.00

**Transcript fee – First Free, Each Additional** ..... 1.00

**Returned-check fee (for each return)** ..... 5.00

### **Flight Training fees**

**A. Basic Program Fees** (Commercial License with  
instrument rating, payable over four semesters) ..... 2340

### **B. Optional Fees:**

1. Multi-engine and flight instructor's ratings ..... 575

2. Air Transport rating—90a ..... \$5 hour

90b ..... 250

**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.**

## **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) day after college scheduled classes commence.

50% if withdrawal is between the eighth (8th) and fourteenth (14th) day after college scheduled classes commence.

0% if withdrawal is the 15th day or thereafter.

Educational Service Fee and Other Fees

Educational services and other fees are non-refundable after the first day of classes.

50% if withdrawal is prior to the first (1st) day of college scheduled classes; no refund thereafter.

Room and Board

Students who officially withdraw from the college before the completion of a semester will receive a pro rata refund of the unused portion of the payment as per the following schedule:

<i>Withdrawal prior to Friday of:</i>	<i>Two-payment Plan \$197.50</i>	<i>Full Semester Payment \$395.00</i>
1st Week	164.50	362.00
2nd Week	131.50	329.00
3rd Week	98.50	296.00
4th Week	65.50	263.00
5th Week	32.50	230.00
6th Week	None	197.00
7th Week	None	164.00
8th Week	None	131.00
9th Week	None	98.00
10th Week	None	65.00
11th Week	None	32.00
12th Week	None	None

## **Room Deposit Refund**

**The \$40.00 room deposit is a guarantee against cancellation of the housing application and is not refundable unless the FULL SEMESTER(S) RESIDENCY IS COMPLETED and all financial obligations to the College have been met. Charges for damages will be deducted from the deposit refund. The room deposit is forfeited if there is:**

Failure to give written notification of room cancellation by the date specified:

### **Fall Semester**

All students – thirty days before classes begin.

### **Spring Semester**

New students – thirty days before classes begin

Continuing students – Saturday prior to beginning of classes

Failure to follow formal and prescribed check-out procedures when departing from assigned residence hall.



# **STUDENT PERSONNEL SERVICES**

## **Financial Aids**

Cochise College offers a variety of financial aids to full-time students. Types of financial aids available are scholarships, grants-in-aid, educational opportunity grants, campus employment, Cochise College loans, United Students Aid Fund Loans, Federally Insured Student Loans, National Defense Loans, Law Enforcement Loans and Grants, and out-of-state tuition waivers. Eligibility for assistance is based on financial need, academic promise and leadership qualities.

## **APPLICATION PROCEDURE**

To apply for any type of financial aids, with the exception of FISL and NVSL loans and LEEP Grants, 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 three weeks for processing.
2. Send the carbon copy of the FFS to the Cochise College Financial Aids Officer along with the Arizona Financial Aids Application. Only one set of applications need be submitted 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 767, Iowa City, Iowa 52240 or Cochise College.
3. If financial need is not a factor, then submit only the Arizona application.

**FINANCIAL AIDS COMMITTEE:** The committee is composed of eight members including the Financial Aids Officer, the Director of Admissions, a fiscal officer from the Office of Business Affairs, two faculty members, and two students appointed by the Student Senate. It is the function of this committee to screen applications and determine recipients of awards with the exception of grant-in-aid and out-of-state tuition waivers.

## **SCHOLARSHIPS**

Both new and returning full-time students are eligible for scholarships. Scholarships are awarded in April to graduates of Cochise County high schools. Scholarships 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. Grade averages and academic rank are of primary importance. In no instance will the grade average be less than C or academic rank be less than the top 2/5 of class.
3. Financial need will be of importance in the awarding of all scholarships with the exception of Cochise County Valedictorian-Salutatorian Scholarships.

## **GRANTS**

Cochise College has a number of grants-in-aid available in the areas of athletics and music. Athletic grants are administered by the Director of Athletics. Recipients of music grants are selected by the Division of Humanities & Fine Arts and awards administered through the Financial Aids Officer.

**EDUCATIONAL OPPORTUNITY GRANTS:** Cochise College awards Federal Educational Opportunity Grants to a limited number of students who exhibit exceptional financial need.

Grants range from \$200 to \$800. They are administered as part of a financial aids "package" and must be matched by scholarships, loans, or earnings from campus employment.

## **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. ALL students employed on campus must complete the financial aids application procedure, including step 1.

Cochise College participates in the government-sponsored College Work-study Program which is underwritten partially by Federal Funds.

## **LOANS**

**COCHISE COLLEGE LOANS:** The fund makes loans available to full-time students. Eligibility includes maintenance of a C average. These loans are short-term and an interest charge is assessed after one year.

**UNITED STUDENT AID FUND LOANS:** These are low cost, long-term loans and are guaranteed by the USAF corporation. Full-time students who show evidence of academic promise are eligible. Up to \$1000 a year may be borrowed through a participating bank. Repayment begins the first day of the 10th month after the student leaves school. The student pays 7% simple interest.

**FEDERAL INSURED STUDENT LOANS:** Regardless of family income, any student desiring to pursue a post-secondary education is eligible to apply for a FISL provided he or she:

1. Is enrolled and in good standing, or has been accepted for enrollment in an eligible school.

2. Is a citizen or national of the United States or is in the United States for other than temporary purposes.

The maximum loan amount is \$1000. During the student's in-school period, the federal government pays the total interest up to 7% for students whose adjusted gross income is less than \$15,000 per year. During the loan repayment period the student pays 7% simple interest on the unpaid principal balance.

Repayment by installments begins not earlier than nine months nor later than one year after graduation or withdrawal.

To apply, a student obtains an application form from his bank or Cochise College. After completing Part A, the Financial Aids Officer at the college will verify enrollment or acceptance on Part B and return the form to the student. The student completes Part C and submits the application to the bank for approval.

**NATIONAL DEFENSE STUDENT LOANS:** An eligible undergraduate may borrow up to \$600 each academic year. He need not begin repayment until nine months after he leaves college, nor does interest begin until then. Interest on the loan is 4% a year. Repayment may be extended over a 10-year period.

If a borrower becomes a full-time teacher in a public or other nonprofit elementary or secondary school, or in an institution of higher education in the United States, up to 50% of the loan may be cancelled or "forgiven" at the rate of 10% for each year of teaching service. An additional 50% may be cancelled at the rate of 15% a year for such teaching service in designated "hardship" schools.

**LAW ENFORCEMENT LOANS AND GRANTS:** Loans are available to students enrolled in programs directly related to Law Enforcement. The loans bear 3% interest up to 10 years. The loans can be cancelled at the rate of 25% for each year of full-time employment in a public Law Enforcement agency.

Grants up to \$300 per semester may be made for full or part-time enrollment in Law Enforcement. To be eligible, beneficiaries

must be full-time employees of a public Law Enforcement agency, and agree to remain employed for 2 years after completion of the course of study.

## **TUITION WAIVERS**

A limited number of tuition waivers of two types are available to out-of-state students:

1. Academic – Selected by the Director of Admissions.
2. Athletic – Selected by the Director of Athletics.

## **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.

## **Group Dynamics**

All entering full-time freshmen students are required to enroll in Group Dynamics. The purpose of the course grows out of the need for students to effect a responsible transition between high school and college, and through small group participation to become aware of human interaction and its effect on social and educational development.

## **Testing**

As a supplement to the American College Testing (ACT) entrance tests, the student and counselor may decide additional individual testing is needed. 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 strength 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.

## **Occupational Information Services**

Cochise College has developed an extensive occupational information system. This includes broad coverage of colleges and universities (both state and national) to which a student may transfer. The service also encompasses military, vocational and trade schools. The information includes entrance requirements, majors offered, courses offered, expenses and general information about the institutions.

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 Placement Officer of the college will assist graduates in meeting contacts and arranging interviews with prospective employers in their fields of specialization and 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 who is under the supervision of a regularly licensed physician. 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.

## **Housing**

Housing 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 resident director who is assisted by trained student proctors. 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, shower, lavatory, desk, chair, dressers, closet, and communication system with the main desk. In addition, each residence hall has a television lounge, study rooms, lounge areas, washing and ironing rooms and conference room.

## **Housing Regulations**

### **General**

All students under the age of 21 are required to live in college residence halls or in the home of parents, guardians, or relatives, if they are commuting students.

Students living in college residence halls are required to carry an academic load of twelve or more units.

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 21, 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 Application for Admission 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.

## **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 administrators in an informal atmosphere. Meeting rooms, as well as comfortable lounges, a billiard room and various dining facilities augment the services to the student by the college. The offices of the Associated Student officers and the office of the Director of the Student Union are located in this building.

The "dining room" services provided by the Cochise College Student Union include a "Rathskeller"—style snack bar, a private dining room, 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 night 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, ICC Carnival, Informal Dances, Intramural Sports, Parents Day, Public Events Series, Red and White Ball, Senior Day, Student Orientation Program.

## **Student Union Activities Board**

A newly-created subsidiary of the Associated Student Senate, the Student Union Activities Board performs important programming functions for the Student Union. The SUAB 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 SUAB schedules dances, selects Sunday night movies, plans open-forums, and mid-week "happenings". With the cooperation of faculty consultants, the SUAB administers the Public Events Series. This series includes cultural events such as films, art exhibits, in addition to appearance by popular personalities and groups. The SUAB also serves as liaison between the student body and our food service.

## **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 Adventure Club, Beta Phi Gamma (Journalism Honorary), Cheerleaders, Chess Club, Delta Epsilon (DECA), Desert Tracks (literary magazine) Drama Club, El Recuerdo (Yearbook), Freshman Class Officers, Forensics, Future Spanish Teachers, Heliograph (Newspaper), Newman Club, Nurses Club, Residence Hall Councils, Rifle and Pistol Club, Red Key Club (Leadership Honorary), Rodeo Club, Skydivers Club, Song-leaders, Sophomore Class Officers, Women's Recreation Association (WRA), YMCA, Radio Club, Phi Beta Lambda (Secretarial).

# ACADEMIC PROCEDURES AND POLICIES

## Academic Council

The enforcement, interpretation, and waiving of academic regulations are a responsibility of the Academic Council. Membership includes the Dean of Liberal Arts, the Dean of Occupational Education, the Dean of Students, appointed faculty members and two students appointed by the Student Senate. The president of the college is an ex-officio member. Student petitions for the waiver of academic regulations may be presented to the Academic Council through the student’s counselor.

## Classification of Students

FRESHMEN:	Students with fewer than 28 passing units of college credit.
SOPHOMORES:	Students with 28 or more passing units of college credit.
FULL-TIME STUDENTS:	Students carrying 12 or more units during the semester.

## Grading System

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

- A – SUPERIOR (4.0)
- B – GOOD (3.0)
- C – AVERAGE (2.0)
- D – POOR (1.0)
- F – FAILURE

WF – WITHDREW FAILING	Indicates withdrawal from the class after Friday of the week following mid-semester examinations with below a C in the course. A grade of WF is computed in the student's grade point average as a F, or failure.
W – WITHDREW	from the course before Friday of the week following mid-semester examinations 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.

## **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**

High Honors are awarded to graduating students who receive a grade point average of 3.5 or better in all work taken at Cochise College, and Honors are awarded to those whose grade point average is between 3.49 and 3.0.

## **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.

## **Academic Probation**

All students who have attempted nine or more units at Cochise College and have not attained a cumulative grade point average of

2.000 or better are 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.

## **Readmission Following Academic Suspension or Dismissal**

A student who has been academically suspended for the first time may return after a period of one regular semester has elapsed,

excluding summer sessions. A student who has been academically dismissed may petition the Academic Council for readmission.

A student readmitted following academic suspension or dismissal will be placed on CONTINUED PROBATION.

## **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 twelve 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 Personnel, 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.

## **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 progress report at mid-semester and a grade report at the completion of the semester. Only final semester grades are recorded on the student's permanent record.

The grade reports of unmarried students under 21 years of age are mailed to parents or guardians. Grade reports of other students are mailed to their home address. A second copy of the grade report is also available to each student in the Student Personnel Office.

A copy of the semester grade report of freshmen students under 21 years of age is mailed to the high school from which the student graduated.

## **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 Personnel 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 carefully arrange their academic schedule 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 Personnel 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 reasons. Part-time evening students may register the first evening the class meets without paying a late-registration fee.

A course may be dropped at any time up to Friday following mid-terms without penalty and the grade assigned will be W, withdrew. Courses dropped after Friday of the week following mid-semester examinations will also receive a grade of W if the student has a C or better average at the time of the drop, but if the average at the time of the drop is D or F, the final grade will be WF (Withdrew Failing).

## **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 a 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.

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 being issued at \$1 each.

## **Transfer of Credit**

Students 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.

## **Attendance Policy**

Attendance policies at Cochise College are based on the belief that 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 who is 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 sixty passing units.
2. A minimum of fifteen 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 4 units to complete the degree requirements at Cochise College.
4. The General Education requirement at Cochise College is twenty-seven hours distributed as follows:

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

ENGL X, English Fundamentals  
ENGL Y, Reading Fundamentals

ENGL 1-2, Composition  
ENGL 4, Introduction to Literature  
ENGL 6, Critical Evaluative Reading  
ENGL 8, Written Communications and Reports  
JOUR 1, Communications  
SPAN 1a, Elementary Spanish  
SPAN 3a, Intermediate Spanish  
SPAN 75a, 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, Acting  
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 20, Philosophies of the East  
SPAN 75a-b, Intermediate Composition and Conversation  
SPAN 104a-b, Introduction to Spanish Literature

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

ANTH 1-2, Introduction to Anthropology  
ANTH 25-26, Cultural Anthropology  
ANTH 35-36, Introduction to Archaeology  
ANTH 85, Prehistoric Indians of the Southwest  
ANTH 86, Modern Indian Tribes of the Southwest  
BUS 9, Survey of American Business  
BUS 23, Personnel Psychology  
ECON 2-3, 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 2-3, Elementary Psychology  
PSYC 13, Child Psychology  
PSYC 14, Adolescent Psychology  
SOC 1, Introduction to Sociology  
SOC 2, Social Problems

AREA 4: A six-unit requirement from the following options.

AVIA 12, Applied Aero Math  
AVIA 14, Aero Physics  
BIOL 1a-b, General Biology  
BIOL 12, Foundations of Science: Biology  
BOT 1, General Botany  
BUS 1, Principles of Accounting  
BUS 4, Business Math  
BUS 19, Business Statistics  
CHEM 2a-b, General Chemistry  
CHEM 12, Foundations of Science: Chemistry  
D.T. 10, Mechanical Drafting  
D.T. 22, Technical Drafting  
E.T. 1, Introduction to Electronics  
E.T. 10, Math for Electronic Technicians

GEOL 12, Foundations of Science: Geology  
GEOL 51, Physical Geology  
MATH 1X, Fundamentals of Math  
MATH 2X, Elementary Algebra  
MATH 3X, Plane Geometry  
MATH 11, Intermediate Algebra  
MATH 20, College Algebra  
PHYS 2a-b, General Physics  
PHYS 3a, Introductory Physics w/Calculus  
PHYS 12, Foundations of Science: Physics  
ZOO 1a-b, General Zoology  
ZOO 20, Human Anatomy  
ZOO 40, Mammalian Anatomy

GROUP DYNAMICS: A one-unit requirement for all full-time first-semester students.

PHYSICAL EDUCATION: A two-unit requirement

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.

# 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 which are 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 for junior standing. Catalogs of major universities and colleges are available in the Library or the Student Personnel 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, junior 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 Personnel Services.



## **Occupational Programs**

Occupational programs at Cochise College are intended for the student who wishes to extend his education by completing two years of college.

Occupational programs in Middle Management, Law Enforcement, Associate Degree Nursing (RN), Office Careers, Medical Secretarial Studies, Medical Record Technology, 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 two years of studies, the student will receive an Associate degree. The College Placement Bureau will assist graduates in finding permanent full-time positions in fields of specialization.

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.

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 that through such courses the student will develop a sense of personal and social responsibility and understanding appropriate to his vocation and community affairs.

## **Developmental Program**

For the student who wishes to improve his educational foundation, Cochise College offers developmental courses in several disciplines: English, Reading, Mathematics, Science and Social Science.

# Aviation Technology

## AVIATION ADMINISTRATION:

Graduates of this program will enter the aviation industry as mid-management trainees with airlines, 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.

### FIRST YEAR

First Sem.	Cr.	Second Sem.	Cr.
AT 80 Basic Flight	6	AT 82 Intermediate Flight	6
General Education	6	General Education	6
Physical Education	1	Physical Education	1
Business	3	Business	3
	<u>16</u>		<u>16</u>

### SECOND YEAR

First Sem.	Cr.	Second Sem.	Cr.
AT 84 Advanced Flight	6	AT 86 Instrument Flight	6
General Education	4	General Education	4
Business	6	Business	6
	<u>16</u>		<u>16</u>

### OPTIONAL

AT 88 A Multi-Engine	3
AT 88 B Flight Instructor	3

## 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 forty-eight week program. Sequencing will be determined by department.

			Cr.
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
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## 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

	Total Hours		With Intern- ship	Without Intern- ship
<b>Freshman Year</b>		<b>Sophomore Year</b>		
General Education Requirements	15	General Education Requirements	6	15
Business Administration Requirements	9	Business Administration Requirements	6	9
Mid-Management Core:	3	Mid-Management Core	3	3
Principles of Marketing	3	Problems of Distribution	3	3
Merchandising		Seminar: Trends & Practices in Marketing & Management	3	3
		*Internship	12	0
Total Units	<hr/> 30	Total Units	<hr/> 30	<hr/> 30

At least 60 units required for graduation.

\*Internship (on the job) training may be taken on a fulltime basis during the student's fourth semester (total 12 hours + 3 hr. Seminar) or during the student's third and fourth semesters. The two semester internship is dependent upon the student being placed locally in order that he (or she) may also attend classes on campus of Cochise College. During the two semester internship, the student would receive 6 hours credit each semester for on-the job training.

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 courses can be designed to accommodate students who have specific occupational goals. Two such options are as follows:

### **HOTEL-MOTEL MANAGEMENT**

Second year students in the Mid-Management program who are interested in the field of hotel-motel management will concentrate on studies of a specialized nature. Arrangements will be made for the student to enroll in correspondence courses from the Kellogg Institute at Michigan State University designed by the Hotel-Motel Institute. Successful completion of these requirements would also result in a diploma from the American Hotel-Motel Institute. These studies are coordinated with normal courses of study within the Mid-Management program.

### **AVIATION ADMINISTRATION**

Graduates of this program will enter the aviation industry as middle management trainees with airlines, aircraft sales or in airport management. Special studies in aviation and related fields will be coordinated within the middle management curriculum.

### **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:	15 hrs
English Requirement (minimum of 6 hours of general education total)	
Secretarial Core:	17 hrs
Shorthand (6)	
Typewriting (6)	
Calculating Machines (2)	
Office Procedures (3)	
Total Hours	<u>32 hrs</u>

### SOPHOMORE YEAR

	With 6 hrs Internship	With 12 hrs Internship	Without Internship
General Education Requirements:	14 hrs	11 hrs	17 hrs
Business Administration Courses:	6 hrs	3 hrs	9 hrs
Accounting 1a or Business Math (3)			
Business Law (3)			
Personal Psychology (3)			
Secretarial Studies Core:	6 hrs	6 hrs	6 hrs
Shorthand or Elective (3)			
College Secretarial Procedures (3)			
Internship:	6 hrs	12 hrs	0 hrs
Total Hours	<u>32 hrs</u>	<u>32 hrs</u>	<u>32 hrs</u>

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.

## 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 position in the business office.

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

Course			Cr.	Course			Cr.
A. Bus	6	Elementary Typing			or		
Bus	7	Intermediate Typing	6	D. Bus	10	Elementary Shorthand	
Bus	8	Advanced Typing		Bus	11	Intermediate Shorthand	6
B. English	X			Bus	12	Advanced Shorthand	
English	8		3			& Transcription	
C. Bus	4	Business Math			or		
Bus	1a	Accounting	6	E. Bus	4	Business Math	
Bus	1b	Accounting		Bus	18	Calculating Machines	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	

## Health Technologies

### Associate Degree Nurse

The Associate Degree Nurse Program prepares young men and women to become eligible for registered nurse (RN) status. Students are prepared to render quality nursing care in those functions commonly associated with the bedside nurse. Technical nursing skills are taught in the classroom and related clinical areas such as hospitals, clinics, public health agencies, doctor's offices and nursery schools. In addition, courses in general education are provided for all students in the program. Preparation in the ADN program does not include direct training for administrative responsibilities.

The ADN program requires four semesters of study. Upon completion, graduates are eligible to take the state board examination for licensure as a registered nurse.

**NOTE:** At the time of catalog preparation, the ADN curriculum is not fully established. The program is tentatively scheduled to begin Fall semester, 1970.

# 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.

First Semester				Second Semester			
			Cr.				Cr.
Eng.	1	English 1	3	Spch	2	Speech	3
Zoo	20a	Human Anatomy and Physiology	3	Zoo	20b	Human Anatomy and Physiology	3
Bus	7	Intermediate Typing	3	PE	2	Physical Education	1
PE	1	Physical Education	1	Bus	4	Business Math or	
Psych	1	Psychology	1	Bus	1a	Principles of Accounting	3
		Elective	3	Bus	81	Medical Terminology	3
						Elective	3
			14				16
Third Semester				Fourth Semester			
			Cr.				Cr.
Bus	62	Office Procedures	3	Bus	95	Internship as Medical Secretary	16
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				
			15				

Suggested Electives: Biology 20 and Business 11

# Medical Record Technician

One of the most important members of the hospital team is the medical record technician, the historian of patient care. She assists in organizing and controlling the mass of reports, which, once assembled, accurately state in uniform, scientific language, life's most anxious moments. The need for qualified people in this specialized field far exceeds the supply. Second year students will

serve an internship in cooperation with the Tucson Medical Center.

First Semester			Cr.	Second Semester			Cr.
Eng	1	English 1	3	Spch	2	Speech	3
Zoo	20a	Human Anatomy and Physiology	3	Zoo	20b	Human Anatomy and Physiology	3
Bus	7	Intermediate Typing	3	PE	2	Physical Education	1
PE	1	Physical Education	1	Bus	81	Medical Terminology	3
Psych	1	Psychology	1	Bus	85a	Medical Record Science I	3
		Elective	3	Bus	4	Business Math	3
			<hr/> 14				<hr/> 16
Third Semester			Cr.	Fourth Semester			Cr.
Soc	1	Introduction to Sociology or		Bus	97	Internship as Medical Record Technician	16
Psych	2	Elementary Psychology	3				
Bus	72	Introduction to Data Processing	3				
Bus	83	Medical Transcription	3				
	85b	Medical Record Science II	3				
		Fine Arts Elective	3				
			<hr/> 15				

Suggested Elective: Biology 20

## Drafting Technology

The complexity of American industry and building construction requires that ideas, sketches and verbal instructions be neatly and accurately recorded in the form of drawings or documents. The curriculum in Drafting Technology is designed to prepare the

### FRESHMAN YEAR

General Education Requirements	13 hrs
Mathematics Requirement (Minimum of 7 hours of General Education total)	
Other Technical Subjects:	
✓Calculating Machines	2 hrs
Drafting Technology Core	15 hrs
Mechanical Drawing (3)	
Technical Drafting (3)	
Applied Descriptive Geometry (3)	
✓Drafting & Design for	
Electricity-Electronics (3)	
Architectural Drafting & Design (3)	
	<hr/> 30 hrs

### SOPHOMORE YEAR

General Education Requirements	11 hrs
Other Technical Subjects:	3 hrs
Elective (3)	
Drafting Technology Core:	16 hrs
Machine Drawing (3)	
Technical Design (3)	
Structural Drafting (3)	
Topographical Drafting (3)	
Individual Studies (4)	
	<hr/> 30 hrs



student with a variety of skills and related knowledge necessary to perform as efficient draftsmen, capable of transferring ideas from engineers and designers to the finished product. Graduates may be employed by manufacturing industries, construction companies, mines, utilities or architectural planners. Preparation for this career includes technical drafting skills and a knowledge of mechanical components and devices, basic mathematics, materials and processes of industry.

## 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

### 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 Requirement (Minimum of 3 hrs of General Education total)	
Electronics Technology Core:	22 hrs
ET 31 Pulse Circuits (5)	
ET 33 Digital Circuits and Systems (4)	
ET 42 Microwave Circuits (5)	
ET 45 Communications Electronics I (4)	
ET 47 Communications Electronics II (4)	
	<hr/>
	33 hrs

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.

## 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.

### FRESHMAN YEAR

	General Education	16 hrs
PS 20	Introduction to Police Science	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 22a	Police Field Training	1 hr
PS 26	Police Organization and Administration	3 hrs
PS 32	Procedural Law I	3 hrs
PS 34	Procedural 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/> 31 hrs

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 problems. 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.

# **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. 1a General Biology.

Courses carrying a letter designates X, viz. 1X 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.

# 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 the Lower Paleolithic to historic periods.
- 10F ARCHAEOLOGICAL SUMMER SESSION 4 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.
- 25 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.
- 26 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.
- 35 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.

- 36            ARCHAEOLOGICAL EXCAVATION            3 UNITS**  
**Prerequisite: None**  
 Practical experience through scientific excavation of an archaeological site. Sessions held in the field.
- 85            PREHISTORIC INDIANS OF THE SOUTHWEST            2 UNITS**  
**Prerequisite: None**  
 A survey of prehistoric Indian groups of the American Southwest including Northern Mexico. Field trips.
- 86            MODERN INDIANS OF THE SOUTHWEST            2 UNITS**  
**Prerequisite: None**  
 A survey of modern Indian tribes of Arizona, New Mexico and Northern Mexico. Field trips.
- 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.

## **Art**

- 1            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.
- 3            BASIC DESIGN            3 UNITS**  
**Prerequisite: None**  
 A study of the basic elements of visual perception and organization. Lecture 2 hours, studio 4 hours.

- 6 BASIC DRAWING 3 UNITS**  
**Prerequisite: None**  
 An introduction to representational drawing and expressive pictorial design. Lecture 2 hours, studio 4 hours.
- 7 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.
- 8 SURVEY OF WORLD ART 3 UNITS**  
**Prerequisite: None**  
 A continuation of Art 7 through the modern era. Lecture 3 hours.
- 30 TWO DIMENSION DESIGN 3 UNITS**  
**Prerequisite: Art 3**  
 A study of the theory and practice of two dimensional composition and design. Lecture 2 hours, studio 4 hours.
- 31 THREE DIMENSIONAL DESIGN 3 UNITS**  
**Prerequisite: Art 3**  
 An introduction to methods of sculpture, pottery, and jewelry. Lecture 2 hours, studio 4 hours.
- 45 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. Studio 6 hours.
- 65 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.

- 80**                      **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. Studio 6 hours.

## **Aviation Technology**

- 11**                      **AIRCRAFT MATERIALS AND PROCESSES**                      **3 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.
- 12**                      **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.
- 14**                      **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.
- 15**                      **AERONAUTICS DRAFTING**                      **3 UNITS**  
A course in basic drafting skills with emphasis on blueprint interpretation and sketching with considerable practice in tracing electrical circuits on schematic drawings.
- 16**                      **THEORY OF FLIGHT AND INSTRUMENTATION**                      **4 UNITS**  
A study of the theory of flight as it related to the maintenance technician with particular emphasis on the associated instrumentation in an aircraft.



- 17 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.
- 20 BASIC AIRCRAFT POWERPLANTS 11 UNITS**  
An introductory course in powerplants of various kinds specialized for aircraft use, a foundation for AT-30.
- 21 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.
- 30 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.
- 40 BASIC AIRFRAME STRUCTURES 5 UNITS**  
An introductory course in actual structures and repair procedures applicable to same.
- 42 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.
- 50 ADVANCED AIRFRAME STRUCTURES 6 UNITS**  
A continuation of AT-40 with emphasis on more sophisticated repairs to larger aircraft primarily in the laboratory.

- 52                    AIRCRAFT ASSEMBLY, RIGGING                    7 UNITS**  
**AND INSPECTION**  
A course in which the student has the opportunity to perform the final work and inspection on an aircraft prior to its return to service after receiving required maintenance, with stress on Federal Aviation Regulations.
- 53                    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.
- NOTE:** All courses offered in Aviation Maintenance will be completed during the forty-eight week program. Sequencing will be determined by department.
- 80                    BASIC FLIGHT                    6 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.
- 82                    INTERMEDIATE FLIGHT                    6 UNITS**  
The student will become proficient in all of the basic maneuvers and familiar with radio navigation. He will get his private license during the first part of the second semester. Commercial maneuvers will be introduced and the student will take the cross-country required for a commercial license.
- 84                    ADVANCED FLIGHT                    6 UNITS**  
The student will become proficient in all the commercial maneuvers and in controlling the aircraft solely by reference to instruments. He will be introduced to instrument approaches. Commercial rating will be awarded upon successful completion of AT-84.

- 86 INSTRUMENT TRAINING 6 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.
- 88-A MULTI-ENGINE 3 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.
- 88-B FLIGHT INSTRUCTOR 3 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.

## **Biology**

- X DEVELOPMENTAL SCIENCE 3 UNITS**  
A developmental 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 the manipulation of science equipment. Lecture 2 hours, Laboratory 3 hours.
- 1a-1b GENERAL BIOLOGY 4-4 UNITS**  
**Prerequisites: 1a is a prerequisite for 1b.**  
Principles and concepts of biology, including historical development, with reference to organization, function, heredity and evolution of micro-organisms, plants, and animals. Lecture 3 hours, Laboratory 3 hours.

- 12 FOUNDATIONS OF SCIENCE: Biology 3 UNITS**  
**Prerequisites: Chemistry 12 and Physics 12 or equivalent courses.**  
Basic concepts of both animals and plants, with emphasis on the processes and interrelationships of living things with each other and their surroundings. Lecture 2 hours, Laboratory 3 hours.
- 20 MICROBIOLOGY 4 UNITS**  
**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; characteristics and importance of microorganisms other than bacteria; control of microorganisms; microorganisms and disease; and other aspects of applied microbiology. Lecture 3 hours, Laboratory 3 hours.
- 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**  
**Prerequisites: Chemistry 2a, Chemistry 12 or high school chemistry.**  
Basic course in botany for students of plant or animal science. An introduction to the principles of botany as illustrated by plants, with emphasis on morphology 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.
- 3a-3b 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.
- 4 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.

- 5                    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.
- 6                    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.
- 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.
- 8                    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.
- 9                    SURVEY OF AMERICAN BUSINESS                    3 UNITS**  
**Prerequisite:** None.  
Fundamental characteristics and functions of modern business, with emphasis on possible career opportunities. An extensive course outline will be given to the

student with questions and programmed terminal performance tasks.

- 10                    ELEMENTARY SHORTHAND                    3 UNITS**  
**Prerequisite: Business 6 or equivalent, minimum grade of 3 in English, or permission of the professor.**  
Emphasis on Gregg Shorthand theory. Students are expected to attain a minimum speed of 60 words a minute on familiar material. Students with high school shorthand should enroll in Business 11 or 13.
- 11                    INTERMEDIATE SHORTHAND                    3 UNITS**  
**Prerequisite: One year of shorthand in high school, or Business 10 with a grade of 3 or better, or permission of the professor.**  
Improvement of Shorthand skills and development of dictation speed to a minimum of 80 words a minute on new material.
- 12                    ADVANCED SHORTHAND                    3 UNITS**  
**AND TRANSCRIPTION**  
**Prerequisite: Business 11, with grade of 3 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.
- 13                    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.

- 14 BILINGUAL SHORTHAND-TYPING I 3 UNITS**  
(English-Spanish)  
**Prerequisite:** 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.
- 15 BILINGUAL SHORTHAND-TYPING II 3 UNITS**  
(English-Spanish)  
**Prerequisite:** Business 14 and have finished or are currently enrolled in Spanish 75a or 75b.  
Continuation of Business 14. Further development of speed and accuracy in typing forms, telegrams, reports, minutes of a meeting, and manuscript in Spanish.
- 18 CALCULATING MACHINES 2 UNITS**  
**Prerequisite:** None.  
Development of fundamental skill in operating rotary calculators, ten-key and printing calculators, and electronic computation equipment.
- 19 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.



- 21 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.
- 23 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.
- 31 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.
- 51 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.
- 52 MERCHANDISING 3 UNITS**  
**Prerequisite:** Business 55 or permission of Professor  
The merchandising process will be dealt with in the areas of: buying motives and habits, sales and sales management functions, sales promotion, and inventory control.

- 53                      SALESMANSHIP    3 UNITS**  
**Prerequisite: None.**  
 Career opportunities in sales work, practical and psychological factors in selling, development of desirable sales personality, current techniques in conducting sales campaigns. Members of the class will engage in practical sales demonstrations.
- 55                      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.
- 57                      PROBLEMS OF DISTRIBUTION    3 UNITS**  
**Prerequisite: Business 55 and 52, or permission of professor**  
 Case study and individualized approach to distribution problems. Students will study in depth facets of distribution which are particularly appealing to them and which have specific vocational significance.
- 59                      PRINCIPLES OF ADVERTISING    3 UNITS**  
**Prerequisite: None.**  
 Role of advertising in distribution, including advertising media, advertising organizations, advertising copy, layout, and production.
- 62                      OFFICE PROCEDURES    3 UNITS**  
**Prerequisite: Business 6, or high school typing, or permission of the professor.**  
 General office procedures, including duties of office workers, staff members, and management. Case problems, projects, and actual machine operation.
- 64                      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.

- 70 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.
- 72 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.
- 81 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.
- 83 MEDICAL TRANSCRIPTION 3 UNITS**  
**Prerequisite:** Business 7, and Business 81 or Zoology 20a.  
Transcribing histories, physicals, admission and discharge notes, and surgical dictation through extensive practice on transcription equipment. (Students will be expected to visit the operating rooms to observe surgery during this time.)
- 85a MEDICAL RECORD SCIENCE I 3 UNITS**  
**Prerequisite:** Zoology 20a.  
Orientation to medical recordkeeping theory and practice through participation in a study of the history of

medicine, hospitals and medical records; a breakdown of professional ethics and personal conduct; a development of securing, evaluating and using medical records; and quantitative and qualitative analysis of the medical record. Preparation of records used and pertinent reports.

**85b                    MEDICAL RECORD SCIENCE II                    3 UNITS**

**Prerequisite: 85a**

Principles involved in numbering, filing, and preservation of medical records; compiling statistics for hospitals; preparation of daily census reports; analysis of hospital service; special reports and classification of disease; processing of file forms and records.

**91ab                    INTERNSHIP IN MARKETING                    12 UNITS**

**Prerequisite: Business 52, 55, 57. (Bus. 57 may be taken concurrently with Bus. 91a.) All students enrolled in Bus. 91ab must have prior approval of Mid-Management professor.**

Culminating effort of students enrolled in the Middle Management program. Consists of paid supervised employment in wholesaling, retailing, service or other distributive occupations. Students will normally live off campus in market areas. Seminars by appointment.

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

**Prerequisite: 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 91ab.

**95                    INTERNSHIP AS MEDICAL SECRETARY                    16 UNITS**

**Prerequisite: Business 81, 83.**

Dovetailing theory and practice with experience in a hospital business office and discussion of problems

encountered in hospital training stations. Lecture-Laboratory experience at Tucson Medical Center or other medical facility.

97	INTERNSHIP AS MEDICAL RECORD TECHNICIAN	16 UNITS
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**Prerequisite:** Business 81, 83.

Dovetailing theory and practice with experience in a hospital business office and discussion of problems encountered in hospital training stations. Lecture-Laboratory experience at Tucson Medical Center or other medical facility.

**98      INTERNSHIP IN OFFICE  
EDUCATION                          6 or 12 UNITS**

**Prerequisites:** At least 12 units of courses related to the job assignments or equivalent.

Correlation of knowledge gained in the classroom with actual paid on-the-job training. Participating business establishments will include those which can provide maximum training in the office environment.

**99 INDIVIDUAL STUDIES 1-4 UNITS**

**Prerequisite: 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

<b>2A</b>	<b>GENERAL CHEMISTRY</b>	<b>4 UNITS</b>
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**Prerequisites:** One year of high school chemistry, or Chemistry 12 with a grade of 3 or better, or Math 11.

Introduction to the general principles of chemistry with emphasis upon quantitative relationships; properties of matter are related wherever possible to present concepts of atomic structure. Lecture 3 hours, Laboratory 3 hours.

- 2b GENERAL CHEMISTRY 4 UNITS**  
**Prerequisite: Chemistry 2a**  
 Continuation of Chemistry 2a with emphasis upon chemical equilibrium and a study of the elements through group relationships on periodic tables. Principles of ionic equilibrium are studied in the laboratory by means of experiments in acid-base equilibria, solubility products, and a modified scheme of qualitative analysis. Lecture 3 hours, Laboratory 3 hours.
- 12 FOUNDATIONS OF SCIENCE: Chemistry 3 UNITS**  
**Prerequisite: No previous chemistry background is assumed.**  
 The classification and structure of matter and the principles of chemical reactions. Lecture 2 hours, Laboratory 3 hours.
- 20 QUALITATIVE ANALYSIS 4 UNITS**  
**Prerequisites: Math 20 and Chemistry 2b.**  
 Theory and practice of qualitative inorganic analysis. Should be taken by students who plan to teach chemistry, study medicine or do research work in science. Lecture 2 hours, Laboratory 6 hours.
- 30 QUANTITATIVE ANALYSIS 4 UNITS**  
**Prerequisites: Math 20 and Chemistry 2b.**  
 Introduction to quantitative chemical analysis involving the fundamentals of volumetric and gravimetric analysis. Careful manipulative technique, integrity and accuracy are stressed in the laboratory. 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**  
**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.

## **Drafting Technology**

- 10**                    **MECHANICAL DRAWING**                    **3 UNITS**  
**Prerequisite:** **None**  
Emphasis on development of lettering, geometric constructions, sketching, multiview projection, pictorial representation, basic dimensioning, sectioning, and reading of specifications. Stress on demonstration of abilities in technique, basic drafting skill, and instrumentation.
- 22**                    **TECHNICAL DRAFTING**                    **3 UNITS**  
**Prerequisite:** **DT 10**  
A continuation of DT 10 with emphasis on development of abilities in auxiliary views, threads and fasteners, developments and intersections, dimensioning, and axonometric projection. Use of the latest techniques, instruments and equipment in performance of practical applications which vary in difficulty from the simple to more complex industry-oriented problems.
- 23**                    **APPLIED DESCRIPTIVE GEOMETRY**                    **3 UNITS**  
**Prerequisite:** **DT 22 or concurrent with**  
Solutions of (1) typical three-dimensional space problems through application of the principles of multi-view projection; (2) problems offering practical exercises in solving of true length lines, true size and shape of planes, (3) approximate development of plane, warped and double-curved surfaces, and (4) other related applications.

- 31 DRAFTING FOR ELECTRONICS 3 UNITS**  
**Prerequisite:** DT 22 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.
- 34 MACHINE DRAWING 3 UNITS**  
**Prerequisite:** DT 22  
Drawing of details, assemblies, gears, cams, illustrations and application of principles of precision dimensioning and tolerancing. Development of ability to use ASA standards, MIL standards, and industrial catalog to perform tolerance studies to complete revisions and to do checking. Emphasis on preparation of industrial production drawings.
- 45 TECHNICAL DESIGN 3 UNITS**  
**Prerequisite:** DT 34  
Principles and applications involved in machine and tool designing. Solutions to problems related to drill jigs, milling fixtures, machine parts and assemblies, and fabrication procedures. Use of industrial catalogs, ASA and MIL standards and performance of dimensioning and tolerancing for production.
- 46 ARCHITECTURAL DRAFTING AND DESIGN 3 UNITS**  
**Prerequisite:** DT 10  
A study of aesthetic and functional design with respect to area planning, elevations, site orientation, mechanical services, and details of residential house planning. Students design and complete a set of residential plans.
- 47 STRUCTURAL DRAFTING 3 UNITS**  
**Prerequisite:** DT 22  
Delineation of problems related to structural steel, timber, and concrete, and the applications of these



materials to commercial buildings, bridges, and other structures. Performance of basic calculations and drawings of details and construction plans.

**49 TOPOGRAPHICAL DRAFTING 3 UNITS**

**Prerequisite:** DT 22

Interpretation and delineation of surveyor's notes, topographical map drawings, land parcels, sub-divisions, area calculations, profiling, contouring, sectioning and vertical curve analysis.

**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 THEATRE 3 UNITS**

**Prerequisite:** None

A study of the history and tradition of western theatre with analysis and discussion of representative drama from classical to contemporary theatre. 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**

- 2 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.
- 3 PRINCIPLES OF ECONOMICS 3 UNITS**  
**Prerequisite: Economics 2**  
 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 INTRODUCTION TO ELECTRONICS 6 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.

- 22 SEMICONDUCTORS AND TRANSISTORS 4 UNITS**  
**Prerequisite: ET 1, ET 10**  
 A comprehensive study of semiconductor devices, stressing the ideal transistor approach. Study of semiconductor physics, the P-N junction diode, transistor configurations, bias arrangements, temperature effects and frequency response. Laboratory work, closely associated with lectures, is designed to illustrate the principles of semiconductors.
- 25 ELECTRONIC CIRCUITS AND SYSTEMS 5 UNITS**  
**Prerequisite: ET 10, concurrent enrollment in ET 20 or equivalent**  
 Study of rectifier circuits and filters, audio, video and R.F. amplifiers. Use of theoretical concepts for practical application in these and oscillator, modulation and demodulation circuits.
- 31 PULSE CIRCUITS 5 UNITS**  
**Prerequisite: ET 22**  
 A study of waveforms, networks, passive pulse circuitry, transistor switching, non-linear waveshaping, gating and multivibrators. The laboratory work illustrates the principles covered in the lectures.
- 33 DIGITAL CIRCUITS AND SYSTEMS 4 UNITS**  
**Prerequisite: ET 31**  
 A study of logic and digital circuits common to computers and other areas of digital electronics. Emphasis on binary and octal numbers, codes, Boolean Algebra, logic circuits, counters, digital clocks, computing circuits and storage devices. Application of digital circuits and systems studied in the laboratory.
- 42 MICROWAVE CIRCUITS 4 UNITS**  
**Prerequisite: ET 22, ET 25**  
 A practical study of the theory and circuit analysis of microwave equipment. Klystron transmitters, modulation, basic microwave receivers, IF amplifiers, video

amplifiers, wave guides and microwave systems presented. The laboratory experiments develop a foundation in the basic principles of circuit analysis and the use of electronic test equipment in the analysis, adjustment and effective repair of microwave equipment.

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

Resonant circuits, coupled circuits, voltage and power amplifiers, and oscillators will be studied and analyzed in this course. Stress on practical application and problem solving.

**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.

## English

**X                    ENGLISH FUNDAMENTALS                    3 UNITS**  
**Prerequisite: None**

A review of the fundamentals of the English language to include structural grammar, English language history, word formation, diction, style, use of the dictionary, literary analysis, and the mechanics of spelling and punctuation. A grade of C or better is required for entrance to English 1. English Y, Reading Fundamentals, must be taken in conjunction with English X.

**1X,2X,                    CONVERSATIONAL ENGLISH                    3-3-3-3 UNITS**  
**3X,4X                    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.

**Y                      READING FUNDAMENTALS                      2 UNITS**

**Prerequisites: None**

Development of optimum reading efficiency through viewing timed Tachomatic films, taking timed comprehension checks on prose selections, reviewing phonics, syllabication, roots and affixes and using both dictionary and reference sources. College reading rates, comprehension, and vocabulary tested weekly in addition to Nelson-Denney evaluation.

**1                      COMPOSITION                      3 UNITS**

**Prerequisite: Counseling placement or a grade of C or better in English X.**

Readings of essays and short stories and application of basic techniques of exposition and literary interpretation through oral participation and the writing of approximately six thousand words.

**2                      COMPOSITION                      3 UNITS**

**Prerequisite: English 1**

Emphasis on the study of logic, the techniques of argument and persuasion, and fallacious reasoning, to develop a competence in the composition of argumentative and persuasive essays.

**4                      INTRODUCTION TO LITERATURE                      3 UNITS**

**Prerequisite: English 1 and 2 or permission of the instructor.**

Use of films, tapes, and records as well as literary selections to analyze various literary genres—poetry, drama, essay, novel, and short story—and the significant characteristics of each.

- 6 CRITICAL EVALUATIVE READING 2 UNITS**  
**Prerequisites:** 40th percentile on the ACT test or complete English X.  
Development of techniques of critical-evaluative reading by criticizing literary prose and poetry, reading library references on literary criticism, locating inferences, generalizations, assumptions, and supporting details in both inductive and deductive paragraphs, taking timed readings with comprehension checks, using a systematic approach to vocabulary development including a review of foreign roots and affixes. Weekly quiz scores and Nelson-Denney scores used for evaluation.
- 7 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.
- 8 WRITTEN COMMUNICATIONS AND REPORTS 3 UNITS**  
**Prerequisites:** Counselor placement or a grade of C or better in English X.  
Development of the skills of effective written communication, with emphasis on the organization of factual and statistical materials, basic report style and format and functions of business communications.
- 20 BRITISH LITERATURE 3 UNITS**  
**Prerequisites:** Six units of freshman English or permission of professor.  
A chronological study of periods, genres, and individual works of British literature from the Age of Chaucer to the Age of Johnson.

- 21**                      **BRITISH LITERATURE**                      **3 UNITS**  
**Prerequisite:** Six units of freshman English or permission of professor.  
A chronological study of periods, genres and selected works of British literature of the 18th, 19th and 20th centuries. English 20 is not a prerequisite to English 21.
- 24**                      **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.
- 25**                      **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, Chaucer, Cervantes, and Shakespeare.
- 27**                      **WORLD LITERATURE**                      **3 UNITS**  
**Prerequisite:** Six units of freshman English or permission of professor.  
A study of ten major literary works from the Renaissance to the present, including selections of Voltaire, Goethe, Stendahl, Austen, Dickens, Dostoevsky, Turgenev, Flaubert, and a twentieth century novelist. 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.

## **French**

**1X,2X, 3X,4X ELEMENTARY CONVERSATIONAL FRENCH 2-2-2-2 UNITS**

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

The student goals are the same as for French 1a and 1b; however, classes will meet fewer hours per week and as a result will 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 transferred upon the completion of 4X.

**1a,1b ELEMENTARY FRENCH 4-4 UNITS**

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

Conversation, comprehension of the tongue, pronunciation, grammar, reading and writing skills. Lecture 4 hours, lab 2 hours.

**50a,50b INTERMEDIATE FRENCH 4-4 UNITS**

**Prerequisite:** French 1b or 2 years of high school French

Continuation of essentials of French grammar and syntax. Reading from simple French prose. Intensive oral and written drills, conversation, and practice in composition. Lecture 4 hours, lab 2 hours.

## Geography

- |           |   |                  |
|-----------|---|------------------|
| <b>1</b>  | <b>PHYSICAL GEOGRAPHY</b><br><b>Prerequisite: None</b><br>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 land-forms, the composition of the earth's crust, weather, climate, vegetation, soils, and the mineral resources used by man.  | <b>3 UNITS</b>   |
|           |   |                  |
| <b>2</b>  | <b>CULTURAL GEOGRAPHY</b><br><b>Prerequisite: None</b><br>A study of the culture regions of the world surveying the important world geographical characteristics, culture, and problems of the world's major regions.   | <b>3 UNITS</b>   |
|           |   |                  |
| <b>5</b>  | <b>ECONOMIC GEOGRAPHY</b><br><b>Prerequisite: None</b><br>A survey 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 of these activities. | <b>3 UNITS</b>   |
|           |   |                  |
| <b>99</b> | <b>INDIVIDUAL STUDIES</b><br><b>Prerequisite: Approval of the Division Chairman and professor.</b><br>The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.  | <b>1-4 UNITS</b> |

## Geology

**12 FOUNDATIONS OF SCIENCE: Geology 3 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 2 hours, Laboratory 3 hours.

**51 PHYSICAL GEOLOGY 3 UNITS**

**Prerequisite: None**

Principles of physical geology for students who plan to major in geology, hydrology, engineering, and agriculture. Lecture 2 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.

## Health

**42 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.

**70 FIRST AID AND SAFETY 2 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.

- 71 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.

## **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

## Geography

- |           |   |                  |
|-----------|---|------------------|
| <b>1</b>  | <b>PHYSICAL GEOGRAPHY</b><br><b>Prerequisite: None</b><br>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 land-forms, the composition of the earth's crust, weather, climate, vegetation, soils, and the mineral resources used by man.  | <b>3 UNITS</b>   |
|           |   |                  |
| <b>2</b>  | <b>CULTURAL GEOGRAPHY</b><br><b>Prerequisite: None</b><br>A study of the culture regions of the world surveying the important world geographical characteristics, culture, and problems of the world's major regions.   | <b>3 UNITS</b>   |
|           |   |                  |
| <b>5</b>  | <b>ECONOMIC GEOGRAPHY</b><br><b>Prerequisite: None</b><br>A survey 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 of these activities. | <b>3 UNITS</b>   |
|           |   |                  |
| <b>99</b> | <b>INDIVIDUAL STUDIES</b><br><b>Prerequisite: Approval of the Division Chairman and professor.</b><br>The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman. May be repeated for credit.  | <b>1-4 UNITS</b> |

## Geology

- 12 FOUNDATIONS OF SCIENCE: Geology 3 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 2 hours, Laboratory 3 hours.
- 51 PHYSICAL GEOLOGY 3 UNITS**  
**Prerequisite: None**  
Principles of physical geology for students who plan to major in geology, hydrology, engineering, and agriculture. Lecture 2 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.

## Health

- 42 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.
- 70 FIRST AID AND SAFETY 2 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.

- 71 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.

## **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.

**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.

**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.

## **Humanities**

**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.
- 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 publica-

tions. 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**  
**Prerequisites:** One year of high school algebra and one year of high school geometry or Math 3X.  
 Covers the content of advanced high school algebra, hence not open for credit to students who have earned credit in such a course. Includes real number system, polynomials, fractions, first and second degree equations, radicals, functions and graphs, simultaneous systems, sequence and series, exponential and logarithmic functions. Lecture 3 hours.
- 12 BASIC CONCEPTS OF NUMBER 3 UNITS**  
**Prerequisite:** Two years of high school mathematics, not including general mathematics, or one year of college mathematics not including Math 1X.  
 The nature of number and systems of enumeration, the logical structure of arithmetic, informal and formal geometry. Emphasis is on developing a basis for understanding the common processes of arithmetic and the metric and non-metric relations in geometry. Lecture 3 hours.
- 20 COLLEGE ALGEBRA 3 UNITS**  
**Prerequisites:** High school plane geometry or Math 3X together with one and one-half years of algebra in high school or Math 11.  
 Includes sets, logic of algebra, inequalities, absolute values, functions and graphs, linear and quadratic functions, determinants, polynomial functions, inverse functions, permutations and combinations, binomial theorem, mathematical induction, exponential and logarithmic functions, and complex numbers. Lecture 3 hours.
- 24 PLANE TRIGONOMETRY 3 UNITS**  
**Prerequisite:** Math 20 or approval of the professor.  
 Includes trigonometric functions, identities, related angles, radian measure, graphs, functions of two angles,

equations, logarithms, right and oblique triangles, inverse functions, complex numbers. Lecture 3 hours.

**26 SLIDE RULE 1 UNIT**

**Prerequisite:** Permission of the professor.

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

**44 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 inductions, exponential and logarithmic functions, applications of circular functions, complex numbers. Lecture 5 hours.

**51 ANALYTICAL GEOMETRY WITH CALCULUS 5 UNITS**

**Prerequisite:** Four years of high school mathematics with permission of the professor or Math 20 and Math 24 or Math 44.

Absolute value and inequality; relations, functions, and graphs; limits and continuity; definition and application of the derivative, antiderivative, and definite integral; differentiation of algebraic functions; trigonometry; and conic sections. Lecture 5 hours.

**52 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                    5 UNITS**  
**WITH CALCULUS**

**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.

## **Music**

**1                    INTRODUCTION TO MUSIC                    3 UNITS**

**Prerequisite: None**

An introduction to musical form with emphasis on listening to recorded music of the eighteenth century

through the twentieth 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.

**20(I) ENSEMBLE 1 UNIT**

**Prerequisite: 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.

**20(V) ENSEMBLE 1 UNIT**

**Prerequisite: 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.

**30 KEYBOARD HARMONY 1 UNIT**

**Prerequisite: 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.

**32a-32b MUSIC THEORY 3 UNITS**

**Prerequisite:** 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.

**50 INTRODUCTION TO JAZZ 3 UNITS**

**Prerequisite:** None

A study of the history and development of jazz music in the United States from 1900 to the present.

## **Philosophy**

**11 INTRODUCTION TO PHILOSOPHY 3 UNITS**

**Prerequisite:** 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.

**20 PHILOSOPHIES OF THE EAST 3 UNITS**

**Prerequisite:** 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.

## **Physical Education**

**10 BEGINNING COED GYMNASTICS 1 UNIT**

**Prerequisite:** None

Beginning and intermediate skills on all the basic pieces of gymnastics apparatus.

**11 INTERMEDIATE COED GYMNASTICS 1 UNIT**

**Prerequisite:** PE 10 or permission of professor

Further development of previously acquired gymnastic skills on all pieces of gymnastics apparatus.

- 12 WEIGHT TRAINING/WRESTLING (Men Only) 1 UNIT**  
**Prerequisite: None**  
The basic skills and knowledge necessary in weight training and wrestling with opportunity for competitive intraclass wrestling.
- 13 MODERN DANCE (Women Only) 1 UNIT**  
**Prerequisite: None**  
Individual and group physical exercises and opportunity for expression through modern dance interpretations.
- 14 COED BADMINTON/VOLLEYBALL 1 UNIT**  
**Prerequisite: None**  
Badminton and volleyball with emphasis on the mastery of fundamentals.
- 15 BEGINNING COED BOWLING 1 UNIT**  
**Prerequisite: None**  
Development of beginning skills of bowling with emphasis on mastery of fundamentals.
- 16 INTERMEDIATE COED BOWLING 1 UNIT**  
**Prerequisite: PE 15 or permission of professor**  
Further development of previously-acquired bowling skills.
- 17 BEGINNING COED TENNIS 1 UNIT**  
**Prerequisite: None**  
Introduction to the beginning skills of tennis with emphasis on mastery of fundamentals.
- 18 INTERMEDIATE COED TENNIS 1 UNIT**  
**Prerequisite: PE 17 or permission of professor**  
Further development of previously-acquired tennis skills including the basic strategy of competitive tennis.



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| <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> |
| <b>20</b> | <b>INTERMEDIATE COED GOLF</b><br><b>Prerequisite: PE 19 or permission of professor</b><br>Further development of previously-acquired golf skills, including chipping, putting, pitching and driving. Introduction of "special shots" and different forms of competition. | <b>1 UNIT</b> |
| <b>21</b> | <b>COED SQUARE AND SOCIAL DANCE</b><br><b>Prerequisite: None</b><br>Introduction to the various ballroom steps in social dancing with the opportunity to master traditional American square dances.  | <b>1 UNIT</b> |
| <b>22</b> | <b>COED ARCHERY</b><br><b>Prerequisite: None</b><br>Target archery and clout shooting with opportunity for improvement of existing skills.   | <b>1 UNIT</b> |
| <b>23</b> | <b>BEGINNING HANDBALL/WEIGHT TRAINING</b><br><b>Prerequisite: None</b><br>Development of basic skills of handball through instruction, participation and intra-class competition and execution of basic weight training exercises.                                       | <b>1 UNIT</b> |
| <b>24</b> | <b>BEGINNING SWIMMING</b><br><b>Prerequisite: None</b><br>For the non-swimmer, guidance through primary phases of learning to swim with the final objective of the course the ability swim 30 yards.   | <b>1 UNIT</b> |
| <b>25</b> | <b>INTERMEDIATE COED SWIMMING</b><br><b>Prerequisite: PE 24 or permission of professor</b><br>Opportunity to improve on skills in the four funda-  | <b>1 UNIT</b> |

mental 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
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**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.

27	COED LIFE SAVING	1 UNIT
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**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.

**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
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**Prerequisite: None**

Development of the basic and intermediate skills of trampolining and practice in several body building exercises, using a variety of pieces of equipment.

30	TRAMPOLINING/BODY DYNAMICS (Women Only)	1 UNIT
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**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 professor  
 Membership in class based on participation on the song-leading or cheerleading squads, with emphasis on individual and group physical exercise stunts, and dances with demonstration of these skills at rallies and games.
- 55 ORIENTATION TO PHYSICAL EDUCATION 3 UNITS**  
**Prerequisite:** None  
 An introduction to the nature and scope of physical education, its historical development, basic philosophy and objectives, changing concepts, scientific foundations, and professional opportunities.
- 171 ORIENTATION TO RECREATION 3 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.
- 189 ELEMENTARY SCHOOL PHYSICAL EDUCATION 3 UNITS**  
**Prerequisite:** None  
 A study of the scope and values of physical education and movement education in the elementary school including the teaching designs for primary and intermediate grades pertaining to physical education as well as knowledge necessary to evaluate physical education

programs. Course designed for prospective elementary education teachers, physical education majors and minors.

## **Physics**

### **2a-2b      GENERAL PHYSICS      4-4 UNITS**

**Prerequisite:** Math 11. 2a is a prerequisite for 2b.

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

### **3a-3b      INTRODUCTORY PHYSICS WITH CALCULUS      4-4 UNITS**

**Prerequisite:** Math 51.

Lecture the same as 2a-2b. Laboratory sections use calculus. Lecture 3 hours, Laboratory 3 hours.

### **12      FOUNDATIONS OF SCIENCE: Physics      3 UNITS**

**Prerequisite:** No previous physics background is assumed.

Presentation of basic concepts of physics with particular emphasis on modern physics. Lecture 2 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.

## **Police Science**

### **20      INTRODUCTION TO POLICE SCIENCE      3 UNITS**

**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.

**22                      POLICE PATROL FUNCTIONS I                      3 UNITS**

**Prerequisite:** Taken concurrently with PS-22a

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.

**22a                      POLICE FIELD TRAINING                      1 UNIT**

**Prerequisite:** Must be taken in conjunction with PS-22

The student will work a minimum of eight hours each week at a local law enforcement agency. His duties shall consist of desk duties, performance of booking procedures, radio dispatching and other duties assigned. The student will be required to maintain a log of his activities and will submit the log to the professor two weeks prior to the end of the semester.

**24                      POLICE PATROL FUNCTIONS II                      3 UNITS**

**Prerequisite:** PS-22 and PS-22a

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.

- 26 POLICE ORGANIZATION AND ADMINISTRATION 3 UNITS**  
**Prerequisite:** PS-20, PS-22, PS-22a, 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.
- 27 RULES OF EVIDENCE 3 UNITS**  
**Prerequisite:** PS-32 and PS-34  
 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.
- 30 JUVENILE PROCEDURES 3 UNITS**  
**Prerequisite:** None  
 Study of the social problem of juvenile delinquency, some of its causes, and what is being done to correct such causes. Juvenile delinquency and dependency and the police, juvenile crime, procedure of arrest, juvenile court, correctional methods and facilities, and the various aspects and effectiveness of rehabilitative procedures.
- 32 PROCEDURAL LAW I 3 UNITS**  
**Prerequisite:** PS-26 or permission of professor  
 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.
- 34 PROCEDURAL LAW II 3 UNITS**  
**Prerequisite:** PS-32  
 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.

- 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-22 or permission of professor**  
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**  
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: PS-20**

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 disorders.

**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 of 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, emphasis on the early period of constitutional construction, constitutional growth, the branches of government, civil liberties, the party system, and American political thought. This course is approved for teacher certification. Students majoring in political science should take Political Science 2.
- 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.

## Psychology

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|-----------|---|----------------|
| <b>1</b>  | <b>GROUP DYNAMICS</b><br><b>Prerequisite:</b> None<br>All full-time freshman students enroll in Psychology I, directed by a member of the Counseling Staff. Students achieve self understanding through group interaction and testing.  | <b>1 UNIT</b>  |
| <b>2</b>  | <b>ELEMENTARY PSYCHOLOGY</b><br><b>Prerequisite:</b> None<br>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.                               | <b>3 UNITS</b> |
| <b>3</b>  | <b>ELEMENTARY PSYCHOLOGY</b><br><b>Prerequisite:</b> None<br>A more intensive study of the realm of psychology with emphasis on the psychobiological bases of behavior, intelligence, sensation, perception, higher mental processes, personality and adjustment, abnormal psychology, and social psychology. | <b>3 UNITS</b> |
| <b>10</b> | <b>INTRODUCTION TO<br/>SOCIAL PSYCHOLOGY</b><br><b>Prerequisite:</b> None<br>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.  | <b>3 UNITS</b> |

- 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.

## **Social Science**

- 1X SURVEY OF SOCIAL SCIENCE 3 UNITS**  
**Prerequisite:** None  
Survey of several disciplines in the social sciences: anthropology, geography, history, political science, psychology and sociology.
- 5 MEXICAN-AMERICAN HERITAGE 3 UNITS**  
**Prerequisite:** None  
Mexican-American culture from the anthropological, historical, and sociological viewpoint with emphasis upon present problems and conditions.

## **Sociology**

- 1 INTRODUCTION TO SOCIOLOGY 3 UNITS**  
**Prerequisite:** None  
An overview of the controversial aspects of sociology through major concepts of writers and presentation of verifiable social facts about group phenomena with student experience in selected social research.
- 2 SOCIAL PROBLEMS 3 UNITS**  
**Prerequisite:** Sociology 1  
A study of contemporary major social problems through selected writings of various authors to provide "the means for understanding the source, nature, and possible resolution of them."

**99 INDIVIDUAL STUDIES 1-4 UNITS**  
**Prerequisite:** Approval of Division Chairman and professor  
 The student will solve a problem under the direction of a faculty member with the approval of the Division Chairman.

## Spanish

**1X,2X, 3X,4X CONVERSATIONAL SPANISH 3-3-3-3 UNITS**  
**Prerequisite:** 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.

**3a,3b INTERMEDIATE SPANISH 4-4 UNITS**  
**Prerequisites:** Spanish 1b or two years of high school Spanish taken not earlier than one year prior to registration at Cochise and completed with average grade or better, or competency as demonstrated to the satisfaction of the professor.

Review of grammar, reading, writing and speaking; introduction to simple literature (short stories, novels,

plays of selected Spanish authors). Lecture (Spanish) 4 hours, lab 2 hours. Course is conducted primarily in Spanish with only those explanations in English necessary for comprehension.

**50x, 51x INTERMEDIATE**

**CONVERSATIONAL SPANISH**

**3-3 UNITS**

**Prerequisite: Spanish 4X or 2 years of recent high school Spanish or permission of professor**

A study of selected excerpts of Hispanic literature. Class and individual discussion of material in Spanish with stress upon the skills of reading, writing and interpreting Hispanic literature and culture. A more detailed exposure to Spanish idioms.

**75a, 75b INTERMEDIATE COMPOSITION**

**AND CONVERSATION**

**3-3 UNITS**

**Prerequisite: Spanish 3b or completion of course similar to Spanish 3b (Mexican schooling above 6th grade, four years of high school Spanish).**

Topic-centered composition and discussion. Application of grammar and increased vocabulary from a variety of readings, class discussions and individual presentations. Course conducted in Spanish.

**104a, 104b INTRODUCTION TO  
SPANISH LITERATURE**

**3-3 UNITS**

**Prerequisite: Spanish 3b and permission of professor or completion of course similar to Spanish 3b (Mexican schooling above 6th grade or four years of high school Spanish) and permission of professor**

An introduction to the works of representative Spanish authors from the beginnings of literary works in Spain to the present. A general knowledge of the history and development of the arts in Spain will be acquired. Emphasis is placed on reading, understanding and analyzing Spanish literary works, through the literary

ideas which originated in Spain that later spread to the rest of the Hispanic World. Course is conducted completely in Spanish.

**99 INDIVIDUAL STUDIES 1-4 UNITS**

**Prerequisite:** Approval of Division Chairman and professor

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

## **Speech**

**2 FUNDAMENTALS OF SPEECH 3 UNITS**

**Prerequisite:** None

Study of fundamental techniques of public speaking, experience in construction and delivery of speeches of various types, 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 UNITS**  
**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.

## **Zoology**

- 1a-1b GENERAL ZOOLOGY 4-4 UNITS**  
**Prerequisite:** Chemistry 2a or Chemistry 12 or high school chemistry. 1a is a prerequisite to 1b except by special permission of the professor.  
An introduction to animal biology and structure, classification of vertebrates, and a survey of vertebrate groups. Principles of genetics, ecology, and embryology. Dissection of typical vertebrate. 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.

**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.