COLUMBIA COLLEGE

1982-83
CATALOG

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LIBRARY

Columbia, CA 95310

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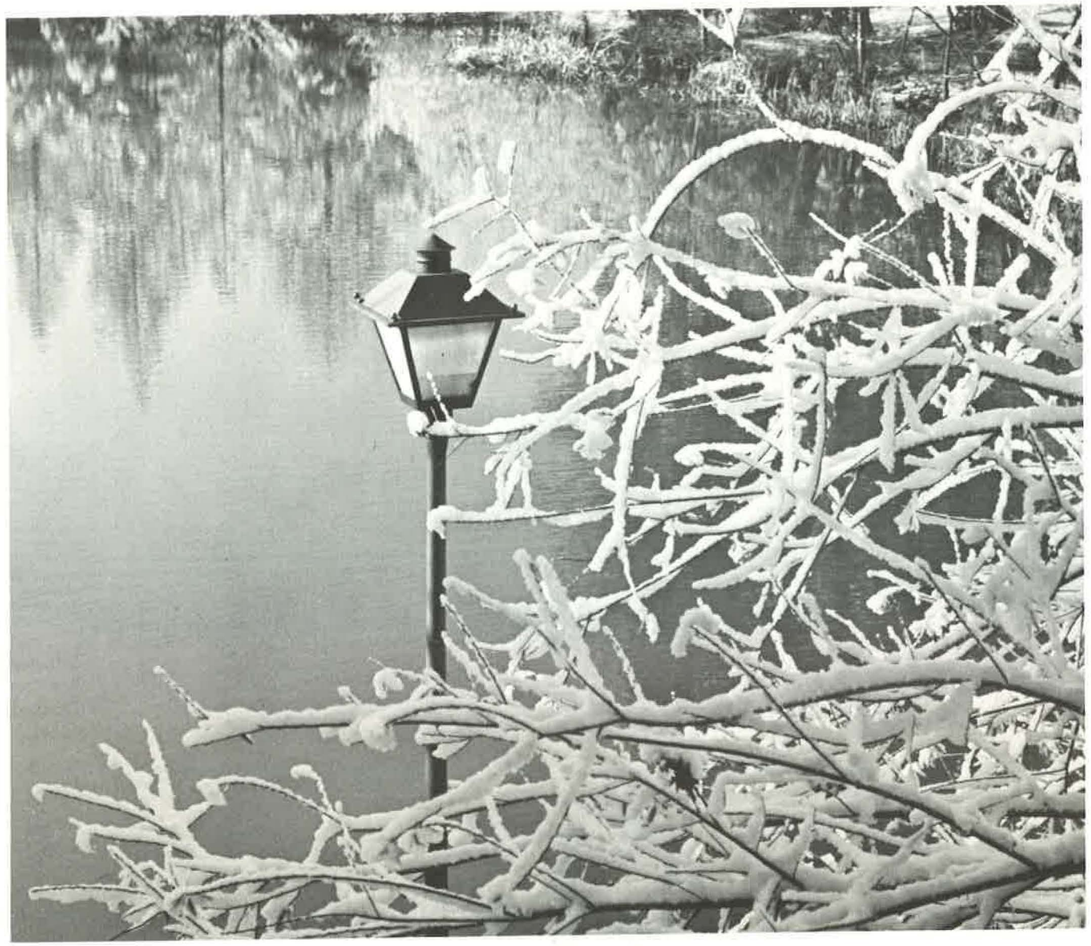
1982-83

YOSEMITE COMMUNITY
COLLEGE DISTRICT

PRICE $2.00



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FALL QUARTER, 1982

July 19 ..... Application for admission and transcripts for day students should be on file.
September 1 ..... Beginning advisement and registration for Fall Quarter for new and former students.
September 20 ..... Instruction begins.
October 1 ..... Last day to enter a class.
October 8 ..... Deadline for filing intent to graduate for Fall Quarter.
October 27 ..... Last day to elect for CR/NC or letter grade.
November 12 ..... Veterans Day Holiday.
November 24 ..... Last day to withdraw from course without penalty.
November 25-26 ..... Thanksgiving Holiday.
December 17 ..... Fall Quarter ends.
December 20-January 2 .... Winter Recess.

WINTER QUARTER, 1983

October 18 ..... Application for admission and transcripts for day students should be on file.
January 3 ..... Instruction begins.
January 14 ..... Last day to enter a class.
January 21 ..... Deadline for filing intent to graduate for Winter Quarter.
January 28 ..... Last day to elect for CR/NC or letter grade.
February 11 ..... Lincoln Day Holiday.
February 21 ..... Washington Day Holiday.
March 4 ..... Last day to withdraw from course without penalty.
March 24 ..... Winter Quarter ends.
March 25 ..... Spring Recess.

SPRING QUARTER, 1983

February 14 ..... Application for admission and transcripts for day students should be on file.
March 28 ..... Instruction begins.
April 8 ..... Last day to enter a class.
April 15 ..... Deadline for filing intent to graduate for Spring Quarter.
April 18 ..... Last day to elect for CR/NC or letter grade.
May 26 ..... Last day to withdraw from course without penalty.
May 27 ..... Board Declared Holiday.
May 30 ..... Memorial Day Holiday.
June 16 ..... Spring Quarter ends.
June 17 ..... Graduation.

Additional information pertaining to advisement, registration, final examinations, as well as other dates will be listed in the Schedule of Classes.

1982

JULY

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SEPTEMBER

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1983

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JUNE

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26	27	28	29	30		

BOARD OF TRUSTEES
YOSEMITE COMMUNITY COLLEGE DISTRICT

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Area 3, Modesto

Robert Cardoza
Area 3, Modesto

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Area 3, Modesto

* Carmen Jackson
Area 3, Turlock

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Area 1, Sonora

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Superintendent,
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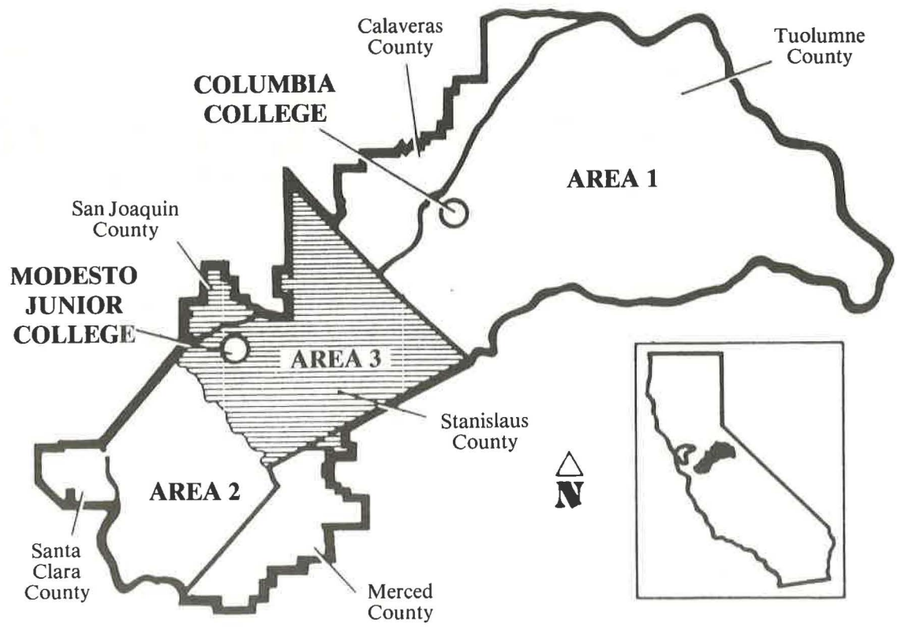
† Charter Board Member



COLLEGE STAFF

CERTIFICATED STAFF

(Date of District appointment follows name.)

DONALD L. ANDREWS (1977) — **Music**
B.A., Stanford University
M.A., Stanford University

JOEL C. BARBER (1967) — **Art, Art History**
B.A., Willamette University
M.A., University of Oregon

PAUL K. BECKER (1971) — ***Dean of Student Services***
A.B., Western State College of Colorado
M.A., Stanford University

JOSHUA E. BIGELOW (1981) — **Physical Education**
A.A., Columbia College
A.B., University of California, Berkeley
M.A., University of California, Berkeley

ELSIE M. BRUNO (1980) — ***Counselor***
B.S., University of California, Los Angeles
M.S., California State University, Los Angeles

DALE L. BUNSE (1975) — **Art**
B.A., Willamette University
M.F.A., Arizona State University

ROSS A. CARKEET, JR. (1968) — **Natural Resources**
A.A., Modesto Junior College
B.S., University of California, Berkeley
M.S., California State University, Humboldt

D. IRVING COBB (1971) — **Natural Resources Technology**
B.S., University of California, Berkeley

DEAN C. COLLI (1975) — **Business**
B.S., California State University, Fresno
M.A., University of California, Santa Barbara

L. FRANCES CULLEN (1971) — ***Psychology, Counselor, Student Activities***
B.S., University of California, Los Angeles
M.S., University of Southern California
Ed.D., University of Southern California

W. DEAN CUNNINGHAM (1979) — ***President***
B.A., Doane College
M.A., Illinois Wesleyan University
Ed.D., Arizona State University

EDWARD C. DOELL, JR. (1973) — **English**
A.A., Foothill Junior College
B.A., California State University, San Francisco
M.A., California State University, San Francisco

RICHARD L. DYER (1966) — **History, Political Science**
A.A., Mount San Antonio College
B.A., LaVerne College
M.A., California State University, Los Angeles

RONALD L. ERICKSON (1981) — ***Coordinator of Hospitality Management***

McKINLEY FROST (1970) — **Heavy Equipment Maintenance, Welding Technology**
A.A., Columbia College

ROBERT H. GIBSON (1970) — **Physical Education**
A.A., Graceland College
B.A., Central College
M.A., California State University, San Jose
Ed.D., University of Central Arizona

ARLENE S. GIORDANO (1976) — **Psychology**
A.B., Hunter College
M.A., University of California, Berkeley
Ph.D., University of California, Berkeley

JON M. HAGSTROM (1962) — **English**
A.A., Shasta College
B.A., California State University, Chico
M.A., University of the Pacific

ROBERT H. HAMILTON (1968) — **History, Political Science, Humanities**
A.A., University of California, Berkeley
Th.M., Dallas Theological Seminary
M.A., University of California, Berkeley

ROD D. HARRIS (1979) — **Music**
A.A., Fort Steilacoom Community College
B.A.E., Pacific Lutheran University
M.M., Pacific Lutheran University

TERRY J. HARRISON (1974) — **Physical Education**
B.A., University of California, Berkeley
M.A., Mills College

JAMES R. HASTINGS (1973) — **Anthropology, Psychology**
A.A., American River College
B.A., California State University, Sacramento
M.A., California State University, Sacramento

FRANCES V. HEGWEIN (1974) — **Health Occupations**
R.N., South Shore Hospital

JOHN L. HOLLOWAY (1981) — **Business**
A.A., Orange Coast Junior College
B.A., California State University, San Francisco
M.B.A., California State University, San Francisco

FLOYD L. HOPPER (1976)
B.A., University of Nevada
M.A., University of California, Long Beach

TOM G. HOLST (1974) — **Earth Science**
A.B., Augustana College
M.N.S., University of South Dakota
Ed.D., University of Northern Colorado

NANCY T. HORNBERGER (1974) — **Sociology**
B.A., University of Rochester
M.A., University of the Pacific

GLORIA L. JACOBSON (1979) — **Health Occupations**
B.S., Loma Linda University

THELMA A. JENSEN (1968) — ***Coordinator of Health Occupations***
R.N., Highland School of Nursing
A.A., Columbia College

MARYALYCE D. JOHNSON (1981) — ***Learning Disabilities Specialist***
B.A., San Jose State College
M.A., University of Santa Clara

DONALD A. JONES (1968) — **Biological Science**
A.A., San Francisco City College
A.B., California State University, San Francisco
M.A., California State University, San Francisco

JAMES R. KINDLE (1974) — ***Coordinator of Learning Skills***
B.A., Wisconsin State College
M.A., Rockford College
M.A., Colorado Springs College

DOUGLAS E. KOTAREK (1974) — **Business, Economics**
B.S., Northern Illinois University (Sabbatical Leave 1982-83)
M.B.A., Northern Illinois University

WALTER L. LEINEKE (1968) — **Speech**
B.A., California State University, Sacramento
M.A., California State University, San Francisco

RAYMOND D. LIEDLICH (1981) — ***Dean of Instruction***
B.S., Bowling Green State University
M.A., California State University, Los Angeles

PAUL W. LOCKMAN (1981) — ***Director of EOPS and Disabled Student Programs***
A.A., Fresno City College
B.A., California State University, Fresno
M.A., California State University, Fresno

JERRY D. LYON (1971) — **Business**
A.A., Edinburg Junior College
B.B.A., University of Texas
M.E., Abilene Christian College

ROBERT L. McDONALD (1969) — **Mathematics, Physics**
A.A., Mount San Antonio College
B.S., California State Polytechnic University, Pomona
M.A., California State Polytechnic University, Pomona

JAMES ROBERT MENDONSA (1981) — **Search and Rescue**
B.A., California State College, Stanislaus
M.A., California State College, Stanislaus

JOHN C. MINOR (1970) — **English**
B.A., Linfield College
M.A., University of Washington

CHESTER H. PALMER (1976) — ***Assistant Dean of Instruction, Continuing Education***
B.A., University of Arizona
M.A., University of Arizona

FRED J. PETERSEN (1981) — **Computer Science**
B.A., California State University, San Jose
M.A., University of Washington

DAVID G. PURDY (1971) — **Drama**
B.A., California State University, San Jose
M.A., California State University, Fresno

BLAINE D. ROGERS (1972) — **Biological Science**
A.A., Bakersfield College
B.A., California State University, Humboldt
M.A., California State University, Humboldt

MELBORN N. SIMMONS (1969) — **Mathematics**
B.S.E., Henderson State College
M.S., University of Arkansas

TERRY L. SMITH (1981) — **Fire Science**
A.S., Miramar Community College

RAYMOND L. STEUBEN (1976) — ***Director of Library Services***
B.A., University of California, Santa Barbara
M.L.S., University of California, Los Angeles

ELLEN H. STEWART (1979) — **Drama**
B.A., San Francisco State University
M.A., Fresno State University

V. PETER SULLIVAN (1961) — **Physical Education**
A.A., Modesto Junior College
B.A., Pepperdine University
M.A., California State University, Sacramento

ROBERT THOMASON (1981) — **Physical Education, Basketball Coach**
B.A., University of the Pacific

CANDACE L. WILLIAMSON (1979) — **Business**
B.A., California State University, Humboldt
M.A., California State University, Humboldt

DAVID I. WILLSON (1975) — **Automotive Technology and Heavy Equipment**
B.S. California Polytechnic State University, San Luis Obispo
M.A., California Polytechnic State University, San Luis Obispo

WILLIAM H. WILSON, JR. (1974) — ***Counselor***
A.A., Solano College
B.A., San Jose State College
M.S., California State University, Hayward

CLARENCE O. WOLGAMOTT, JR. (1971) — **Chemistry**
B.S., Tennessee Technological University
M.A., Tennessee Technological University

FACULTY EMERITI

MATILD M. KAMBER (1976) — **Philosophy 1976-1982**
B.A., American College for Girls, Istanbul, Turkey
M.A., University of Istanbul

BARBARA C. PAINTER (1969) — **Counselor 1969-1980**
A.A., Modesto Junior College
A.B., California State University, San Jose
M.A., University of the Pacific
Ed.D., University of the Pacific

HARVEY B. RHODES (1947) — **President 1967-1979**
A.B., California State University, San Jose
M.S., University of Southern California
Ed.D., University of California, Berkeley

RICHARD H. ROGERS (1968) — **Business 1968-1982**
A.B., California State University, Fresno
M.A., California State University, Fresno

CLASSIFIED STAFF

(Date of District appointment follows name.)

KATHLEEN L. ABBOTT (1976) — Account Clerk, Business Services

ROSS L. ALDRICH (1975) — Performing Arts Production Technician

SHIRLEY M. APPLING (1967) — Evaluation Technician, Admissions and Records

DORYENE M. BENTLEY (1975) — Secretary, Director of Instructional Materials Center

D. LARUE BUSALACCHI (1969) — Business Office and Budget Manager

CLARENCE E. CLARK (1971) — Maintenance

DOLORES C. CONNITT (1971) — Clerk, Admissions and Records

SUZANNE K. COTE (1980) — Typist Clerk, Disabled Student Center

L. C. CRAIN (1976) — Custodian

DOROTHY A. DANZ (1965) — Secretary, Dean of Student Services

TERRILL O. DEATSCH (1975) — Bus Driver/ Groundskeeper

SALLY K. DIETSCHAK (1981) — Assistant, Financial Aids and Veterans' Affairs

HELEN C. ERNEST (1969) — Clerk, Admissions and Records

KAREN M. ETHIER (1973) — Secretary, Instruction Office

DENISE F. FINN (1978) — Secretary, Assistant Dean of Instruction

STEVEN M. FROST (1979) — Custodian

KATHY P. GAINES (1981) — Switchboard Operator

WILLIAM J. GAISER (1970) — Equipment Mechanic

BEVERLY A. GINN (1980) — Supervisor, Food Services

DORIS I. GOLDSON (1970) — Secretary/ Media Assistant, Library

LINNETT C. GRANIS (1975) — Media Assistant, Library

WENDY L. GRIFFITHS (1981) — Media Assistant, Library

LAUREL M. GRINDY (1981) — Instructional Aide, Mathematics

RUTH O. HAGSTROM (1970) — College Nurse

JOSEPHINE N. HALL (1974) — Food Services

ROBERT G. HENDY (1979) — Groundskeeper/Custodian

NORINE D. HOLMES (1978) — Clerk, Admissions and Records

SONIA L. HURT (1974) — Laboratory Assistant

DWAIN JACK (1974) — Skilled Maintenance Worker

RONALD D. JACKSON (1976) — Custodian

LOUISE M. JOHNSON (1979) — Printing Specialist, Instructional Materials Center

JAMES L. JORDAN (1977) — Athletic Equipment Attendant

JANICE M. JORN (1977) — Public Information Writer

LINDA J. KALEND (1981) — Tutorial Coordinator, Learning Skills

STEVEN A. KOEHLER (1981)	Instructional Aide, Heavy Equipment
KENNETH R. LUCAS (1967)	Supervisor, Transportation/Grounds
WILLIAM L. LUCE (1976)	Custodian
DOROTHY A. MAECHLER (1981)	Accompanist/ Instructional Aide, Music
PAULA A. MAUCERE (1979)	Instructional Aide, Learning Disabilities Center
ANDREW B. MAURER (1974)	Graphic Artist, Instructional Materials Center
NEIL A. MILL (1975)	Instructional Aide, Social Sciences
LUIS C. RAMIREZ (1970)	Supervising Custodian
DAVID A. RICHMOND (1975)	Electronics Technician, Instructional Materials Center
RONALD R. ROACH (1970)	Photographer, Instructional Materials Center
JOHN R. ROSS (1970)	Director, Instructional Materials Center
MARGARET A. SCIARONI (1975)	Coordinator of College Re-entry and Student Placement
JILL L. SOUTHARD (1982)	Instructional Aide, Physical Education
ROY D. TENNANT (1980)	Media Assistant, Library
PATRICIA C. THOMAS (1972)	Account Clerk, Business Services
CAROL A. VAUGHN (1974)	Switchboard Operator/ Typist Clerk, Instructional Materials Center
BERNICE A. WADDELOW (1970)	Secretary, Dean of Instruction
CHRISTINE M. WALKER (1978)	Instructional Aide, Learning Skills
ARLENE F. WALLACE (1968)	Secretary, President
CAROL R. WIVELL (1972)	Manager, Bookstore
JAMES B. WOOD, SR. (1977)	Custodian
DONALD W. WRIGHT (1971)	Utility Worker
MELINDA G. WRIGHT (1975)	Instructional Aide, Learning Skills

GENERAL INFORMATION

COLUMBIA COLLEGE

History

Columbia College and Modesto Junior College are the two community colleges located in the Yosemite Community College District. The former Modesto Junior College District was expanded into the larger Yosemite Community College District in 1964 by action of the district electorate. The district is geographically one of the largest in the State and transects more than 100 miles of the fertile San Joaquin Valley from the Coast Range on the west to the Sierra Nevada on the east. The boundaries include nearly 4,000 square miles encompassing all of Tuolumne and Stanislaus Counties and parts of San Joaquin, Merced, Calaveras and Santa Clara Counties.

Because of an increase in student enrollment, the need for greater educational opportunities in the mountain counties, and the great distance involved in travel for students to attend Modesto Junior College, the Yosemite Community College District Board of Trustees authorized the formation of Columbia Junior College and scheduled its opening for September, 1968. The word "Junior" was dropped from the College name in 1978. During the 1981-82 academic year, from 3200 to 3500 students were enrolled each quarter, with a full-time equivalent student body of 1800.

Campus and Facilities

Campus buildings are planned around San Diego Reservoir from which wooded foothills join the rugged majesty of the Sierra Nevada. In keeping with the historic atmosphere of the Mother Lode Region, the design concept of the campus is in the architectural style of early California during the Gold Rush Days. In this unusual and picturesque setting, the College is committed to a comprehensive program of academic and occupational education which focuses on the worth and dignity of each student.

More than 200 acres of forest and land adjacent to Columbia State Historic Park in Tuolumne County were acquired from the U.S. Department of Interior, Bureau of Land Management, as the site for the Columbia College.

Accreditation

Columbia College is accredited by the Accrediting Commission for Junior Colleges, Western Association of Schools and Colleges.

The College is listed in directories of the United States Office of Education, the American Council on Education, and the Western Association of Schools and Colleges.

Appropriate lower division courses completed at Columbia College will be accepted with full credit upon transfer to California State Universities and other four-year colleges.

Philosophy

This community college is dedicated to the worth and dignity of each student. Its primary responsibility is to the goals of the student, his/her needs, desires, and aspirations.

We believe an effective education teaches that one has a life to live as well as a living to earn. Columbia College will, therefore, involve each student in opportunities for developing his/her capabilities to become a useful and contributing member of society. This objective will be accomplished through a living, dynamic and continuing experience in which each individual can confront opportunities to participate actively in the learning process. In effect, education will not happen to him/her, but with him/her and by him/her.

Guiding Principles

Each student is a separate and unique individual who shall be accepted as such. It shall be the responsibility of each student and staff member to accept and perpetuate the philosophy of this college.

This College shall provide a focus on learning as an individual process that can best be accomplished through active involvement in a setting of reality. It shall be recognized that learning is a logical outgrowth of experiences that are meaningful to each student and not the rote acquisition of a specific body of knowledge.

The College shall be characterized by its flexibility in meeting student needs. Every facet of the institution shall expect and promote this quality.

This College shall serve the total community. It will provide educational opportunities for all people of post high school age, regardless of socioeconomic class, level of aspiration, or previous performance. Thus, this college shall adhere strictly to the open-door policy.

The College shall combine the strengths of the various disciplines, so that each will contribute to and support the bases used by students to reach their goals. No single instructional area or individual will be self-sustaining, but only as a component of the student's educational progress.

This College shall perceive achievement as a function of individual growth and not of time alone. Progress will not terminate at an artificial barrier, but continue on through the student's goal.

This College shall focus on student success. This will be accomplished by preserving an environment where each individual will have maximum freedom of choice. It will afford each student an opportunity to profit from education to the fullest extent of his capabilities.

This College shall be responsive to the needs and desires of the total community. Moreover, this responsibility will transgress the artificial boundaries of town, county, or region in providing a meaningful expression of the occupational, intellectual, sociological, and cultural needs of this community.

The personnel, functions, and services provided at this College shall be distinguished by their specific ability to meet the needs of students in reaching their particular goals. None shall base its existence upon the sole fact that it is a usual occurrence at a community college.

This College shall enable each student to acquire the trait of learning as a lifelong pattern. Learning will be considered a continuous process and not an isolated incident in given time or place.

This College shall require that each member of the faculty assume the dual roles of academic advisor in general and specific academic counselor in his/her discipline. This responsibility shall be apparent in student-faculty relationships and will not be the sole responsibility of Student Services personnel.

This College shall be committed to continuous planning, development, and evaluation. It shall seek and expect constant reexamination as a natural process for making appropriate modifications in every phase of its activities.

There shall be change with a purpose. Toward this end the College shall seek innovation, support creativity and imagination, while conformity for its own sake will be ignored. It shall consider technological and methodical advances which appear to have promise.

The natural and human resources adjacent to and beyond the campus shall be an integral part of the educational program.

The College shall encourage student involvement in responsible citizenship.

College Functions

Implementation of the philosophy and guiding principles of this College shall be carried out through a variety of functions. These functions may be described as the actions the College will perform in meeting the defined needs of its students.

I. General Education Function
Provide a broad program of knowledge and skill acquisition in humanities, arts, and sciences for personal development.

II. Transfer Education Function
Provide a comprehensive program that meets the lower division requirements for acceptance at designated institutions.

III. Occupational Education Function
Provide specialized training programs needed to develop skills, knowledge, attitudes, and other occupational competencies.

IV. Ancillary and Consultative Education Function
Provide educational services of an ancillary and consultative nature to individual students and the community.

V. Remedial Education Function
Assist the student to acquire those basic competencies needed for effective participation in programs leading to his/her goal.

VI. Occupational and Educational Planning Function
Provide an opportunity for students to attain personal goals through a program of realistic planning and direction.

VII. Continuing Education Function
Provide continuing educational and vocational activities for adults.

PROGRAMS

The College offers courses designed to meet the diverse interests, educational needs, and vocational needs of its students. Vocational programs are designed to prepare students for entry employment in such fields as business administration, secretarial work, diesel technology and **auto mechanics, nursing, fire technology, forestry and natural resources, hospitality management, computer science and many other fields.**

In response to the specific needs and personal interests of the older adults in the community, the Columbia College Involvement for Seniors (C.C.I.F.S.) Program offers courses especially designed to meet their needs. Classes are offered at various locations throughout the community during the day for the convenience of the older adults and retired members of the community.

Cultural enrichment is offered through courses in art, literature, humanities, foreign languages, instrumental and vocal music, drama and speech. Performances by dance, drama, and musical groups are part of the cultural events offered to the community. Those who wish to broaden their horizons, to become more aware of themselves and the world about them, or to improve their home environment will be drawn to offerings in health education, consumer education, psychology, child development, sociology, speech, conservation, useful and edible plants, science today, art appreciation, the metric system and physical activities.

All students are encouraged to become active participants in the college community activities such as student government, athletics, art shows, music, drama, journalism and tutoring.

Certain courses are designed to assist the individual in personal development. These include, among others, effective study skills, improvement in reading, writing, mathematics and listening skills, career awareness, job employment skills, personal awareness, inquiry into self and values.

ADULT AND CONTINUING EDUCATION

Columbia College is committed to meeting the educational needs of adults in our community. Through the Continuing Education program a variety of credit and non-credit classes are offered which fulfill requirements leading to an A.A. or A.S. Degree, a high school or elementary diploma, or an assortment of vocational certificates. Most of these courses are offered during the evening at locations both on and off campus. Continuing Education courses are designed to provide opportunities to resume interrupted education, to investigate new fields of interest, and for general education for self-improvement and enriched living.

HIGH SCHOOL CREDIT COURSES

A high school student may be admitted to the college if he/she:

(1) Is 18 years of age or older.
(2) Is married and less than 18 years of age.
(3) Is less than 18 years of age, but he/she is required to obtain a signed release from the superintendent of his/her

high school district of residence, stating the classes he/she is allowed to attend.

The College will certify completion of courses which fulfill high school graduation requirements as determined by the high school of residence. The high school of residence will officially award the diploma.

College units used toward the High School diploma are not applicable toward the Associate degree.

High School Equivalency Diploma (G.E.D.)
Columbia College serves as an official General Educational Development Testing Center and provides the opportunity to obtain the High School Equivalency (G.E.D.) Diploma.

COMMUNITY SERVICES

The Columbia College Community Services program is a response of the College to meet challenges of our society. Community Services provides that phase of the educational, recreational, and cultural program which lies beyond formalized classroom instruction.

Meeting challenges such as the complexities of leisure time, cultural needs, economic and technological change, and minority group problems require unique programs. Ways constantly are sought to discover and respond to community needs. Community Service sponsors many programs including public lectures, forums, concerts, art exhibits, and film series; a speakers' bureau which offers speakers without charge; campus tours; short courses; community recreation; and a public information program. A citizen's committee advises the College of needs and evaluates proposals and programs.

The College is a center for community functions of various kinds. College facilities are available for use by recognized community groups when such use does not interfere with the regular educational program.

NON-DISCRIMINATION

Columbia College does not discriminate on the basis of race, sex, physical handicap, religion, color, creed, national origin, or age in any of its educational and employment programs, activities, policies, practices, and procedures.

OPEN CLASS POLICY

Unless specifically exempted from statute, every course, course section, or class, the average daily attendance of which is to be reported for state aid, is open to enrollment and participation by any person who has been admitted to the college and who meets such prerequisites as may be established.

Exception to this policy will be made where health, safety, legal requirements or the facility is a limiting factor in the conduct of the course. Students denied enrollment by this policy may appeal to the Dean of Student Services.

STATEMENT OF INTENT

The Yosemite Community College District and Columbia College have made every reasonable effort to determine that everything stated in this catalog is accurate. Courses and programs offered together with other matters contained herein, are subject to change without notice by the administration of the Yosemite Community College District or Columbia College for reasons related to student enrollment, level of financial support, or for any other reason, at the discretion of the District and the College. The District and the College further reserve the right to add, amend, or repeal any of their rules, regulations, policies and procedures.

ADMISSIONS

ADMISSIONS

Eligibility

Graduates of accredited high schools, persons holding a high school Certificate of Proficiency, or those persons 18 years of age or older who are able to profit from instruction and who meet the residence requirement are eligible for admission to Columbia College. Admission with previously earned credits will be granted upon evidence of official transcripts showing satisfactory scholarship and an unqualified honorable dismissal from an accredited college. The students must request the previous colleges of attendance to mail transcripts directly to Columbia College.

Residence Requirements

Persons 18 years of age and older have the legal right to establish their own residence for purposes of admission.

A statement verifying legal residence is required to be filed with the College prior to initial registration. A student is qualified to attend Columbia College if he/she meets one of the following residence requirements:

(1) Is a legal resident of the Yosemite Community College District with a local address.

(2) Is a legal resident of a California high school district not affiliated with a community college district.

(3) Is a legal resident of another community college district and presents a proper permit from that district (if required by interdistrict agreement). If the district of residence does not issue a permit, the student may elect to pay the cost of instruction. (See Admission of Non-resident Students.)

(4) Is a student whose legal residence is in another state and pays the out-of-state fee.

(5) Is an international student who complies with special admisson requirements and pays the non-resident fee.

Admission of Non-resident Students

Columbia College accepts students who are residents of other states if they meet all admission requirements. An adult is a non-resident if he/she has not resided in California for one year prior to the opening date of the quarter. A minor's residence is the same as that of his/her parents or legal guardian.

Residency determination dates for 1982-83 are September 20, 1982, for Fall Quarter; January 3, 1983, for Winter Quarter; and March 28, 1983 for Spring Quarter.

Nonresidents of California, including international students, are required to pay an out-of-state tuition fee of $59.00 per unit. Tuition refunds are based on the following schedule: before or during week in which instruction begins, 100 percent; second week of instruction, 50 percent. No refund permitted after the second week of instruction. Questions regarding determination of residency should be referred to the Admissions and Records Office.

Interdistrict Attendance Permits

Yosemite Community College District maintains a free exchange of students with all community college districts in the State of California with the exception of San Joaquin Delta Community College District. San Joaquin Delta District residents (except those in Calaveras County) may contact San Joaquin Delta College to request a permit. Calaveras County residents and residents of any other California community college district may attend Columbia College without a permit. For further information, contact the Admissions and Records Office.

Admission Procedures

Students who desire admission to Columbia College are to complete and return application forms to the College Admissions and Records Office. Application forms are available from Columbia College, high school counselors in the Yosemite Community College District or may be obtained by writing to the College.

Before admittance, official transcripts for all previous college work must be received by the College. If no transcript is available due to withdrawal, an official letter stating this fact is required.

It is the student's responsibility to furnish the College with official documentation for previous college work or training to be evaluated for credit. These documents become the property of Columbia College.

Applications should be submitted as early as possible in order to allow for processing. A local address must be submitted before completion of registration.

Readmission

A student who plans to return to Columbia College after an absence of one calendar year or more must file an application for readmission. Transcripts are required if the student has attended another college since last attending Columbia College.

Notice of Acceptance

New and former students will be notified officially of their acceptance and advisement appointment after all application forms and documents have been received. This notice is mailed approximately four weeks prior to the first day of the quarter. Early advisement is desirable to allow the student a maximum choice of classes.

Schedule of Classes

A Schedule of Classes is the official listing of courses. It is published each quarter of the academic year.

The Schedule of Classes contains information regarding registration dates and special instructions for registering in classes.

The College reserves the right to make additions or deletions to the Schedule of Classes. Any class in which the enrollment is too small to justify continuance may be cancelled.

Admission of International Students

In the belief that students from foreign countries make significant contributions to the college community while preparing for leadership roles in their home countries, Columbia College accepts a limited number of international students each year.

The College may restrict the number of international students from a foreign country so that many nations of the world may be represented on the Columbia campus. Students are required to submit the following information by the third week of May for admission to the following Fall Quarter:

(1) Submit official transcripts, translated into English, of all high school and college work attempted.

(2) Furnish one letter of recommendation, translated into English, from a former teacher.

(3) Take a TOEFL test if from a non-English speaking country. Results of the test are to be forwarded to Columbia College. No other testing is required.

(4) Have a physician complete a Report of Medical History and Health Evaluation including a tuberculin clearance examination. The report shall be in English and returned to the College.

(5) Furnish evidence of a health and accident insurance policy.

(6) Furnish evidence of satisfactory financial support. This may be accomplished by providing a written guarantee from the bank of a parent, relative or sponsor in the United States.

(7) Pay tuition at the current rate of $59.00 per unit. International students must be full-time students (12 units minimum).

(8) Students are responsible for making arrangements for their own housing and notifying the College of their local address.

(9) There is no application fee.

Consideration for admission will be given only after all of the required information is on file. Upon acceptance for admission, the I-20 form will be mailed so that a Student Visa can be obtained.

A College counselor serves as advisor to international students.

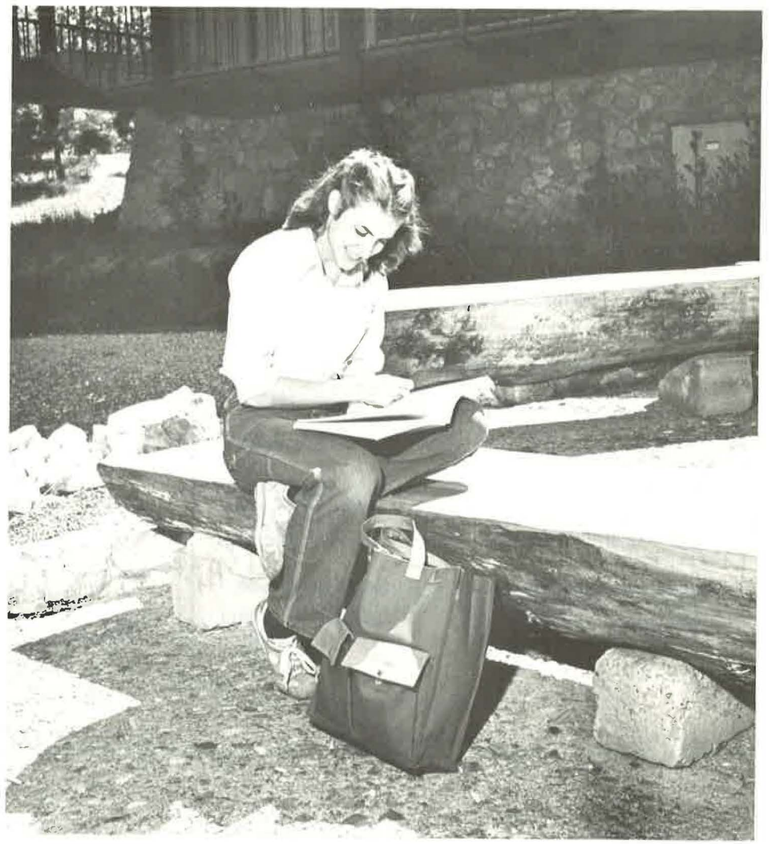
Admission of High School Students

High school students in their junior or senior year, upon written authorization of their principal and approval of the College, or those holding a Certificate of Proficiency, may take community college courses.

This opportunity is designed to introduce high school students to a college environment when, in the judgment of their principal and the College, the student can profit from the experience.

Units earned will apply toward the requirements of a college degree if not used for high school graduation.

STUDENT SERVICES



STUDENT SERVICES

Student Orientation

An introduction to the College is provided for new incoming students at the time of their initial advisement appointment. Since this is a group orientation, students are encouraged to use this service to gain information concerning the College's responsibility to the student, the student's responsibility to the College, as well as to learn what student services are available. Academic procedures are discussed and the arrangement of the student's first program of classes with the assignment of an advisor takes place at this orientation.

Counseling Services

Counselors are available to all students during the day and on selected evenings by appointment or drop-in basis. Counseling is provided by specialized and trained personnel to assist students with academic planning, determining vocational goals and resolving personal and social problems. Counselors may also function in the advisement process. Testing services to evaluate occupational interests, general ability or evaluations of personal and social skills are provided by counselors. When appropriate, counselors may refer students to other services provided by the College or other agencies.

Faculty Advisement Program

Advisement is an on-going service whereby students meet with a faculty person to discuss educational objectives, plan an academic program, gain assistance in registration procedures, evaluate academic progress or gain referral to counselors and other sources concerning personal or academic problems related to the college experience. College advisors are assigned on the basis of the student's program of study. Scheduled student-advisor conferences are held prior to the beginning of each quarter to allow continuing students an opportunity to plan an academic program for the next quarter. Students are encouraged to confer with their advisor at any time.

Testing Services

The College offers testing services to students requiring evaluation of their academic potential, occupational interests, or general ability. Students may be referred for individual or group testing by instructors, advisors, or counselors. Testing services also are available through the counselors upon individual student request. Columbia College serves as a General Educational Development (GED) Testing Center to provide tests of high school equivalency.

Services for Disabled Student

The Disabled Student Services Program is designed to open the door to educational opportunities for students with disabilities. The College has made changes in design so as to offer the disabled student access to instructional components of the College.

Students who have a physical, communication, or learning disability and need special services and/or equipment are asked to contact the Disabled Student Services office in the lower level of the Learning Resource Center. Academic advising and personal counseling are available along with the following special services: on-campus transportation, mobility assistance, academic tutoring, interpreters, assistance in locating readers, notetakers, testing and other services based on student needs.

In addition to Columbia College's regularly scheduled classes, programs and services, there are selected classes that are specially adapted to the needs of the disabled students, such as the Adaptive Physical Education Class.

Student Insurance

Student accident insurance is provided by the student health fee. Students who desire additional accident or health insurance information may contact the College Business Office.

Privacy Rights of Students

All student records of Columbia College are kept in accordance with the provisions of the "Buckley Amendment" also known as the Family Educational Rights and Privacy Act of 1974.

All students, including former students, have the right to review their records and the right to challenge the content of their records if, in their opinion, the records contain material that is incorrect, inaccurate or otherwise inappropriate. The Dean of Student Services is the official to be contacted by any student desiring to exercise his/her rights to access and challenge.

Written student consent is needed for release or review of student records to all parties or officials except for those specifically authorized access under the Act.

Copies of the Family Educational Rights and Privacy Act of 1974, as amended, are available for inspection in the Admissions and Records Office.

Student Records Regulations

Student information designated as public directory information may be released at the discretion of the College at any time unless the College has received prior written objection from the student specifying information which should not be released. Directory information includes the student's name, address, telephone listing, date and place of birth, major field of study, class schedule, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student.

A student's records are open to the student, employees of the College acting in the course of their duties and State and Federal officials as defined in Section 54618 of the California Administrative Code.

The College may grant access to individual student records

for educational or emergency purposes and for court orders as permitted in Sections 54620 and 54622 of the California Administrative Code.

Student's Rights and Procedures for Grievance

Information pertaining to students' rights, conduct and grievance procedure is available in the Student Handbook. Student Handbooks are issued to each student at the time of registration.

Transcripts

Upon written request to the Admissions and Records Office, two transcripts will be issued without charge for each student in good standing. Additional transcripts are $1 each. No transcripts will be issued for students who have outstanding financial obligations to the College. To comply with the Buckley Amendment, Family Educational Rights and Privacy Act of 1974, transcripts cannot be sent in response to a telephone request. Transcripts from other colleges may not be released to students, other colleges, or agencies.

Student Identification Cards

Student Identification Cards will be issued at the time of registration. Student Identification Cards are required for checking out library books and audio visual equipment and materials. Students who do not receive Student Identification Cards at registration may obtain them in the College Library.

Career Information Center

The College maintains a career information center to assist students to explore a variety of resources available to those seeking information pertaining to educational and occupational programs. Assistance is provided in the use of EUREKA—a computerized career information system. Students may be referred to counselors for assistance.

Student Employment

Employers are encouraged to report job openings, part or full-time, to the Career Center which maintains a list of student employment opportunities. Students seeking employment should register with the Career Center and update their availability each quarter.

Financial Aid

Students who need financial assistance to defray college expenses may be eligible for funds under the College Work Program, Educational Opportunity Grants, Basic Educational Opportunity Grants, National Direct Student Loans, or Extended Opportunity Programs and Services (EOPS). These funds are administered by the College Financial Aid Office and EOPS Office.

Applications for the above funds are required to determine financial need. These are available in the Financial Aid Office.

Applications for applying for Federally Insured Student Loans and California Guaranteed Student Loans may also be obtained in the Financial Aid Office. Receipt of financial aid is contingent on student's eligibility and availability of funds. To comply with federal regulations, a detailed publication regarding financial aid is available in the College Financial Aid Office, Admissions and Records Office and College Library.

Scholarships and Awards Program

Columbia College has an extensive number of scholarships and awards provided by various organizations and individuals from the community. Scholarships and awards are generally based on grade point average, financial need, units completed, and/or participation in extra curricular activities including employment and/or homemaking. Special awards are available for students majoring in Fire Technology, Conservation, Forestry Technology, Natural Resources, Hospitality Management, Vocational Nursing, Business, Music, Special Education, other vocational majors, and Sonora or Summerville High School graduates.

Scholarships and awards are available to Columbia College students who are new, continuing, returning and/or transferring to a four-year college or university.

When a student applies for a specific scholarship or award at the beginning of the Spring Quarter, the application is considered for all other scholarships and awards for which the student qualifies that quarter. Most awards are granted during the Spring Quarter for the following academic year; others are awarded throughout the school year. The MONEYBOOK brochure, containing detailed information about the Scholarship Program, is available in the Student Services Office and the Admissions and Records Office. The MONEYBOARD bulletin board, located near the Office of Admissions and Records, lists the criteria for scholarships and awards as they become available throughout the year.

Health Services

A variety of health services are available to students registered at the College. As part of the enrollment application, students are asked to complete an emergency health card. Students having chronic health problems, however, are advised to inform the College Nurse so that the best possible help may be rendered in case of an emergency. Illness or accidents should be reported immediately to the College Nurse or any administrator. A fee, payable at the time of registration, is charged for health services.

Veterans Affairs

Students who are eligible to apply for Federal and State educational benefits for veterans should contact the Financial Aid Office at the time of registration each quarter for regular certification.

Those veterans who are eligible and wish to apply for advance payment should contact the above office at least 6-8 weeks prior to the beginning of the term. Veteran students are required to notify the Veteran Affairs Office of any changes in their program during the quarter.

Student Activities

College life fosters an attitude and a pattern for social and college-community involvement. Student activities are offered to widen horizons of students and develop an awareness of social and public responsibility. The framework of social events, publications, clubs, intramural activities, community projects, musical programs, dramas, campus involvement, and cultural events is developed through student-faculty interaction.

A program must meet the needs of students to be meaningful. Students interested in planning and developing an activity are encouraged to discuss their ideas with any faculty member or person involved in student activities. Faculty members may serve as advisors to foster and help the student. The College is closed weekends and school holidays.

All students are members of the Associated Students of Columbia College and they in turn develop a student government. Student Government is a representative group of students which is responsible for the conduct of student affairs, coordinates the social activities of campus organizations, and serves as spokesman for the student body. The government is developed to fit the needs of the students at that particular time.

Inter-Collegiate Athletics

The College is a member of the Central Valley Conference in basketball, volleyball and tennis. To be eligible to participate in intercollegiate athletics, a student must be enrolled in at least 12 units of credit.

Living Accommodations

There are no facilities for on-campus housing at Columbia College. Information regarding off-campus housing is available at the Career Center and is posted on College bulletin boards. The College does not supervise, recommend or assume responsibility for any off-campus housing facility.

College Bookstore

The Manzanita Bookstore, located in the Learning Resources Center, carries textbooks, materials and supplies required for classes. The bookstore also sells paperbacks, greeting cards, sundries, snacks, and many other items.

Costs of textbooks and educational supplies vary with the type of program the student is pursuing. Costs normally range from $75 to $100 each quarter depending on the program.

Library

The Columbia College Library is a center for study, class research, and leisure reading, and welcomes use by students, staff and community members. The Library's collections include nearly 30,000 books, current subscriptions to 250 magazines and six newspapers, pamphlets, maps and art prints. Available in the Audio-Visual Department are more than 5,000 cassette tapes of popular, folk, and classical music, local oral history, shorthand, and a wide variety of other topics, as well as cassette players and slide-tape kits. A typing room with electric and manual typewriters is open for use during Library hours. Photocopying can be done on a coin-operated machine near the Library.

The Library can locate and borrow on Interlibrary Loan materials not in the College Library. As a member of the Central Association of Libraries, the Library has quick access to the collections of more than 50 libraries. This service is available to students, community residents, and college staff.

The Library is open when college is in session Monday through Thursday, 8:00 a.m. to 9:00 p.m., and Friday, 8:00 a.m. to 4:30 p.m. It is closed weekends and school holidays.

ACADEMIC POLICIES AND PROCEDURES

Academic Policies And Procedures

Unit of Credit

A "unit of credit" is earned on the basis of one hour of lecture-recitation per week or three hours of laboratory per week during a quarter. In some physical education, art, drama, and music courses, a unit of credit is earned for each two hours of class time. It is common to find courses composed of learning activities resulting in combinations of lecture-recitation, independent and tutorial study, or directed and individual laboratory experiences. In all cases these are to be equated with the unit of credit.

The following terms are synonymous in expressing a unit of credit: quarter unit, quarter hour, class hour, credit and credit hour.

Conversion of Units

To convert quarter and semester units of credit, the following methods of computation are used:

(1) Quarter units of credit are converted to semester units of credit by multiplying the number of quarter units by two-thirds.

(2) Semester units of credit are converted to quarter units of credit by multiplying the number of semester units by one and one-half.

Prerequisites

Course prerequisites are intended to ensure that the student will have sufficient preparation before entering a course and to assure a reasonable chance for his/her success. **Knowledge of course prerequisites is the student's responsibility.**

Where no prerequisite is stated as part of the course description, none is required.

Prerequisites may be waived with the Dean of Instruction's permission when in the instructor's judgment the student has adequate preparation to satisfy the course objectives. An instructor has the prerogative to refuse admission to class or officially drop a student from class who has not satisfied the course prerequisites as published in the College catalog.

Grading System

Evaluation of student achievement is made in relation to the attainment of specific course objectives. At the beginning of a course the instructor will explain the course objectives and the basis upon which grades will be determined by one of the following symbols:

A - Excellent
B - Good
C - Satisfactory
D - Passing, Less Than Satisfactory
F - Failure
W - Withdrawal From Course
I - Incomplete
CR - Credit (At Least Satisfactory)
NC - No Credit (Less Than Satisfactory)
IP - In Progress (Did not meet course objectives; recommend re-enrollment in class.)
RD - Report Delayed
O - Ungraded Class

Grading Scale

Columbia College uses the following system of grade points appraising the student's level of achievement:

A - 4 grade points per unit
B - 3 grade points per unit
C - 2 grade points per unit
D - 1 grade point per unit
F - 0 grade points per unit

W, I, CR, NC, IP, O, RD — Not included in computing grade point average.

Grade Point Average

The Grade Point Average — GPA — is determined by the following formula:

$$GPA = \frac{\text{Total grade points earned}}{\text{Total quarter units attempted}}$$

For example, a student who earns 5 units of "A", 4 units of "B", 3 units of "C", 2 units of "D", and 2 units of "F" would compute his GPA as follows:

5 units	A x 4 =	20 grade points
4 units	B x 3 =	12 grade points
3 units	C x 2 =	6 grade points
2 units	D x 1 =	2 grade points
2 units	F x 0 =	0 grade points
16 units		40 grade points

$$GPA = \frac{40 \text{ grade points}}{16 \text{ units attempted}}$$

The result in this example is a GPA of 2.50.

Units for which a grade of "W," "IP," "CR," "I," or "NC" has been assigned are not counted in computing the Grade Point Average.

At the time of publication of this catalog, the Board of Governors of the California Community Colleges was reviewing the existing statewide grading system and may recommend changes. The College will make every effort to inform students of any changes, but reserves the right to amend this system accordingly.

Adding A Course

Adding a course or adding units to a course in which a student is already enrolled is permitted during the first five days of instruction each quarter. Entrance into a class in days six through ten requires the instructor's written approval. After the tenth day, students may be admitted to certain classes with the written consent of the instructor. Refer to the quarterly Schedule of Classes for designation of those classes. Students who are not eligible for self-programming must obtain their advisor's written approval before adding a course.

Dropping A Course

A student may drop a course or reduce the number of units in a course during the first three weeks of instruction. The course or units will be removed from the student's program of attendance without a grade being recorded. From the fourth week to the last day to drop without penalty, a student may drop a course and a grade of W will be recorded on the Permanent Record Card.

The last day to withdraw without penalty for all full-term credit courses shall be the last day of 75 percent of the quarter as noted in the college calendar of the Schedule of Classes. For courses less than full term, an equivalent withdrawal period will be in effect. When dropping a course, it is important for the student to inform the instructor of the class.

Auditing A Course

Enrollment on an auditing basis is not permitted.

Repetition of Courses

Courses may be repeated only to improve a grade of D, F, IP, CR, or NC except as otherwise noted in the College catalog.

When repeating a course in which a "D" grade was earned, the new grade and grade points will be recorded, but no additional units for the course will be allowed. When repeating a course in which "F", "IP", or "NC" grades were earned, the new grade, grade points, and units for the course will be recorded.

Incomplete Grades

An incomplete grade ("I") may be given for an unforeseeable emergency and justifiable reason if a student does not complete all requirements. Responsibility for removal of incomplete grades within the time granted by the instructor rests with the student. Incomplete grades must be made up within one quarter or will automatically revert to the alternate grade assigned by the instructor on the Incomplete Grade Removal Contract.

Forgiveness of "F" Grades

For graduation purposes, "F" grades recorded on the transcript for the first 45 quarter units of college work attempted will not be included in computing the Grade Point Average. An "F" grade earned after the quarter in which 45 quarter units of college work are completed will be computed in the Grade Point Average for graduation.

99./199. Independent Study Courses

Independent Study courses are intended to give students an opportunity to independently research specialized areas not available as regular course offerings of the College.

Independent Study courses do not appear in the catalog as such since these courses are designed to meet specific student interests. Independent study courses may be made available in any subject matter area. Consult your advisor for specific procedures.

CONDITIONS

To be admitted to independent study, a student shall:

(1) have completed one quarter (12 units) in residence and have a Grade Point Average of 2.5 either cumulative or for the previous quarter as a full-time student.

(2) have written approval of the instructor directing the student's Independent Study, and written verification by the Admissions and Records Office that the maximum credit limitation for Independent Study will not be exceeded. Maximum unit value for any Independent Study course for any one quarter will be 3 units of credit.

LIMITATIONS

The following limitations apply to Independent Study courses:

(1) Registration is restricted to one Independent Study course per quarter and registration must be completed prior to the fourth week of the quarter.

(2) An overall maximum of 7 units of credit completed will be allowed for Independent Study.

Students who intend to transfer are advised that Independent Study credit may not fulfill either major or General Education Breadth Requirements. Independent Study credit earned by students not transferring may be evaluated in partial fulfillment of major requirements.

Credit/No Credit

Each student may elect no later than the end of the first 30 percent of the course whether the basis for evaluation is to be Credit/No Credit or letter grade. The instructor has the privilege of allowing the Credit/No Credit option at any time during the quarter due to extenuating circumstances. With the exception of Work Experience courses, a maximum of 21 "CR" units may be counted toward the 90 units required for graduation. Credit for a course in which "CR" was earned may be converted to a letter grade by repeating the course or challenging the course by examination. CR/NC units are not computed in determining the student's GPA nor can they be applied toward the major.

At the time of publication of this catalog, the Board of Governors of the California Community College was reviewing the existing statewide grading system and may recommend changes. The College will make every effort to inform students of any changes, but reserves the right to amend this system accordingly.

Credit by Examination

A student may challenge a course by examination and obtain credit. Grades and grade points are entered on the student's transcript of record in the same manner as for regular courses of instruction. The intent of this provision is to:

(1) enable students to pursue courses of study at an accelerated rate and to encourage independent study, and

(2) recognize training or experience for which credit or advanced standing was not previously granted.

CONDITIONS

Only Columbia College courses may be challenged by examination. A maximum of 30 units may be earned by Credit by Examination. Credit granted by examination at accredited colleges will be accepted; such credit will be included in the maximum allowed by examination.

In order to challenge a course for credit, a student must:

(1) be registered in Columbia College and enrolled in the course which is being challenged.

(2) have completed at least 15 quarter units of work in residence.

(3) have a cumulative Grade Point Average of 2.0 ("C" average).

A student who fails to meet condition (2) or (3) above but feels it should be waived in his/her case may request a waiver from the instructor of the course and the Dean of Student Services.

PROCEDURE

The student must make arrangements for credit by examination with the individual instructor, who, on approval, will outline the challenge requirements and schedule the examination. If the student passes his/her examination, the grade will be recorded on his/her record at the end of the quarter.

PREVIOUSLY EARNED CREDITS

College Credit

Previously earned lower division college or university units will be accepted if the institution was accredited by a recognized accrediting association when the student was in attendance. A maximum of 15 quarter units will be allowed for courses taken by correspondence from accredited institutions.

Credit for Military Service

Armed forces personnel or veterans with a minimum of one year of satisfactory service may receive:

(1) Three quarter units and waive P.E. requirement for graduation.

(2) Credit for military service schools in accordance with credit recommendations published by the American Council on Education.

(3) Credit for certain USAFI lower division college-level courses. Provisions for granting credit to armed forces personnel and veterans are subject to the following conditions:

At least 15 quarter units of work must be completed at Columbia College before a student may receive credit.

Credit will not be granted for military service or military service schools where comparable units have been earned in courses previously taken.

The maximum credit allowable is 30 ungraded quarter units.

Credit granted to armed forces personnel and veterans by another institution is subject to re-evaluation by Columbia College.

Student Load

A student who desires to carry more than 18 units must secure approval from his/her advisor or the Dean of Students. Self-programmed students must obtain approval from a counselor. Students on academic probation will be limited to a unit load recommended by their advisor.

Classification of Students

While the minimum full-time program that will qualify a student for graduation in two years is 15 units per quarter, the following classifications have been established:

Full-time — registered for 12 or more units.
Freshman — fewer than 45 units completed.
Sophomore — 45 or more units completed.

Attendance

Students are responsible for making arrangements with their instructors to complete all course work missed.

An instructor has the prerogative to lower a student's grade or drop a student from class because of excessive absence.

Absence from the first class meeting may cancel registration in the course.

Final Examinations

Students are responsible for taking final examinations at the time scheduled unless prior arrangements are made with the instructor.

Final grades are considered permanent and may be changed by the instructor only in case of error.

Scholastic Honors

Graduating students who have earned a cumulative Grade Point Average of 3.75 or better in all college work are awarded the Associate Degree With Distinction.

Students whose cumulative Grade Point Average is between 3.50 and 3.74 are awarded the Associate Degree With Honors.

Each quarter a list of student names is published to recognize scholarship in at least 12 attempted units of work. **Classes taken for CR/NC are not included in attempted units.** Students whose Grade Point Average is between 3.30 and 3.74 are acknowleged on the Dean's list.

Students whose Grade Point Average is between 3.75 and

4.0 are recognized as Scholars of Distinction by the President and are acknowledged on the President's list.

Scholarship Reports

Grade reports are made after the end of each quarter. If the student wishes to obtain a current progress report, he/she should initiate such a request in the Admissions and Records Office.

Satisfactory Scholarship

A student whose cumulative Grade Point Average is 2.0 ("C" average) is scholastically in "good standing."

All units and grade points are counted on a cumulative basis. The method of computing the Grade Point Average is illustrated on page 21.

A student with a Grade Point Average less than 2.0 is doing unsatisfactory work, will be placed on academic probation, and is subject to disqualification.

Academic Probation

The purpose of academic probation at Columbia College is to ensure that students who are deficient in scholastic achievement will receive special advisement. Self-programmed students who are on probation will be assigned an advisor by a counselor. A student who has attempted at least 18 quarter units as shown by the official academic record shall be placed on probation if either of the following occur:

(1) The student has earned a Grade Point Average below 2.0 in all units which were graded on the basis of the grading scale described in the section entitled "Grading System."

(2) When the percentage of cumulative units in which a student has enrolled and for which entries of "W," "I," and "NC" are recorded reaches or exceeds 50 percent.

Status While on Probation

Probationary students will be limited to a unit load recommended by their advisor.

Students on probation are subject to disqualification at any time their academic work shows neglect of studies.

Removal From Probationary Status

Clear status will be granted to a student on academic probation when:

(1) In the case of probation based on Grade Point Average, the student's cumulative Grade Point Average is 2.0 or better.

(2) In the case of probation based on percentage of "W," "I," or "NC" grades, the percentage of units in this category drops below 50 percent.

If a student has been placed on academic probation and feels he/she has extenuating circumstances worthy of consideration, he/she may request the Dean of Student Services to waive such a status.

Disqualification

A student on academic probation may be disqualified under any of the following conditions:

(1) Completion of a second quarter on probation with a cumulative Grade Point Average below 1.75.

(2) Completion of a third quarter on probation with a cumulative Grade Point Average below 2.0.

(3) Where a student who has been placed on probation for two consecutive quarters enrolled and who would remain on probation for a third consecutive quarter enrolled because of an accumulation of "W," "I," or "NC" grades.

A student who earns a Grade Point Average of less than 1.0 in any quarter may be disqualified without a period of probation.

A disqualified student may not be reinstated under the admissions provisions until one quarter from the date of disqualification. If the Grade Point Average of a student readmitted after disqualification falls below 2.0 for a quarter's work, the student may be permanently disqualified.

In the event a student is disqualified, he/she may petition for readmission on the basis of the following circumstances that might warrant an exception:

(a) Evidence of consistent improvement in the student's record.

(b) A change from one major to a field of study more appropriate to the student.

(c) Circumstances in the personal life of the student which the advisor of the student believes may have been of sufficient gravity to affect adversely the performance of the student.

(d) The recommendation of the student's physician that the continuance in college would be of sufficient therapeutic benefit to the student to warrant the granting of an additional opportunity.

If a student has been disqualified and feels he/she has extenuating circumstances worthy of consideration, he/she may request the Dean of Student Services to waive the one quarter period of disqualification.

Conduct

A Code of Student Conduct was adopted by the Yosemite Community College District Board of Trustees January 6, 1970, based on the following philosophical concept:

The students and faculty at Columbia form a closely knit educational community which is engaged in the process of learning through involvement. Regulations are needed but the broader concept of personal honor is based on integrity, common sense, and respect for civil and moral law.

The College expects its students to conduct themselves as responsible citizens both on and off campus. Recognizing the students' responsibilities as individuals, it is the policy of the College not to discipline students for acts occurring away from the campus and not connected with College-sponsored activities. The complete Code of Student Conduct can be found in the Student Handbook.

Withdrawal From College

It is the student's responsibility to officially withdraw from the college and notify the Admissions and Records Office so that a grade of "W" may be recorded on the permanent record.

Instructional Materials and Breakage Fees

In some classes, instructional materials and breakage fees must be borne by students. Generally, these fees are assessed in those classes where the materials are consumed during the course of instruction or become the property of students at the end of the class. Such fees are indicated in the quarterly Schedule of Classes. The College makes every effort to see that students are fully informed about fees but reserves the right to add or modify fees as necessary.

Additional Education Expenses

Other educational expense depends upon the type of program undertaken. Certain classes may assess special fees for consumable items such as materials used in welding, science, or art courses. Other classes may require special clothing such as some of the physical education classes. Special activity or field trip classes may require additional expenses. A health fee is assessed each quarter. The health fee is required of all students except those exempted by California Administrative Code Title V and senior citizens who have or are eligible for a gold card. All fees are due at the time of registration. These fees are indicated in the class schedule for each quarter.

Refund Schedule

Materials fees are refundable as follows:

100 percent if class is cancelled by the College or the student withdraws from the class prior to the second class meeting.

50 percent of the fee will be refunded prior to the third class meeting.

No refunds will be given after the third class meeting.

Students eligible for refunds must obtain a drop card signed and dated by the instructor and submit the card to the Admissions and Records Office for refund.

CERTIFICATES, DEGREES, TRANSFERS

CERTIFICATES, DEGREES, TRANSFER

Columbia College awards the Associate in Arts and the **Associate in Science degrees in accordance with requirements** outlined on page 34. Requirements for the Associate in Science degree include a major of no fewer than 30 units in the fields of physical and biological sciences or occupational curricula.

The College offers many programs of study leading to certificates. Certificate programs are designed to prepare the vocational students for employment. Requirements of each such certificate have been determined by the department offering the program with the help of its advisory committee.

For students entering Columbia College for the first time in Fall, 1982, the following certificate requirements are valid through the 1985-86 academic year. A student taking more than four (4) years to complete may only use certificate requirements in effect up to four (4) years prior to the date of completion.

In order to qualify for a certificate, a student must complete required and elective courses with at least a Grade Point Average of 2.0 ("C"). No more than 30 percent of the courses required for the certificate may be fulfilled with parallel courses completed at other accredited institutions.

Units earned in obtaining a certificate may be applied toward the 90 units required for an Associate degree.

Certificates of achievement are offered in the following disciplines:

Automotive Technology
Business Administration
  Management
  Retailing
Computer Science
Fire Technology
Forestry Technology
Heavy Equipment
  Heavy Equipment Repair
  Truck Repair
Hospitality Management
  Food Service Technology
  Hotel Management
Human Services
  Criminal Justice
  Disabled
  Gerontology
  Social Welfare
Natural Resources
  Interpretation
Natural Resources Technology
Office Occupations
  Clerk Typist
  General Clerk
  Legal Secretarial
  Medical Transcription
  Secretarial
Real Estate
Search and Rescue
Teacher Aide
Vocational Nursing
Welding Technology
  General Welding
  Pipe Welding

Following are the specific requirements for the certificate programs listed above. **Completion of certain certificate programs may necessitate attending classes during evening only or a combination of both day and evening classes.**

AUTOMOTIVE TECHNOLOGY

REQUIRED COURSES:		UNITS
Auto. Tech. 101	Intro. to Auto Technology	2
Auto. Tech. 103	**Preventitive Maintenance**	**2**
Auto. Tech. 112	Pulling and Installing Engines	2
Auto. Tech. 116	Engine Rebuilding	5
Auto. Tech. 117a	Fuel Systems	2
Auto. Tech. 117b	Emission Control	2
Auto. Tech. 119	Gasoline Engine Tune-up	2
Auto. Tech. 130	Manual Transmission Rebuilding	2
Auto. Tech. 134	Axles and Drive Lines	2
Auto. Tech. 136	Automatic Transmission - GM	2
Auto. Tech. 138	Automatic Transmission - Ford	2
Auto. Tech. 140a	Brakes - Drum	2
Auto. Tech. 140b	Brakes - Disc	1
Auto. Tech. 144a	Front End and Suspension	2
Auto. Tech. 144b	Front End and Suspension	2
Auto. Tech. 150a	Electrical Theory	2
Auto. Tech. 150b	Charging System	2
Auto. Tech. 150c	Starting and Ignition System	2
Auto. Tech. 150d	Lighting and Chassis Electrics	2
Auto. Tech. 170a	Practical Laboratory	2
Auto. Tech. 170b	Practical Laboratory	2
Heavy Equip. 114	Machine Shop Procedures	2

TOTAL REQUIRED UNITS 46

BUSINESS ADMINISTRATION
MANAGEMENT

REQUIRED COURSES:		UNITS
Bus. Ad. 101	Principles of Business	3
Bus. Ad. 115a	Commercial Law	3
Bus. Ad. 115b	Commercial Law	3
Bus. Ad. 120	Principles of Marketing	5
Bus. Ad. 130a	Principles of Accounting	4
Bus. Ad. 130b	Principles of Accounting	4
Bus. Ad. 130c	Principles of Accounting	4
	or	
Bus. Ad. 61	Small Business Accounting	5
Bus. Ad. 140	Principles of Management	5
Bus. Ad. 150	Small Business Management	3
Econ. 101a	Principles of Economics	5
Econ. 101b	Principles of Economics	5
Off. Oc. 68	Business Correspondence	3

TOTAL REQUIRED UNITS 40-47

PROVEN COMPETENCY REQUIREMENT:
Business Mathematics Examination or
Bus. Ad. 63 Business Math 4
RECOMMENDED OPTIONAL COURSES:
Bus. Ad. 145 Retail Business Management 4
Work Exp. 98 Vocational Work Experience ..... Min. 4

BUSINESS ADMINISTRATION
RETAILING

REQUIRED COURSES		UNITS
Bus. Ad. 60a	Bookkeeping	5
Bus. Ad. 60b	Bookkeeping	5
	or	
Bus. Ad. 61	Small Business Accounting	5
Bus. Ad. 101	Principles of Business	3
Bus. Ad. 115a	Commercial Law	3
Bus. Ad. 120	Principles of Marketing	5
Bus. Ad. 123	Sales	3
Bus. Ad. 125	Advertising & Display Promotion	3
Bus. Ad. 145	Retail Business Management	4
Econ. 101a	Principles of Economics	5
Econ. 101b	Principles of Economics	5
Off. Oc. 68	Business Correspondence	3

TOTAL REQUIRED UNITS 39-44

PROVEN COMPETENCY REQUIREMENT:
Business Mathematics Examination **or**
Bus. Ad. 63 Business Math 4
RECOMMENDED OPTIONAL COURSES:

Bus. Ad. 140	Principles of Management	5
Work Exp. 98	Vocational Work Experience	Min. 4

COMPUTER SCIENCE

REQUIRED COURSES:		UNITS
Comp. Sc. 105	Computers and Society	4
Comp. Sc. 110	Computer Logic	4
Comp. Sc. 120a	Computer Programming: Introductory	3
Comp. Sc. 120b	Computer Programming: Intermediate	3
Comp. Sc. 120c	Computer Programming: Advanced	3
Comp. Sc. 125	Computer Programming: Pascal	3
Comp. Sc. 140	Machine Language Programming	3
Comp. Sc. 145	Computer Programming: Applications	3
Comp. Sc. 150	Computers and Control	5
Mathematics 115	Matrix Mathematics	2

TOTAL REQUIRED UNITS: 33

FIRE TECHNOLOGY

REQUIRED COURSES		UNITS
Fire Tech. 61	Organization and Fire Control	3
Fire Tech. 62	Equipment Operation	3
Fire Tech. 63	Extinguishers and Protective Equipment	3
Fire Tech. 64	Hose, Nozzles and Fittings	3
Fire Tech. 65	Hose Evolutions	3
Fire Tech. 66	Fire Service Ladders	3
Fire Tech. 67	Salvage and Overhaul Procedures	3
Fire Tech. 101	Introduction to Fire Technology	3
Fire Tech. 102	Fund. of Personal Fire Safety and Emergency Action	2
Fire Tech. 103	Fundamentals of Fire Protection	3
Fire Tech. 104	Fundamentals of Fire Behavior and Control	3
Fire Tech. 105	Fundamentals of Fire Prevention	4
Fire Tech. 130	Fire Protection Equipment and Systems	3

TOTAL REQUIRED UNITS 39

FORESTRY TECHNOLOGY

REQUIRED COURSES:		UNITS
Biology 60	Natural History & Ecology	3
Fire Sci. 117	Wildland Fire Control	3
For. Tech. 50	Intro. to Technical Forestry	4
For. Tech. 53	Forest Surveying Techniques	3
For. Tech. 56	Tree & Plant Identification	3
For. Tech. 59	Forest Inventory	5
For. Tech. 62	Applied Forest Management	5
Heavy Equip. 70	Logging Equipment	3
Nat. Res. Tech. 52	Applied Wildlands Management	3
Nat. Res. Tech. 55	Interp. Guided Tours	3
Nat. Res. Tech. 60	Aerial Photog. & Map Interpretation	3
Nat. Res. Tech. 81	California Wildlife	3
	or	
Nat. Res. Tech. 83	California Wildlife	3
Nat. Res. 109	Parks & Forests Law Enforcement	4

TOTAL REQUIRED UNITS 45

PROVEN COMPETENCY REQUIREMENT:
Mathematics Examination **or**
Math 50 Basic Math (or higher) 2
Reading Examination **or**
Skills 50 Basic Reading (or English 51 or 101a) 2
Typing Examination **or**
Off. Oc. 50 Personal Typing (or Off. Oc. 101) 3
Writing Examination **or**
Skills 70 Writing Skills (or English 51 or 101a) 1
ADDITIONAL REQUIREMENT:
Appropriate Summer Employment
RECOMMENDED OPTIONAL COURSES:
Nat. Res. 122 Fire Ecology 3

HEAVY EQUIPMENT AND TRUCK REPAIR
HEAVY EQUIPMENT REPAIR

REQUIRED COURSES:		UNITS
Auto Tech. 150a	Electrical Theory	2
Auto Tech. 150b	Charging Systems	2
Auto Tech. 150c	Starting and Ignition Systems	2
Auto Tech. 150d	Lighting and Chassis Electrics	2
Hvy. Equip. 101	Introduction to Hvy. Equip	3
Hvy. Equip. 102	Preventive Maintenance (Tractor)	2
Hvy. Equip. 114	Machine Shop Procedures	2

Any two of the following for six (6) units.

Hvy. Equip. 115a	Diesel Engine Rebuilding - Caterpillar	3
Hvy. Equip. 115b	Diesel Engine Rebuilding - Detroit	3
Hvy. Equip. 115c	Diesel Engine Rebuilding - Cummins	3
Hvy. Equip. 116a	Diesel Engine Tune-up - Caterpillar	1
Hvy. Equip. 116b	Diesel Engine Tune-up - Detroit	1
Hvy. Equip. 116c	Diesel Engine Tune-up - Cummins	1
Hvy. Equip. 136	Tractor Power Trains	3
Hvy. Equip. 140	Heavy Duty Brake Systems	2
Hvy. Equip. 142	Tractor Undercarriage	3
Hvy. Equip. 165	Hydraulic Systems	3
Hvy. Equip. 170a	Practical Maintenance Lab	2
Hvy. Equip. 170b	Practical Maintenance Lab	2
Weld. Tech. 101	Introduction to Welding	3
Weld. Tech. 132	Attachment Repair	2

TOTAL REQUIRED UNITS 44

HEAVY EQUIPMENT AND TRUCK REPAIR
TRUCK REPAIR

REQUIRED COURSES:		UNITS
Auto Tech. 150a	Electrical Theory	2
Auto Tech. 150b	Charging Systems	2
Auto Tech. 150c	Starting and Ignition Systems	2
Auto Tech. 150d	Lighting and Chassis Electrics	2
Hvy. Equip. 101	Introduction to Heavy Equipment	3
Hvy. Equip. 104	Preventive Maintenance (Trucks)	2
Hvy. Equip. 114	Machine Shop Procedures	2

Any two of the following for six (6) units.

Hvy. Equip. 115a	Diesel Engine Rebuilding - Caterpillar	3
Hvy. Equip. 115b	Diesel Engine Rebuilding - Detroit	3
Hvy. Equip. 115c	Diesel Engine Rebuilding - Cummins	3
Hvy. Equip. 116a	Diesel Engine Tune-up - Caterpillar	1
Hvy. Equip. 116b	Diesel Engine Tune-up - Detroit	1
Hvy. Equip. 116c	Diesel Engine Tune-up - Cummins	1
Hvy. Equip. 130	Transmissions	3
Hvy. Equip. 134	Rear Axles and Drive Lines	3
Hvy. Equip. 140	Heavy Duty Brake Systems	2
Hvy. Equip. 144	Steering and Suspension Systems	3
Hvy. Equip. 170a	Practical Maintenance Lab	2
Hvy. Equip. 170b	Practical Maintenance Lab	2
Weld. Tech. 101	Introduction to Welding	3
Weld. Tech. 132	Attachment Repair	2

TOTAL REQUIRED UNITS 44

HOSPITALITY MANAGEMENT
FOOD SERVICE TECHNOLOGY

REQUIRED COURSES:		UNITS
Health Ed. 120	Nutrition	4
Hosp. Mgmt. 101	Introduction to Hospitality Industry	4
Hosp. Mgmt. 103	Marketing of Hospitality Services	4
Hosp. Mgmt. 130	Food Service Management	3
Hosp. Mgmt. 131	Dining Room Service	3
Hosp. Mgmt. 134	Fast Foods	3
Hosp. Mgmt. 135	Commercial Baking	3
Hosp. Mgmt. 137	Buffet Catering	3
Hosp. Mgmt. 138	Family Restaurant Service	3
Hosp. Mgmt. 140a	Classical Cuisine: Beginning	3
Hosp. Mgmt. 140b	Classical Cuisine: Intermediate	3
Hosp. Mgmt. 140c	Classical Cuisine: Advanced	3
Hosp. Mgmt. 144	Meat Analysis	3

TOTAL REQUIRED UNITS 42

HOSPITALITY MANAGEMENT
HOTEL MANAGEMENT

REQUIRED COURSES:		UNITS
Bus. Ad. 63	Business Mathematics	4
Hosp. Mgmt. 101	Introduction to Hospitality Industry	4
Hosp. Mgmt. 103	Marketing of Hospitality Services	4
Hosp. Mgmt. 112	Front Office Management/ Laws of Innkeeping	4
Hosp. Mgmt. 114	Intro. to Maintenance and Housekeeping	3
Hosp. Mgmt. 120	Hotel Catering	3
Hosp. Mgmt. 130	Food Service Management	3
Hosp. Mgmt. 160	Intro. to Travel-Tourism Industry	3
Hosp. Mgmt. 163	Tours	3

TOTAL REQUIRED UNITS 31

RECOMMENDED OPTIONAL COURSES:

Bus. Ad. 60a	Bookkeeping	5
Bus. Ad. 60b	Bookkeeping or	5
Bus. Ad. 130a	Accounting	4
Bus. Ad. 130b	Accounting	4
Off. Oc. 136	Electronic Printing Calculators	1

HUMAN SERVICES
CRIMINAL JUSTICE

REQUIRED COURSES:		UNITS
Law Enforce 100	Intro. to Admin. of Justice	4
Law Enforce 102	Prin. & Proced. of the Justice System	4
Law Enforce 132	Juvenile Procedures	4
Psychology 101a	General Psychology	5
Psychology 103	Social Psychology	5
Psychology 120	Interpersonal Growth	2
Psychology 130	Personal and Social Adjustment	5
Sociology 101	People in Groups	5
Sociology 110	Deviance and Conflict	5
Sociology 140	Human Services	4
Sociology 141	Human Services Laboratory	2

TOTAL REQUIRED UNITS 45

HUMAN SERVICES
DISABLED

REQUIRED COURSES:		UNITS
Physical Ed. 105	Personal Fitness Concepts & Evaluation	3
Physical Ed. 106	Theory & Practice of Adaptive P.E.	3
Physical Ed. 107	Corrective & Rehab. P.E. - Assisting	1-3
Physical Ed. 173a	Adult Fitness Program	2-3
Psychology 101a	General Psychology	5
Psychology 103	Social Psychology	5
Psychology 120	Interpersonal Growth	2
Psychology 125	Biofeedback and Self-Control	3
Psychology 130	Personal and Social Adjustment	5
Sociology 101	People in Groups	5
Sociology 110	Deviance and Conflict	5
Sociology 140	Human Services	4
Sociology 141	Human Services Laboratory	2

TOTAL REQUIRED UNITS 45-48

HUMAN SERVICES
GERONTOLOGY

REQUIRED COURSES:		UNITS
Health Ed. 35	Cardiac Pulmonary Resuscitation	0
Health Ed. 105	Consumer Health	3
Physical Ed. 171	Introduction to Adult Fitness	3
Physical Ed. 172	Multi-Phasic Fitness Testing Program	1
Physical Ed. 173a	Adult Fitness Program	2-3
Psychology 101a	General Psychology	5
Psychology 120	Interpersonal Growth	2
Psychology 130	Personal and Social Adjustment	5
Sociology 101	People in Groups	5
Sociology 112	Family, Marriage, and the Individual	4
Sociology 127	Aging	4
Sociology 128	Death and Dying	4
Sociology 140	Human Services	4
Sociology 141	Human Services Laboratory	2

TOTAL REQUIRED UNITS 44-45

HUMAN SERVICES
SOCIAL WELFARE

REQUIRED COURSES:		UNITS
Psychology 101a	General Psychology	5
Psychology 120	Interpersonal Growth	2
Psychology 122	Assertive Behavior	2
Psychology 130	Personal and Social Adjustment	5
Psychology 145ab	Developmental Psychology	4-4
Sociology 101	People in Groups	5
Sociology 110	Deviance and Conflict	5
Sociology 112	Family, Marriage and the Individual	4
Sociology 128	Death and Dying	4
Sociology 140	Human Services	4
Sociology 141	Human Services Laboratory	2
Speech 135	Effective Interpersonal Communication	2

TOTAL REQUIRED UNITS 48

NATURAL RESOURCES
INTERPRETATION

REQUIRED COURSES:		UNITS
Art 145	Field Photography	2
Biology 58	Birds of the Mother Lode	2
Biology 59	Wildflowers of the Mother Lode	3
Biology 60	Natural History and Ecology	3
Earth Sci. 59	Geology of the Mother Lode	3
Earth Sci. 63	Mother Lode Skies	½
Earth Sci. 111	Rocks and Minerals	2
Earth Sci. 112	Erosion—Water, Wind and Ice	1
Earth Sci. 113	Mountains and Earthquakes	1
Earth Sci. 125	Geology of the National Parks	4
Earth Sci. 142	Descriptive Astronomy	3
Fire Sci. 117	Wildland Fire Control	3
For. Tech. 56	Tree and Plant Identification	3
Health Ed. 113	Adv. First Aid and Emergency Care	5
History 149	The Mother Lode **or**	3
History 155	The American Frontier	4
Nat. Res. 100	Conservation of Natural Resources	4
Nat. Res. 109	Parks and Forests Law Enforcement	4
Nat. Res. 130	Wild Edible Plants	3
Nat. Res. Tech. 52	Applied Wildlands Management	3
Nat. Res. Tech. 55	Interpretive Guided Tours	3
Nat. Res. Tech. 81	Calif. Wildlife—Mammals/Furbearers **or**	3
Nat. Res. Tech. 83	Calif. Wildlife—Upland Game and Fish	3

TOTAL REQUIRED UNITS 58½-59½

NATURAL RESOURCES TECHNOLOGY

REQUIRED COURSES:		UNITS
Biology 60	Natural History & Ecology	3
Earth Sci. 125	Geology of National Parks	4
Fire Sci. 117	Wildland Fire Control	3
For. Tech. 50	Intro. to Technical Forestry	4
For. Tech. 53	Forest Surveying Techniques	3
For. Tech. 56	Tree & Plant Identification	3
Hvy. Equip. 70	Logging Equipment	3
Nat. Res. Tech. 52	Applied Wildlands Management	3
Nat. Res. Tech. 55	Interpretive Guided Tours	3
Nat. Res. Tech. 60	Aerial Photog. & Map Interpretation	3
Nat. Res. Tech. 81	California Wildlife	3
Nat. Res. Tech. 83	California Wildlife	3
Nat. Res. 109	Parks & Forests Law Enforcement	4

TOTAL REQUIRED UNITS 42

PROVEN COMPETENCY REQUIREMENTS:
Mathematics Examination **or**
Math 50 Basic Math (or higher) 2
Reading Examination **or**
Skills 50 Basic Reading (or English 51 or 101a) 2
Typing Examination **or**
Off. Oc. 50 Personal Typing (or Off. Oc. 101) 3
Writing Examination **or**
Skills 70 Writing Skills (or English 51 or 101a) 1

RECOMMENDED OPTIONAL COURSES:
Nat. Res. 122 Fire Ecology 3

OFFICE OCCUPATIONS
CLERK TYPIST

REQUIRED COURSES:		UNITS
Bus. Ad. 63	Business Mathematics	4
Bus. Ad. 60a	Bookkeeping	5
Bus. Ad. 60b	Bookkeeping	5
	or	
Bus. Ad. 61	Small Business Accounting	5
	or	
Bus. Ad. 130a	Accounting	4
Bus. Ad. 130b	Accounting	4
Comp. Sc. 105	Computers and Society	4
Office Oc. 65	Business English	3
Office Oc. 68	Business Correspondence	3
Office Oc. 103	Intermediate Typing	4
Office Oc. 107	Word Processing: Memory Typewriter	1
	or	
Office Oc. 108	Word Processing: Electronic Typewriter	1
Office Oc. 109	Word Processing: Display System	3
Office Oc. 130	Filing Systems	3
Office Oc. 132	Machine Transcription	3
Office Oc. 135	Ten-Key Adding Machine	1
Office Oc. 136	Electronic Printing Calculator	1
Office Oc. 138	Office Procedures	4

TOTAL REQUIRED UNITS 39-44

OFFICE OCCUPATIONS
GENERAL CLERK

REQUIRED COURSES:		UNITS
Bus. Ad. 63	Business Mathematics	4
Bus. Ad. 60a	Bookkeeping	5
Bus. Ad. 60b	Bookkeeping	5
	or	
Bus. Ad. 61	Small Business Accounting	5
	or	
Bus. Ad. 130a	Accounting	4
Bus. Ad. 130b	Accounting	4
Office Oc. 65	Business English	3
Office Oc. 68	Business Correspondence	3
Office Oc. 101	Beginning Typing	4
Office Oc. 53	Review Typing	3
	or	
Office Oc. 103	Intermediate Typing	4
Office Oc. 130	Filing Systems	3
Office Oc. 135	Ten-Key Adding Machines	1
Office Oc. 136	Electronic Printing Calculators	1

TOTAL REQUIRED UNITS 27-33

OFFICE OCCUPATIONS
LEGAL SECRETARIAL

REQUIRED COURSES:		UNITS
Bus. Ad. 58	Pegboard Payroll	1
Bus. Ad. 115a	Commercial Law	3
Bus. Ad. 115b	Commercial Law	3
Computer Sci. 105	Computers and Society	4
Office Oc. 65	Business English	3
Office Oc. 68	Business Correspondence	3
Office Oc. 103	Intermediate Typing	4
	or	
Office Oc. 53	Review Typing	3
Office Oc. 107	Word Processing: Memory Typewriter	1
	or	
Office Oc. 108	Word Processing: Electronic Typewriter	1
Office Oc. 109	Word Processing: Display System	3
Office Oc. 111a	Machine Shorthand	4
Office Oc. 111b	Machine Shorthand	4
Office Oc. 111c	Machine Shorthand	4
	or	
Office Oc. 112a	Intermediate Shorthand	4
Office Oc. 112b	Intermediate Shorthand	4
Office Oc. 130	Filing Systems	3
*Office Oc. 132	Machine Transcription	3
*Office Oc. 154	Legal Transcription/Terminology	3
Office Oc. 157	Legal Office Procedures	3
Law Enforce 100	Introduction to Admin. of Justice	4

TOTAL REQUIRED UNITS 48-53

* Must earn at least a letter grade of "B" in Office Oc. 132 before enrolling in Office Oc. 154.

OFFICE OCCUPATIONS
MEDICAL TRANSCRIPTION

REQUIRED COURSES:		UNITS
Computer Sci. 105	Computers and Society	4
Office Oc. 65	Business English	3
Office Oc. 68	Business Correspondence	3
Office Oc. 103	Intermediate Typing	4
	or	
Office Oc. 53	Review Typing	3
* Office Oc. 132	Machine Transcription	3
Office Oc. 140a	Medical Terminology	3
Office Oc. 140b	Medical Terminology	3
* Office Oc. 142a	Medical Transcription	3
* Office Oc. 142b	Medical Transcription	3

TOTAL REQUIRED UNITS 28-29

*Must earn at least a letter grade of "B" in Office Oc. 132 before enrolling in Office Oc. 142ab.

OFFICE OCCUPATIONS
SECRETARIAL

REQUIRED COURSES		UNITS
Bus. Ad. 63	Business Mathematics	4
Bus. Ad. 60a	Bookkeeping	5
Bus. Ad. 60b	Bookkeeping or	5
Bus. Ad. 61	Small Business Accounting or	5
Bus. Ad. 130a	Accounting	4
Bus. Ad. 130b	Accounting	4
Computer Sci. 105	Computers and Society	4
Office Oc. 65	Business English	3
Office Oc. 68	Business Correspondence	3
Office Oc. 103	Intermediate Typing or	4
Office Oc. 53	Review Typing	3
Office Oc. 107	Word Processing: Memory Typewriter or	1
Office Oc. 108	Word Processing: Electronic Typewriter	1
Office Oc. 109	Word Processing: Display System	3
Office Oc. 111a	Machine Shorthand I	4
Office Oc. 111b	Machine Shorthand II	4
Office Oc. 111c	Machine Shorthand III or	4
Office Oc. 112a	Intermediate Shorthand	4
Office Oc. 112b	Intermediate Shorthand	4
Office Oc. 130	Filing Systems	3
Office Oc. 132	Machine Transcription	3
Office Oc. 135	Ten-Key Adding Machines	1
Office Oc. 136	Electronic Printing Calculators	1
Office Oc. 138	Office Procedures	4

TOTAL REQUIRED UNITS 46-56

REAL ESTATE

REQUIRED COURSES:		UNITS
Bus. Ad. 63	Business Math	4
Bus. Ad. 101	Principles of Business	3
Real Est. 101	Principles of Real Estate	3
Real Est. 105	Real Estate Practice	4
Real Est. 110	Legal Aspects of Real Estate	4
Real Est. 115	Real Estate Finance	4
Real Est. 120	Real Estate Appraisal	4
Real Est. 125	Real Estate Economics	4

TOTAL REQUIRED UNITS 30

SEARCH AND RESCUE

REQUIRED COURSES		UNITS
Health Oc. 103	Emergency Med. Tech. Training	8
S.A.R. 103	Environmental Injuries	2
S.A.R. 110	Introduction to Search Theory or	3
S.A.R. 112	Managing the Search Function	3
S.A.R. 114	Intro. to Tracking and Sign Cutting	1
S.A.R. 118	Basic Survival Skills	2
S.A.R. 122	Wilderness Navigation	2
S.A.R. 126	Intro. to Non-Winter Grid Techniques	1
S.A.R. 130	Introduction to Rescue Techniques	4
S.A.R. 132	Ascending and Descending Techniques	2
S.A.R. 134	Helicopter Oper. and Personnel Safety	1
S.A.R. 136	Introduction to Litter Management	2
S.A.R. 146	Introduction to Swiftwater Rescue	2

TOTAL 30

PLUS 4 UNITS from any of the other courses in the Search and Rescue curriculum 4

TOTAL REQUIRED UNITS 34

TEACHER AIDE

REQUIRED COURSES:		UNITS
Teacher Aide 55a	Teacher Aide Training	3
Teacher Aide 55b	Teacher Aide Training	3
Teacher Aide 55c	Teacher Aide Training	3
Teacher Aide 65	Reading Fundamentals for Teacher Aides	3
English 101a	Reading and Composition	5
Health Ed. 110	Safety and First Aid Education	3
History 117a	United States History	(5)
	or	
Pol. Science 101	Constitutional Government	(5)
Psychology 101a	General Psychology	5
Speech 135	Effective Interpersonal Communication	2
Skills 60	Mathematics Skills	1

TOTAL REQUIRED UNITS 33

VOCATIONAL NURSING

REQUIRED COURSES:		UNITS
Health Oc. 110	Intro. to Vocational Nursing	5
Health Oc. 113a	Anatomy & Physiology for Voc. Nurses	5
Health Oc. 113b	Anatomy & Physiology for Voc. Nurses	5
Health Oc. 115	Maternity Nursing	3
Health Oc. 118	Pharmacology for Voc. Nurses	2
Health Oc. 120a	Effects of Medication	2
Health Oc. 120b	Effects of Medication	2
Health Oc. 123	Pediatrics	3
Health Oc. 125a	Medical-Surgical Nursing	5
Health Oc. 125b	Medical-Surgical Nursing	5
Health Oc. 128	Community Health	3
Health Oc. 140a	Clinic	8
Health Oc. 140b	Clinic	8
Health Oc. 140c	Clinic	8
Health Oc. 140d	Clinic	8

TOTAL REQUIRED UNITS 72

WELDING TECHNOLOGY
GENERAL WELDING

REQUIRED COURSES:		UNITS
Mathematics 50	Basic Mathematics	2
	or	
Skills Dev. 60	Mathematics Skills	2
Weld. Tech. 101	Introduction to Welding	3
Weld. Tech. 103	Adv. Arc Welding Techniques	3
Weld. Tech. 110	Blueprint Reading for Welders	2
Weld. Tech. 130	Maintenance Welding	2
Weld. Tech. 132	Attachment Repair	2
Weld. Tech. 140	Welding Non-Ferrous Metals	2
Weld. Tech. 145	Metal Fabrication	3
Weld. Tech. 160	Practical Laboratory	2

TOTAL REQUIRED UNITS 21

WELDING TECHNOLOGY
PIPE WELDING

REQUIRED COURSES:		UNITS
Mathematics 50	Basic Mathematics	2
	or	
Skills Dev. 60	Mathematics Skills	2
Weld. Tech. 101	Introduction to Welding	3
Weld. Tech. 103	Adv. Arc Welding Techniques	3
Weld. Tech. 110	Blueprint Reading for Welders	2
Weld. Tech. 120	Pipe Welding	3
Weld. Tech. 122	Advanced Pipe Welding	3
Weld. Tech. 140	Welding Non-Ferrous Metals	2
Weld. Tech. 145	Metal Fabrication	3
Weld. Tech. 160	Practical Laboratory	2

TOTAL REQUIRED UNITS 23

GRADUATION REQUIREMENTS

DEGREE REQUIREMENTS

Columbia College will confer the Associate in Arts Degree or the Associate in Science Degree upon completion of the following requirements. The Associate in Science Degree is awarded to students who major in physical or biological sciences or occupational curricula. The Associate in Arts Degree is awarded for all other majors.

TOTAL UNITS: Satisfactory completion of 90 quarter units of which the last 15 of the required units must be completed in residence at Columbia College.

For students entering Columbia College for the first time in Fall, 1982, the following graduation requirements are valid through the 1985-86 academic year. A student taking more than four (4) years to graduate may only use graduation requirements in effect up to four (4) years prior to the date of graduation.

SCHOLARSHIP: A cumulative Grade Point Average of 2.0 ("C" average).

MAJOR: Satisfactory completion of a minimum of 30 quarter units of study taken in a discipline or in related disciplines. (Major lists are available in the Admissions and Records Office or in the current college catalog.)

More than one Associate Degree may be granted to a student who has completed the applicable requirements as well as an additional 15 quarter units in residence.

GENERAL EDUCATION: Satisfactory completion of General Education Requirements selected from the courses listed below. Any course listed below which is taken to meet the Major Requirement may also be used to meet the General Education Requirement within the appropriate category.

NATURAL SCIENCES

A course must be completed from both Category A, Biological Sciences, and Category B, Physical Sciences.

A. BIOLOGICAL SCIENCES
- Biology 60. Natural History and Ecology (3).
- Biology 100. Biology and Contemporary Society (4).
- Biology 110. Fundamentals of Biology (4).
- Biology 111. Principles of Biology (5).
- Biology 120. Fundamentals of Plant Biology (3).
- Biology 130. Fundamentals of Animal Biology (3).
- Health Occ. 113A. Anatomy and Physiology for Vocational Nurses (5).

B. PHYSICAL SCIENCES
- Chemistry 100. Fundamentals of Chemistry (4).
- Chemistry 101a. General Chemistry (5).
- Earth Science 101. Survey of Geology (2).
- **Physical Geology** — Earth Science 111, Earth Science 112, and Earth Science 113 (4)
- Earth Science 141. Survey of Astronomy (2).
- Earth Science 142. Descriptive Astromony (3).
- Earth Science 144. General Astronomy (4).
- Earth Science 161. Survey of Meteorology (2).
- Earth Science 171. Survey of Oceanography (2).
- Physics 100. Modern Physics (3).

SOCIAL SCIENCES

One course must be completed from each category — A, American History and Institutions; B, Social Sciences; and C, Other Social Science Courses.

A. AMERICAN HISTORY AND INSTITUTIONS
- History 117a. United States (5).
- History 117b. United States (5).
- Political Science 101. Constitutional Government (5)

B. SOCIAL SCIENCES
- Anthropology 101a or 101b. Introduction to Anthropology (5)(5).
- Economics 101a. Principles of Economics (5).
- Psychology 101a. General Psychology (5).
- Sociology 101. Introduction to Sociology (5).

C. OTHER SOCIAL SCIENCE COURSES
- Anthropology 115. Indians of North America (5).
- Economics 101b. Principles of Economics (5).
- Geography 102. Introduction to Cultural Geography (5).
- History 155. The American Frontier (4).
- Psychology 130. Personal and Social Adjustment (5).
- Psychology 145a or 145b, Developmental Psychology (4)(4)
- Sociology 110. Deviance and Conflict (5).
- Sociology 112. Family, Marriage, and the Individual (4).

HUMANITIES

One course must be completed from both Category A, Literature, History, and Philosophy, and Category B, Fine Arts.

A. LITERATURE, HISTORY AND PHILOSOPHY
- English 101b. Reading and Composition (5).
- English 117a or 117b or 117c. Literature of the United States (4)(4)(4).
- English 146a or 146b or 146c. Survey of English Literature (4)(4)(4).
- History 104a or 104b or 104c. World Civilization (4)(4)(4).
- Humanities 101. Old World Culture (4).
- Humanities 102. Modern Culture (4).
- Philosophy 101. Knowledge and Reality (4).
- Philosophy 125. Twentieth Century Philosophy (4).

B. FINE ARTS
- Art 111a or 111b or 111c. History of Art (3)(3)(3).
- Drama 102. Oral Expression and Interpretation (5).
- Music 102. Introduction to Music (4).

LEARNING SKILLS (Basic Subjects)

One course must be completed from A, Communications; two courses must be completed from B, Computation Skills; and one course must be completed from C, Health Education/Physical Education.

A. COMMUNICATIONS
- English 51. College Composition (4).
- English 101a. Reading and Composition (5).
- Office Oc. 65, Business English (3) **and** Office Oc. 68, Business Correspondence (3).

B. COMPUTATION SKILLS
- Business Adm. 63, Business Mathematics (4).
- Computer Sci. 105, Computers and Society (4).
- Mathematics 101. Intermediate Algebra (5) (or higher).
- Mathematics 55. Beginning Algebra (5).

C. HEALTH EDUCATION/PHYSICAL EDUCATION
- Health Education 101. Health and Fitness Education (4).
- P.E. activity classes (2 courses minimum) (P.E. 112, 116, 117, 119, 120, 130, 140, 150, 160 or 173a) (1-4).

NOTICE OF INTENT TO GRADUATE: A Notice of Intent to Graduate must be filed in the Admissions and Records Office no later than the second week of the quarter in which the student plans to complete his requirements for graduation.

Graduation requirements may be completed during any quarter. Degrees are conferred at graduation exercises at the close of the Spring Quarter.

COLUMBIA COLLEGE MAJORS

Following are the required patterns for completion of an academic major to fulfill the Associate Degree requirements of Columbia College. Each four-year college and university has its own requirements, and students who plan to transfer should examine the catalog of the transfer institution and plan accordingly. Students are encouraged to consult with a faculty advisor or counselor for assistance in program planning.

ART

REQUIRED COURSES:		UNITS
Art 101	Freehand Drawing	3
Art 102a	Design: Basic	2
Art 109a	Life Drawing	1.5
Art 111a	History of Art: Ancient & Medieval	3
Art 111b	History of Art: Ren. & Baroque	3
Art 111c	History of Art: 19th & 20th Century	3
Art 131a	Ceramics: Introductory	3
		TOTAL 18.5
3 UNITS FROM:		
Art 121a	Introductory Acrylic Painting	(3)
	or	
Art 122a	Introductory Oil Painting	(3)
	or	
Art 123a	Introductory Watercolor Painting	(3)
		TOTAL 21.5
AND 8.5 UNITS FROM:		
Art 133	Primitive Ceramics	(3)
Art 141a	Photography	(3)
Art 151	Relief Printmaking	(1.5-3)
Art 153	Silkscreen	(1.5-3)
Art 167a	Textile Design	(2)
Art 169a	Silversmithing	(1.5)
Art 171a	Sculpture	(1.5-3)
		TOTAL REQUIRED UNITS 30

ART
PHOTOGRAPHY

REQUIRED COURSES:		UNITS
Art 102a	Design: Basic	2
Art 111c	History of Art	3
Art 141a	Photography: Beginning	3
Art 141b	Photography: Intermediate	3
Art 141c	Photography: Advanced	3
Art 142a	Introduction to Color Photography	3
Art 142b	Introduction to Color Photography	3
Art 148	Special Topics in Photography	3
Art 149	Portfolio and Exhibition Preparation	2
		TOTAL 25
AND AT LEAST 7 UNITS FROM:		
Art 101	Freehand Drawing	(1.5-3)
Art 102b	Design: Color	(2)
Art 102c	Design: Structure	(2)
Art 109a	Life Drawing	(1.5-3)
Art 109b	Life Drawing	(1.5-3)
Art 109c	Life Drawing	(1.5-3)
Art 111a	History of Art	(3)
Art 111b	History of Art	(3)
		TOTAL REQUIRED UNITS 32

AUTOMOTIVE TECHNOLOGY

REQUIRED COURSES:		UNITS
Auto. Tech. 101	Intro. to Auto. Tech	2
Auto. Tech. 116	Engine Rebuilding	5
Auto. Tech. 117a	Fuel Systems	2
Auto. Tech. 117b	Emission Control	2
Auto. Tech. 119	Gasoline Engine Tune-up	2
Auto. Tech. 130	Manual Trans. Rebuilding	2
Auto. Tech. 134	Axles and Drive Lines	2
Auto. Tech. 136	Auto. Transmissions (GM)	2
Auto. Tech. 140a	Brakes (Drum)	2
Auto. Tech. 144a	Front-end and Suspension	2
Auto. Tech. 150a	Electrical Theory	2
Auto. Tech. 150b	Charging Systems	2
Auto. Tech. 150c	Starting & Ignition Systems	2
Auto. Tech. 150d	Lighting & Chassis Elec.	2
Heavy Equip. 114	Machine Shop Procedures	2

TOTAL REQUIRED UNITS 33

BIOLOGY

REQUIRED COURSES:		UNITS
Biology 111	Principles of Biology	5
Biology 121	Principles of Plant Biology	5
Biology 131	Principles of Animal Biology	5

TOTAL 15

A MINIMUM OF 6 UNITS FROM:

Biology 125	Plant Tax. of Sierra Nevada	(4)
Biology 140	Intro. Human Anatomy	(4)
Biology 151	The Terrestrial Environment	(3)
Biology 160a	Intro. to Human Physiology	(3)
Biology 160b	Intro. to Human Physiology	(3)
Biology 165a	Microbiology	(3)
Biology 165b	Microbiology	(3)

TOTAL 21

AND 9 UNITS FROM:

Chemistry 101a	General Chemistry	(5)
Chemistry 101b	General Chemistry	(5)
Chemistry 101c	General Chemistry	(5)
Chemistry 108a	Chem. of Carbon Compounds	(4)
Chemistry 108b	Chem. of Carbon Compounds	(4)
Physics 110a	Applied Physics	(4)
Physics 110b	Applied Physics	(4)
Physics 110c	Applied Physics	(4)
Physics 120a	General Physics	(6)
Physics 120b	General Physics	(6)
Physics 120c	General Physics	(6)

TOTAL REQUIRED UNITS 30

BUSINESS
CLERICAL

REQUIRED COURSES:		UNITS
Bus. Ad. 60a	Bookkeeping	5
	and	
Bus. Ad. 60b	Bookkeeping	5
	or	
Bus. Ad. 61	Small Business Acctng.	5
	or	
Bus. Ad. 130a	Accounting	4
	and	
Bus. Ad. 130b	Accounting	4
Office Oc. 65	Business English	3
Office Oc. 103	Intermediate Typing	4
Office Oc. 107	Memory Typewriter	1
	or	
Office Oc. 108	Electronic Typewriter	1
Office Oc. 130	**Filing Systems & Records Mgmt.**	**3**
Office Oc. 132	Machine Transcription	3

TOTAL 19-24

AND 6-11 UNITS FROM:

Bus. Ad. 63	Business Mathematics	(4)
Computer Sci. 105	Computers and Society	(4)
Office Oc. 68	Business Correspondence	(3)
Office Oc. 135	Ten-Key Adding Machines	(1)
Office Oc. 136	Electronic Printing Calculators	(1)

TOTAL REQUIRED UNITS 30

BUSINESS
SECRETARIAL

REQUIRED COURSES:		UNITS
Office Oc. 68	Business Correspondence	3
Office Oc. 103	Intermediate Typing	4
Office Oc. 112a	Intermediate Shorthand	4
Office Oc. 112b	Intermediate Shorthand	4
Office Oc. 130	Filing Systems & Records Mgmt.	3
Office Oc. 132	Machine Transcription	3

TOTAL 21

AND 9 UNITS FROM:

Office Oc. 65	Business English	(3)
Bus. Ad. 60a	Bookkeeping	(5)
	and	
Bus. Ad. 60b	Bookkeeping	(5)
	or	
Bus. Ad. 61	Small Business Accounting	(5)
	or	
Bus. Ad. 130a	Accounting	(4)
	and	
Bus. Ad. 130b	Accounting	(4)
Computer Sci. 105	Computers and Society	(4)

TOTAL REQUIRED UNITS 30

BUSINESS
BUSINESS ADMINISTRATION (PROFESSIONAL)

REQUIRED COURSES:		UNITS
Bus. Ad. 115a	Commercial Law	3
Bus. Ad. 115b	Commercial Law	3
Bus. Ad. 130a	Accounting	4
Bus. Ad. 130b	Accounting	4
Bus. Ad. 130c	Accounting	4
Computer Sci. 105	Computers and Society	4
Economics 101a	Principles of Economics	5
Economics 101b	Principles of Economics	5

TOTAL REQUIRED UNITS 32

BUSINESS
BUSINESS ADMINISTRATION (OCCUPATIONAL)

REQUIRED COURSES:		UNITS
Bus. Ad. 60a	Bookkeeping	5
Bus. Ad. 60b	Bookkeeping	5
	or	
Bus. Ad. 61	Small Business Accounting	5
	and	
Bus. Ad. 63	Business Mathematics	4
Bus. Ad. 101	Principles of Business	3
Computer Sci. 105	Computers and Society	4
Office Oc. 68	Business Correspondence	3

TOTAL 19-20

AND 10-11 UNITS FROM:

Bus. Ad. 104	Human Relations in Business	(3)
Bus. Ad. 115a	Commercial Law	(3)
Bus. Ad. 115b	Commercial Law	(3)
Bus. Ad. 120	Principles of Marketing	(5)
Bus. Ad. 123	Sales	(3)
Bus. Ad. 125	Advertising & Display Promotion	(3)
Bus. Ad. 140	Principles of Management	(5)
Bus. Ad. 145	Retail Business Management	(4)
Bus. Ad. 150	Small Business Management	(3)

TOTAL REQUIRED UNITS 30

CHEMISTRY

REQUIRED COURSES:		UNITS
Chemistry 101a	General Chemistry	5
Chemistry 101b	General Chemistry	5
Chemistry 101c	General Chemistry	5
Chemistry 108a	Chem. of Carbon Compounds	4
Chemistry 108b	Chem. of Carbon Compounds	4

TOTAL 23

AND 7 UNITS FROM:

Math 120a	Calculus w/Analytic Geometry	(5)
Math 120b	Calculus w/Analytic Geometry	(5)
Math 120c	Calculus w/Analytic Geometry	(5)
Physics 120a	General Physics	(6)
Physics 120b	General Physics	(6)
Physics 120c	General Physics	(6)

TOTAL REQUIRED UNITS 30

COMPUTER SCIENCE

REQUIRED COURSES:		UNITS
Computer Sci. 105	Computers and Society	4
Computer Sci. 110	Computer Logic	4
Computer Sci. 120a	Computer Programming: Intro.	3
Computer Sci. 120b	Computer Programming: Inter.	3
Computer Sci. 120c	Computer Programming: Adv.	3
Computer Sci. 125	Computer Programming: Pascal	3
Computer Sci. 140	Machine Language Programming	3
Computer Sci. 145	Computer Programming: Applications	3
Computer Sci. 150	Computers and Control	5
Mathematics 115	Matrix Mathematics	2

TOTAL REQUIRED UNITS 33

EARTH SCIENCE

REQUIRED COURSES:		UNITS
Earth Science 110	Intro. Physical Geology	1
Earth Science 111	Rocks and Minerals	2
Earth Science 112	Erosion—Water, Wind, Ice	1
Earth Science 113	Mountains & Earthquakes	1
Earth Science 125	Geology of National Parks	4
Earth Science 133	Global Tectonic Geology	4
Earth Science 139	Field Geology	(1-3)
Earth Science 142	Descriptive Astronomy	(3)
	or	
Earth Science 144	General Astronomy	(4)
Earth Science 161	Survey of Meteorology	2
Earth Science 171	Survey of Oceanography	2

TOTAL 21-24

AND 6-9 UNITS FROM:

Comp. Sc. 120a	Computer Programming	(3)
Earth Science 149	Observational Astronomy	(2)
Geography 105	Physical Geography	(5)
Nat. Res. Tech. 60	Aerial Phot. & Map Interp.	(3)
Nat. Res. 102	Property of Soils	(4)50

TOTAL REQUIRED UNITS 30

RECOMMENDED COURSES:
Physics, Chemistry, and Mathematics to include College Algebra and Calculus.

ENGLISH

REQUIRED COURSES:		UNITS
English 101a	Reading and Composition	5
English 101b	Reading and Composition	5

TOTAL 10

AND AT LEAST 20 UNITS FROM:

English 110	Creative Writing	(5)
English 117a	Literature of the U.S.	(4)
English 117b	Literature of the U.S.	(4)
English 117c	Literature of the U.S.	(4)
English 146a	Survey of English Literature	(4)
English 146b	Survey of English Literature	(4)
English 146c	Survey of English Literature	(4)
English 149	California Literature	(5)
English 150	Introduction to Shakespeare	(4)

TOTAL REQUIRED UNITS 30

FIRE TECHNOLOGY

REQUIRED COURSES:		UNITS
Fire Tech. 101	Introduction to Fire Technology	3
Fire Tech. 102	Fund. of Personal Fire Safety and Emergency Action	2
Fire Tech. 103	Fundamentals of Fire Protection	3
Fire Tech. 104	Fund. of Fire Behavior and Control	3
Fire Tech. 105	Fundamentals of Fire Prevention	4
Fire Tech. 108	Firefighting Strategy & Tactics	3
Fire Tech. 114	Fire Apparatus & Equipment	3
Fire Tech. 117	Wildland Fire Control	3
Fire Tech. 123	Fire Hydraulics	3
Fire Tech. 130	Fire Protection Equip. and Sys.	3

TOTAL REQUIRED UNITS 30

FORESTRY TECHNOLOGY

REQUIRED COURSES:		UNITS
For. Tech. 59	Forest Inventory	5
	and	
For. Tech. 50	Intro. to Technical Forestry	4
	or	
For. Tech. 101	Introduction to Forestry	4
	and	
For. Tech. 53	Forest Surveying Techniques	3
	or	
For. Tech. 105	Forest Surveying	5
	and	
For. Tech. 56	Tree & Plant Identification	3
	or	
For. Tech. 110	Dendrology	4

TOTAL 15-18

AND 12-15 UNITS FROM:

Biology 60	Natural History & Ecology	(3)
Fire Sci. 117	Wildland Fire Control	(3)
For. Tech. 62	Applied Forest Management	(5)
Mathematics 50	Basic Mathematics	(2)
Nat. Res. Tech. 52	Applied Wildlands Management	(3)
Nat. Res. Tech. 55	Interp. Guided Tours	(3)
Nat. Res. Tech. 60	Aerial Photog. & Map Interpretation	(3)
Nat. Res. Tech. 63	Water for Consumption	(4)
Nat. Res. Tech. 81	California Wildlife	(3)
Nat. Res. Tech. 83	California Wildlife	(3)
Nat. Res. 100	Conservation of Natural Resources	(4)
Office Oc. 50	Personal Typing	(3)
	or	
Office Oc. 53	Review Typing	(3)

TOTAL REQUIRED UNITS 30

HEALTH OCCUPATIONS
VOCATIONAL NURSING

REQUIRED COURSES:		UNITS
Health Oc. 110	Intro. to Voc. Nursing	5
Health Oc. 113a	Anatomy & Physiology	5
Health Oc. 113b	Anatomy & Physiology	5
Health Oc. 115	Maternity Nursing	3
Health Oc. 118	Pharmacology for Voc. Nurses	2
Health Oc. 120a	Effects of Medication	2
Health Oc. 120b	Effects of Medication	2
Health Oc. 123	Pediatrics	3
Health Oc. 125a	Medical-Surgical Nursing	5
Health Oc. 125b	Medical-Surgical Nursing	5
Health Oc. 128	Community Health	3
Health Oc. 140a	Clinic	8
Health Oc. 140b	Clinic	8
Health Oc. 140c	Clinic	8
Health Oc. 140d	Clinic	8

TOTAL REQUIRED UNITS 72

HEAVY EQUIPMENT AND TRUCK REPAIR
TRACTOR

REQUIRED COURSES:		UNITS
Heavy Equip. 101	Intro. to Heavy Equip	3
Heavy Equip. 102	Prev. Maint. - Tractor	2
Heavy Equip. 115a	Diesel Engine Rebuild	3
Heavy Equip. 115b	Diesel Engine Rebuild	3
Heavy Equip. 115c	Diesel Engine Rebuild	3
Heavy Equip. 116a	Diesel Engine Tune-up	1
Heavy Equip. 116b	Diesel Engine Tune-up	1
Heavy Equip. 116c	Diesel Engine Tune-up	1
Heavy Equip. 136	Tractor Power Trains	3
Heavy Equip. 140	Heavy Duty Brake Systems	2
Heavy Equip. 142	Tractor Undercarriage	3
Auto. Tech. 150a	Electrical Theory	2
Auto. Tech. 150b	Charging System	2
Auto. Tech. 150c	Starting & Ignition System	2
Auto. Tech. 150d	Lighting/Chassis Elect.	2

TOTAL REQUIRED UNITS 33

HEAVY EQUIPMENT AND TRUCK REPAIR
TRUCK

REQUIRED COURSES:		UNITS
Heavy Equip. 101	Intro. to Heavy Equip	3
Heavy Equip. 104	Prev. Maintenance Truck	2
Heavy Equip. 114	Machine Shop Procedures	2
Heavy Equip. 115a	Diesel Engine Rebuild	3
Heavy Equip. 115b	Diesel Engine Rebuild	3
	or	
Heavy Equip. 115c	Diesel Engine Rebuild	3
Heavy Equip. 116a	Diesel Engine Tune-up	1
Heavy Equip. 116b	Diesel Engine Tune-up	1
Heavy Equip. 116c	Diesel Engine Tune-up	1
Heavy Equip. 130	Transmissions - Truck	3
Heavy Equip. 134	Rear Axles & Drive Lines	3
Heavy Equip. 140	Heavy Duty Brake Systems	2
Auto. Tech. 150a	Electrical Theory	2
Auto. Tech. 150b	Charging System	2
Auto. Tech. 150c	Starting & Ignition Systems	2
Auto. Tech. 150d	Lighting/Chassis Elec.	2

TOTAL REQUIRED UNITS 32

HISTORY

REQUIRED COURSES:		UNITS
History 104a	World Civilization: to 500 A.D.	4
History 104b	World Civilization: 500-1700 A.D.	4
History 104c	World Civilization: 1700-Present	4
History 117a	U.S. History: Colonization/Recon.	5
History 117b	U.S. History: Recon. to Present	5

TOTAL 22

AND 8 UNITS FROM:
Any Other History Course
Any Political Science Course

Anthro. 101a	Intro. to Anthro: Physical	(5)
Anthro. 101b	Intro. to Anthro: Cultural	(5)
Economics 101a	Prin. of Econ.: Macro-Economics	(5)
Economics 101b	Prin. of Econ.: Micro-Economics	(5)
Geography 102	Cultural Geography	(5)
Sociology 101	People in Groups	(5)
	or	
Sociology 102	American Social Patterns	(5)

TOTAL REQUIRED UNITS 30

HOSPITALITY MANAGEMENT
FOOD SERVICE TECHNOLOGY

REQUIRED COURSES:		UNITS
Hosp. Mgmt. 101	Introduction to Hospitality Industry	4
Hosp. Mgmt. 103	Marketing of Hospitality Services	4
Hosp. Mgmt. 130	Food Service Management	3
Hosp. Mgmt. 131	Dining Room Service	3
Hosp. Mgmt. 134	Fast Foods	3
Hosp. Mgmt. 135	Commercial Baking	3
Hosp. Mgmt. 137	Buffet Catering	3
Hosp. Mgmt. 138	Family Restaurant Service	3
Hosp. Mgmt. 140a	Classical Cuisine: Beginning	3
Hosp. Mgmt. 140b	Classical Cuisine: Intermediate	3
Hosp. Mgmt. 140c	Classical Cuisine: Advanced	3
Hosp. Mgmt. 144	Meat Analysis	3
Health Ed. 120	Nutrition	4

TOTAL REQUIRED UNITS 42

HOSPITALITY MANAGEMENT
HOTEL MANAGEMENT

REQUIRED COURSES:		UNITS
Hosp. Mgmt. 101	Introduction to Hospitality Industry	4
Hosp. Mgmt. 103	Marketing of Hospitality Services	4
Hosp. Mgmt. 112	Front Office Management/ Laws of Innkeeping	4
Hosp. Mgmt. 114	Intro. to Maintenance and Housekeeping	3
Hosp. Mgmt. 120	Hotel Catering	3
Hosp. Mgmt. 130	Food Service Management	3
Hosp. Mgmt. 160	Intro. to Travel-Tourism Industry	3
Hosp. Mgmt. 163	Tours	3
Bus. Ad. 63	Business Mathematics	4

TOTAL REQUIRED UNITS 31

RECOMMENDED OPTIONAL COURSES:

Bus. Ad. 60a	Bookkeeping	5
Bus. Ad. 60b	Bookkeeping	5
	or	
Bus. Ad. 130a	Accounting	4
Bus. Ad. 130b	Accounting	4
Off. Oc. 136	Electronic Printing Calculators	1

HUMANITIES

REQUIRED COURSES:		UNITS
Humanities 101	Old World Culture	4
Humanities 102	Modern Culture	4

TOTAL 8

PLUS 22 ADDITIONAL UNITS FROM THE FOLLOWING COURSES, INCLUDING AT LEAST ONE IN ART OR MUSIC, ONE IN ENGLISH OR DRAMA, AND ONE IN PHILOSOPHY, BUT NOT TO EXCEED 12 UNITS IN ANY ONE DISCIPLINE.

Art 111a	History of Art	(3)
Art 111b	History of Art	(3)
Art 111c	History of Art	(3)
Drama 133a	Dramatic Literature	(4)
Drama 133b	Dramatic Literature	(4)
Drama 133c	Dramatic Literature	(4)
English 117a	Literature of the United States	(4)
English 117b	Literature of the United States	(4)
English 117c	Literature of the United States	(4)
English 146a	Survey of English Literature	(4)
English 146b	Survey of English Literature	(4)
English 146c	Survey of English Literature	(4)
History 104a	World Civilization	(4)
History 104b	World Civilization	(4)
History 104c	World Civilization	(4)
Humanities 110	Current Religious Movements	(3)
Humanities 120	America's Religious Heritage	(3)
Humanities 130	World Religious Consciousness	(3)
Intrdis. Studies 101	Introduction to Fine Arts	(4)
Intrdis. Studies 105	Humanities Through the Arts	(4)
Music 102	Introduction to Music	(4)
Music 110a	Survey of Music History and Literature	(5)
Music 110b	Survey of Music History and Literature	(5)
Music 110c	Survey of Music History and Literature	(5)
Philosophy 101	Knowledge and Reality	(4)
Philosophy 102	Ethics and Religion	(4)
Philosophy 103	Values in Politics and Esthetics	(4)
Philosophy 105	Alternate Views in Philosophy	(4)
Philosophy 108	Humanistic and Scientific Thought	(4)

TOTAL 22

TOTAL REQUIRED UNITS 30

LAW ENFORCEMENT

REQUIRED COURSES:		UNITS
L.E. 100	Intro. to Admin. of Justice	4
L.E. 102	Princ. & Proced. of Justice Sys.	4
L.E. 106	Concepts of Criminal Law	4
L.E. 110	Police, Community Relations	4
L.E. 122	Concepts of Enforcement Services	4
L.E. 124	Principles of Investigation	4

TOTAL 24

AND 6 UNITS FROM.

L.E. 108	Legal Aspects of Evidence	(4)
L.E. 120	Substantive Law	(4)
L.E. 130	California Penal Code	(4)
L.E. 132	Juvenile Procedures	(4)
L.E. 134	Self Defense	(2)
L.E. 138	Firearms	(1)
L.E. 150	Supervised Field Work	(4)
L.E. 160	Advanced Officers' Training	(4)
Nat. Res. 109	Parks/Forests Law Enforcement	(4)

TOTAL REQUIRED UNITS 30

MATHEMATICS

REQUIRED COURSES:		UNITS
Math. 120a	Calculus w/Analytic Geometry	5
Math. 120b	Calculus w/Analytic Geometry	5
Math. 120c	Calculus w/Analytic Geometry	5
Math. 103	College Algebra or	5
Math. 105	Elements of Statistics	5
	TOTAL	20

AND 10 UNITS FROM:

Comp. Sc. 120a	**Computer Programming**	**(3)**
Comp. Sc. 120b	**Computer Programming**	**(3)**
Comp. Sc. 120c	**Computer Programming**	**(3)**
Math 110	**Finite Mathematics**	**(5)**
Physics 120a	**General Physics**	**(6)**
Physics 120b	**General Physics**	**(6)**
Physics 120c	**General Physics**	**(6)**

TOTAL REQUIRED UNITS 30

MUSIC

REQUIRED COURSES:		UNITS
Music 120a	Music Theory	5
Music 120b	Music Theory	5
Music 120c	Music Theory	5
	TOTAL	15

AT LEAST 9 UNITS OF MUSIC HISTORY FROM:

Music 110a	Survey of Music Hist. & Lit.	(5)
Music 110b	Survey of Music Hist. & Lit.	(5)
Music 110c	Survey of Music Hist. & Lit.	(5)
Music 112	Survey of Jazz & Popular Music	(4)
Music 115	Survey of Eastern Music	(4)
	TOTAL	24

AT LEAST 6 UNITS OF KEYBOARD FROM:

Music 131	Beginning Keyboard	(3)
Music 141	Inter. Keyboard	(3)

(Each of the above may be taken for credit twice.)

Advanced students may substitute music electives for keyboard requirements from:

Music 126	Composition	(3)
Music 130-Music 179		(3)

TOTAL REQUIRED UNITS 30

NATURAL RESOURCES TECHNOLOGY

REQUIRED COURSES:		UNITS
Nat. Res. Tech. 55	Interp. Guided Tours	3
Nat. Res. Tech. 60	Aerial Photo./Map Interp and	3
Biology 60	Natural History & Ecology or	3
Nat. Res. 100	Conservation of Nat. Res. and	4
Nat. Res. Tech. 52	Applied Wildlands Mgmt. or	3
Nat. Res. 101	Intro. Soil, Water, Atmos. or	4
Nat. Res. 102	Properties of Soil	4
	TOTAL	12-14

AND 16-18 UNITS FROM:

Fire Sci. 117	Wildland Fire Control	(3)
For. Tech. 50	Intro. to Technical Forestry	(4)
For. Tech. 53	Forest Surveying Techniques	(3)
For. Tech. 56	Tree & Plant Identification	(3)
For. Tech. 59	Forest Inventory	(5)
For. Tech. 62	Applied Forest Mgmt.	(5)
Heavy. Equip. 70	Logging Equipment	(3)
Math. 50	Basic Mathematics	(2)
Nat. Res. Tech. 63	Water for Consumption	(4)
Nat. Res. Tech. 81	California Wildlife	(3)
Nat. Res. Tech. 83	California Wildlife	(3)
Office Oc. 50	Personal Typing or	(3)
Office Oc. 53	Review Typing	(3)

TOTAL REQUIRED UNITS 30

PHILOSOPHY

REQUIRED COURSES:		UNITS
Philosophy 101	**Knowledge and Reality**	**4**
Philosophy 102	**Ethics and Religion**	**4**
Philosophy 125	**Twentieth Century Philosophy**	**4**
Mathematics 100a	**Logic**	**5**
Mathematics 100b	**Logic**	**5**
	TOTAL	22

AND 8 UNITS FROM:

Philosophy 103	Values in Politics/Esthetics	(4)
Philosophy 105	Alternate Views in Philosophy	(4)
Philosophy 108	Humanistic/Scientific Thought	(4)
History 104b	World Civilization: 500-1700 A.D.	(4)

TOTAL REQUIRED UNITS 30

PHYSICAL EDUCATION

REQUIRED COURSES:		UNITS
P.E. 101	Introduction to Physical Education	2
P.E. 105	Personal Fitness Concepts and Evaluation	3
Health Ed. 101	Health and Fitness Education	4
Health Ed. 110	Safety and First Aid Education	3
Physics 110a	Applied Physics	4
	or	
Chemistry 100	Fundamentals of Chemistry	4
Biology 110	Fundamentals of Biology	4
Minimum of six (6) units from P.E. 120, 130 and 140		6
	TOTAL	26

AND AT LEAST 6 UNITS FROM:

P.E. 106	Theory and Practice of Adaptive P.E.	3
P.E. 107	Corrective Rehab. P.E. Assisting	1-3
P.E. 110	Intramural Leadership	2
P.E. 111a	Leadership Laboratory	1
P.E. 112	Theatre Production: Dance Emphasis	1-3
P.E. 116	Dance Production	4
P.E. 117	Choreography and Composition	4
P.E. 119	Dance Touring Company	3
P.E. 171	Introduction to Adult Fitness	3
P.E. 177	Introduction to Exercise Stress Testing	3
Health Ed. 105	Consumer Health	3
Health Ed. 113	Advanced First Aid	5
Biology 140	Introductory to Human Anatomy	4
Biology 160a	Introduction to Human Physiology	3
Mathematics 105	Elements of Statistics	5

TOTAL REQUIRED UNITS 32

RECOMMENDED COURSES:

Psychology 101a	General Psychology	5
Sociology 101	People in Groups: Introduction to Sociology	5
Speech 101	Fundamentals of Speech	5

PHYSICAL SCIENCE

REQUIRED COURSES:		UNITS
Chemistry 101a	General Chemistry	5
Chemistry 101b	General Chemistry	5
Chemistry 101c	General Chemistry	5
Earth Science 110	Introduction to Physical Geology	1
Earth Science 111	Rocks and Minerals	2
Earth Science 112	Erosion—Water, Wind and Ice	1
Earth Science 113	Mountains and Earthquakes	1
Earth Science 144	General Astronomy	4
Mathematics 105	Elements of Statistics	5
Mathematics 120a	Calculus with Analytic Geometry	5
Mathematics 120b	Calculus with Analytic Geometry	5
Mathematics 120c	Calculus with Analytic Geometry	5
Physics 120a	General Physics	6
Physics 120b	General Physics	6
Physics 120c	General Physics	6

TOTAL REQUIRED UNITS 62

RECOMMENDED COURSES:

Biology 111	Principles of Biology	5
Comp. Sc. 120a	Computer Programming	3
Comp. Sc. 120b	Computer Programming	3
Comp. Sc. 120c	Computer Programming	3

PSYCHOLOGY

REQUIRED COURSES:		UNITS
Psychology 101a	General Psychology	5
Psychology 101b	General Psychology	5
Psychology 145a	Developmental Psychology	4
Psychology 145b	Developmental Psychology	4
Psychology 160	Personality Theory	5
	TOTAL	23

AND AT LEAST 7 UNITS FROM:

Psychology 107	Search for Self	(2)
Psychology 120	Interpersonal Growth	(2)
Psychology 125	Biofeedback and Self-Control	(3)
Psychology 130	Personal/Social Adjustment	(5)
Sociology 101	People in Groups: Intro. to Soc.	(5)

TOTAL REQUIRED UNITS 30

SEARCH AND RESCUE

REQUIRED COURSES:		UNITS
Health Oc. 103	Emergency Med. Tech. Trng.	8
	or	
Health Ed. 113	Adv. First Aid & Emergency Care	5
S.A.R. 103	Environmental Injuries	2
S.A.R. 110	Intro. to Search Theory	3
S.A.R. 112	Managing the Search Function	3
S.A.R. 114	Intro. to Man Track/Sign Cut	1
S.A.R. 116	Use of Dogs in S.A.R.	1
S.A.R. 130	Intro. to Rescue Techniques	4
S.A.R. 132	Ascend. & Descend. Techniques	2
S.A.R. 134	Helicopter Operations	1
	TOTAL	22-25

AND 5-8 UNITS FROM ANY OTHER COURSES IN THE SEARCH AND RESCUE CURRICULUM (5-8)

TOTAL REQUIRED UNITS 30

SOCIOLOGY

REQUIRED COURSES:		UNITS
Sociology 101	People in Groups: Intro. to Soc.	5
Sociology 102	American Social Patterns	5
Sociology 110	Deviance and Conflict	5
Sociology 112	Family, Marriage, Individual	4
Sociology 127	Aging	(4)
	or	
Sociology 128	Death and Dying	(4)
	TOTAL	23

AND AT LEAST 7 UNITS FROM:

Psychology 101a	General Psychology	(5)
Psychology 103	Social Psychology	(5)
Psychology 107	Search for Self	(2)
Psychology 120	Interpersonal Growth	(2)

TOTAL REQUIRED UNITS 30

LOWER DIVISION REQUIREMENTS CALIFORNIA FOUR-YEAR COLLEGES AND UNIVERSITIES

Students should consult the latest catalog of the institution to which they intend to transfer to ensure that all required lower division courses are included in their Columbia program of study.

Advisors will help students select courses that fulfill both major and General Education Breadth Requirements. **The responsibility for fulfilling requirements rests with the student.**

CALIFORNIA STATE UNIVERSITY TRANSFER

The California State University system has established the following campuses:

California State College, Bakersfield
California State University, Chico
California State University, Dominguez Hills
California State University, Fresno
California State University, Fullerton
California State University, Hayward
Humboldt State University
California State University, Long Beach
California State University, Los Angeles
California State University, Northridge
California State Polytechnic University, Pomona
California State University, Sacramento
California State College, San Bernardino
San Diego State University
San Francisco State University
San Jose State University
California Polytechnic State University, San Luis Obispo
Sonoma State University
California State College, Stanislaus

Students may complete their lower division preparation for transfer to one of the state universities without loss of credit or grades.

Students should make their choice of transfer institution early and consult the catalog of the transfer college. Each state university has its own academic emphasis and program requirements.

A student who is ineligible for direct admission to a state university from high school may transfer after he/she has completed 90 transferable quarter units with a cumulative Grade Point Average of 2.0 ("C" average) or better.

Students should consider the following if they plan to transfer to a state university:

(1) General Education Breadth Requirements: State universities require a minimum of 58.5 quarter units of lower division general education for a Bachelor's degree.

(2) Department Requirements: Students should refer to the transfer university catalog to identify any special lower division major requirements.

(3) Minor Requirements: In many programs a minor is required. Students should consult the transfer university catalog to include lower division courses which may be required for upper division work in a minor.

To earn the Associate degree and enter a state university with junior standing, a student should complete at least 90 transferable quarter units with a cumulative Grade Point Average of 2.0 ("C" average) or better. A maximum of 105 quarter units of junior college credit will be accepted by a state university. Units in excess of 105 may be applied toward fulfillment of requirements in the General Education Breadth Requirements, the major, or the minor.

THE COLUMBIA COLLEGE PATTERN OF GENERAL EDUCATION FOR STATE UNIVERSITY TRANSFER

One of the specific requirements to obtain a baccalaureate degree from the California State University System is the General Education requirement. This requirement can be met by completing satisfactorily a minimum of 72 quarter units of general education. 13.5 quarter units of General Education must be taken in the upper division at the four-year college from Areas B, C and D listed below.

Columbia College may certify a maximum of 58.5 quarter units as having fulfilled the CSU lower division General Education requirements. A class taken at another participating institution may be included on Columbia's certification list if the class would have been certified at another institution.

TOTAL GENERAL EDUCATION REQUIREMENTS:
72 Quarter Units

Completion of 58.5 quarter units specified in Areas A-E below will be given full certification.

The balance of 13.5 quarter units minimum must be taken as designated by the State University conferring the BA/BS degree.

No course may be used to meet more than one requirement.

These CSU General Education requirements are effective for students entering Columbia College for the first time in the Fall of 1981 or thereafter.

Students who entered Columbia College prior to Fall of 1981 should continue to use the old Columbia College pattern so long as they make normal and continuous progress toward the baccalaureate degree.

DISTRIBUTION OF COURSES

The courses below are applicable to the General Education requirement to be certified by Columbia and must be distributed as follows:

AREA A. Communication in the English Language and Critical Thinking: Three courses are required:
REQUIRED:

A.1 **Oral Communication**
Speech 101. Fundamentals of Speech (5)

A.2 **Written Communication**
English 101a. Reading and Composition (5)
English 101b. Reading and Composition (5)

AREA B. Physical Universe, Its Life Forms and Mathematical Concepts: A minimum of thirteen and one-half (13.5) quarter units are required from B.1, B.2, and B.3. One course from B.1. or B.2. must be a laboratory course, A minimum of 3 units each must be taken from B.1, B.2., and B.3.
REQUIRED:

B.1 **Physical Sciences**
Chemistry 100, Fundamentals of Chemistry (4) (lab course)
Chemistry 101a, General Chemistry (5) (lab course)
Earth Science 101, Survey of Geology (2)
Earth Science 111, Rocks and Minerals (2)
Earth Science 112, Erosion—Water, Wind and Ice (1)
Earth Science 113, Mountains and Earthquakes (1)
(The three courses, E.S. 111, E.S. 112, and E.S. 113 will fulfill the General Education Breadth Requirement for a laboratory science.)
Earth Science 141, Survey of Astronomy (2)
Earth Science 142, Descriptive Astronomy (3)
Earth Science 144, General Astronomy (4) (lab course)
Earth Science 161, Survey of Meteorology (2)
Earth Science 171, Survey of Oceanography (2)
(Any two courses of the Earth Science series, E.S. 101, E.S. 141, E.S. 161, and E.S. 171, will fulfill General Education Breadth Requirements of a laboratory science.)
Physics 100, Modern Physics (3)
Physics 110a, Applied Physics (4) (lab course)
Physics 120a, General Physics (6) (lab course)

B.2 **Biological Sciences**
Biology 100, Biology and Contemporary Society (4)
Biology 110, Fundamentals of Biology (4), (lab course)
Biology 111, Principles of Biology (5), (lab course)
Biology 120, Fundamentals of Plant Biology (3) (lab course)
Biology 130, Fundamentals of Animal Biology (3) (lab course)

B.3 **Quantitative Reasoning and Mathematics**
Math. 101, Intermediate Algebra (5)
Math. 102, Trigonometry (5)
Math. 103, College Algebra (5)
Math. 105, Elements of Statistics (5)
Math. 110, Finite Mathematics (5)
Math. 115, Matrix Mathematics for Computers (2)
Math. 120a, Calculus with Analytic Geometry (5)
Comp. Sc. 120a, Computer Programming (3)

AREA C. Arts, Literature, Philosophy, and Foreign Language: Thirteen and one-half (13.5) quarter units with at least one course from C.1 and C.2
REQUIRED:

C.1 **Arts (Art, Dance, Drama, Music)**
Art 111a or 111b or 111c, History of Art (3) (3) (3)
Drama 102, Oral Expression and Interpretation (5)
Interdisciplinary Studies 101, Introduction to Fine Arts (4)
Music 102, Introduction to Music (4)

C.2 **Literature, Philosophy, Foreign Language**
English 117a or 117b or 117c, Literature of the United States (4) (4) (4)
English 146a or 146b or 146c, Survey of English Literature (4) (4) (4)
Humanities 101, Old World Culture (4)
Humanities 102, Modern Culture (4)
Philosophy 101, Knowledge and Reality (4)
Philosophy 125, Twentieth Century Philosophy (4)

AREA D. Social, Political and Economic Institutions and Behavior: One course each from D.1 and D.2, and two courses from D.3 are required for the General Education Pattern. (Only 13.5 units will apply toward the required 58.5 quarter units.)
REQUIRED:

D.1 **General Social Sciences**
Economics 101a, Principles of Economics (5)
Psychology 101a, General Psychology (5)
Sociology 101, Introduction to Sociology (5)

D.2 **Civilization and Cultures**
Anthropology 101a or 101b, Introduction to Anthropology (5) (5)
Geography 102, Introduction to Cultural Geography (5)
History 104a, 104b or 104c, World Civilization (4) (4) (4)
History 111, Asia (4)

D.3 **U.S. History and Government**
History 117a, United States (5)
History 117b, United States (5)
Political Science 101, Constitutional Government (5)

Note: California law includes a requirement in U.S. History and Government for the BA/BS Degree. Completion of two courses from D.3 will meet the requirement. The student should be aware that only 4.5 quarter units will be credited toward 58.5 certified General Education units.

Some CSU campuses place the U.S. History and Government requirement outside the General Education requirement, while others include it within. Consult the catalog of the state university to which you are transferring or see a counselor for this information.

AREA E. Lifelong Understanding and Self-Development: Four and one-half (4.5) quarter units are required.
REQUIRED:
Health Education 101, Health and Fitness Education (4)
Physical Education 171, Introduction to Adult Fitness (3)
Physical Education 173a, Adult Fitness Program (2-3)
Psychology 107, Search for Self (2)
Psychology 125, Biofeedback and Self-Control (3)

AREA F. Upper Division Requirement: A minimum of 13.5 quarter units as designated by the State University conferring the BA/BS Degree is required.

UNIVERSITY OF CALIFORNIA TRANSFER

The University of California has established campuses at Berkeley, Davis, Irvine, Los Angeles, Riverside, San Diego, San Francisco, Santa Barbara, and Santa Cruz.

To earn the Associate degree and enter the University of California with junior standing, a student should complete at least 90 transferable quarter units with a cumulative Grade Point Average of 2.0 ("C") or better.

The University will not grant credit toward graduation for work completed in excess of 105 lower division quarter units.

A student not eligible for direct admission to the University from high school may become eligible and transfer upon completion of all deficiencies. If the deficiency occurred because of a failure to complete required high school subjects, the student may be admitted when he/she has:

(1) established a cumulative Grade Point Average of 2.0 ("C") or better.
(2) satisfied subject requirements with a grade of "C" or better. There is an exception to this requirement. Up to two units of credit in the required high school subjects will be excused if the student has earned a Grade Point Average of 2.4 or better in 84 quarter units (56 semester units) of college credit in courses accepted by the University for transfer. Any deficiency over two units in the required high school subjects must be made up by completing appropriate college courses with a grade of "C" or better.

The University of California has stated breadth requirements in terms of courses completed, not units. Because there may be individual variations between the several University campuses, students planning to transfer to a campus of the University of California should obtain a catalog from that campus and, in consultation with his/her advisor, determine the proper courses needed to fulfill requirements. The Career Center maintains a collection of University catalogs for student reference.

ASSOCIATE DEGREE FOR TRANSFER TO PRIVATE COLLEGES AND UNIVERSITIES

Students planning to transfer to private colleges and universities should consult the catalog of the college to which they plan to transfer for specific lower division required courses which may be completed at Columbia College. The student should consult with his/her advisor for guidance.

COURSE DESCRIPTIONS

COURSE INFORMATION

Numbering of Courses

Courses numbered 1 to 49 are non-credit courses; courses numbered 50 to 99 are not intended for transfer, but may be accepted for transfer credit by agreement with specific four-year colleges and universities.

Courses numbered 100 and above are designated baccalaureate level courses.

Students must understand that some courses designated as baccalaureate level may not meet requirements at the transferring institution; however, they may be used for elective credit.

Course Description

A course description is given for each credit course offered by the College. Students are urged to refer to the course description for information concerning course prerequisites and allocation of class hours for lecture, laboratory, field trips, or other required learning activities.

Courses Not Listed in The Catalog

1. *Credit Free Courses*
   In an effort to meet some of the special interest needs of the populations served by the College, Credit Free Courses are usually offered each quarter. These courses are traditionally offered either through Continuing Education or Community Services sponsorship. Credit Free Courses cannot be applied toward fulfilling graduation, transfer, or vocational education programs, but such courses do provide information and/or training on a variety of topical subjects.
2. *80/180 Courses: Special Topics*
   Lecture and/or laboratory hours and units of credit may vary.
   Classes in which a particular topic in a discipline (such as history) is treated with in-depth study. The topic, the number of units and hours, and prerequisites (if any), will be determined in advance and published in the quarterly Schedule of Classes. 80/180 Courses may be repeated for credit with different topics only. These courses may transfer for elective credit but will not fill requirements.
3. *85/185 Courses: Interdisciplinary Studies — Special Topics*
   Lecture and/or laboratory hours and units of credit may vary.
   Classes in which a particular topic which crosses interdisciplinary lines is studied in-depth. The topic, the number of units and hours, and prerequisites (if any), will be determined in advance and published in the quarterly Schedule of Classes. 85/185 Courses may be repeated for credit with different topics only. These courses may transfer for elective credit but will not fill requirements.
4. *99/199 Courses: Independent Study*
   Independent study courses are intended to give students an opportunity to independently research specialized areas not available as regular course offerings of the college. They are designed to meet specific student interests and may be made available in any subject matter area. Consult your advisor for specific procedures. (See page 22 for conditions, limitations.)

Prerequisites

Prerequisites are intended to ensure that the student will have sufficient preparation before entering a course.

Where no prerequisite is stated for a course, none is required.

A prerequisite may be waived with the Dean of Instruction's permission when, in the instructor's judgment, the student has adequate preparation to satisfy the course objectives.

Credit Value

The number after the course indicates the unit credit value of the course. Course listed in this catalog are described in quarter units. One and one-half quarter units are equal to one semester unit.

Field Trips

Field trips may be required in a number of courses where such a statement is not currently a part of the course description.

ANTHROPOLOGY

101a INTRODUCTION TO ANTHROPOLOGY: Physical 5 units
Lecture: 5 hours
Evolutionary history with emphasis on recent developments; primatology; the fossil sequence beginning with pre-human through Paleolithic era to domestication of plants and animals and the dawn of civilization. Race. Cultural adaptations resulting from biological and genetic background.

101b INTRODUCTION TO ANTHROPOLOGY: Cultural 5 Units
Lecture: 5 hours
Primitive beings and the concept of culture basic to anthropology. Emphasis on methods of fieldwork, cultural ecology, language, social structure, the psychological perspective, religion, medicine, and cultural change.

101c INTRODUCTION TO ANTHROPOLOGY: Current Problems 5 Units
Prerequisite: Anthropology 101a or 101b
Lecture: 5 hours
Intra-specific aggression, territoriality, population control, primate social organization, intra- and inter-species communication, and the present and future trends in social organization, war, religion, and cultural change.

110 INTRODUCTION TO ARCHAEOLOGY 3 Units
Lecture: 3 hours
Development of archaeology as an anthropological study, a review of archaeological projects in North and South America. Archaeological methods, techniques, and site survey methods reviewed.

115 INDIANS OF NORTH AMERICA 5 Units
Lecture: 5 hours
A survey of the origins, cultures, and customs of peoples indigenous to the North American continent with a primary emphasis upon folkways dominant prior to interference by foreign cultures, and a secondary emphasis upon the status of the Indians in the USA today.

APPRENTICE CARPENTRY

The Apprentice Carpentry Program is conducted in accordance with State Apprenticeship laws. The apprentice serves for a four-year period, the first three months of which are probationary. Apprentice training consists of full-time employment supplemented by related classroom instruction. The apprentice will be required to meet 4 hours by arrangement each month in addition to classroom schedules. Students whose work or attendance is not satisfactory may be dropped from the program by recommendation of the Joint Apprentice Committee. The College grants credit for the successful completion of the program.

The Associate in Science degree may be earned, in addition to the completion of the apprentice training program, by fulfilling the Graduation Requirements listed on pages 34-35.

101a APPRENTICE CARPENTRY 3 Units
Lecture: 3 hours
Blueprint reading, estimating, mathematics, form construction, light frame construction, hand and portable power tools, safety and Uniform Building Code.

101b APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 101a or consent of instructor
Lecture: 3 hours
Continuation of Apprentice Carpentry 101a.

101c APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 101b or consent of instructor
Lecture: 3 hours
Continuation of Apprentice Carpentry 101b.

102a APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 101c.
Lecture: 3 hours
Simplified framing, framing tables, sheathing, and insulation.

102b APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 102a.
Lecture: 3 hours
Continuation of Apprentice Carpentry 102a.

102c APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 102b.
Lecture: 3 hours
Continuation of Apprentice Carpentry 102b.

103a APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 102c.
Lecture: 3 hours
Interior and exterior trim, stair layout, blueprint reading, and advanced framing techniques.

103b APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 103a.
Lecture: 3 hours
Continuation of Apprentice Carpentry 103a.

103c APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 103b.
Lecture: 3 hours
Continuation of Apprentice Carpentry 103b.

104a APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 103c.
Lecture: 3 hours
Heavy timber construction, reinforced concrete form work, blueprint reading, and estimating.

104b APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 104a.
Lecture: 3 hours
Continuation of Apprentice Carpentry 104a.

104c APPRENTICE CARPENTRY 3 Units
Prerequisite: Apprentice Carpentry 104b.
Lecture: 3 hours
Continuation of Apprentice Carpentry 104b.

ART

101 FREEHAND DRAWING 1.5-3 Units
Studio: 3-6 hours
Introduction to basic drawing techniques, rendering techniques, composition and various drawing media. Special attention will be paid to principles of visual design and organization.

102a DESIGN: Basic 2 Units
Laboratory: 6 hours
Fundamental elements and principles of design explored through lectures, reading problems, and studio projects.

102b DESIGN: Color 2 Units
Laboratory: 6 hours
Continuation of Art 102a with emphasis on the principles and application of color theory.

102c DESIGN: Structure 2 Units
Laboratory: 6 hours
Continuation of Art 102a and 102b working with three dimensional designs and structures.

109a LIFE DRAWING: Introductory 1.5-3 Units
Studio: 3-6 hours
Problems in figure drawing, working from the undraped model.
May be repeated for a maximum of three units.

109b LIFE DRAWING: Advanced 1.5-3 Units
Studio: 3-6 hours
An extension of Art 109a emphasizing various media and compositional problems.
May be repeated for a maximum of three units.

109c LIFE DRAWING: Special Problems 1.5-3 Units
Studio: 3-6 hours
An extension of Art 109b emphasizing individual growth on the part of the student as an artist.
May be repeated for a maximum of six units.

111a HISTORY OF ART: Ancient and Medieval 3 Units
Lecture: 3 hours
Survey of art history from the Paleolithic Age through the Late Gothic Era.
Field trips may be required.

111b HISTORY OF ART: Renaissance and Baroque 3 Units
Lecture: 3 hours
Survey of art history from the 15th through the 18th centuries.
Field trips may be required.

111c HISTORY OF ART: 19th and 20th Century 3 Units
Lecture: 3 hours
The background, causes, and evolution of contemporary art.
Field trips may be required.

121a ACRYLIC PAINTING: Introductory 1.5-3 Units
Studio: 3-6 hours
Introduction to the painting process using acrylic as a medium. Special attention will be paid to design elements and color theory.
May be repeated for a maximum of three units.

121b ACRYLIC PAINTING: Advanced 1.5-3 Units
Studio: 3-6 hours
An extension of Art 121a emphasizing technique.
May be repeated for a maximum of three units.

121c ACRYLIC PAINTING: Special Problems 1.5-3 Units
Studio: 3-6 hours
An extension of Art 121b emphasizing individual growth on the part of the student as an artist.
May be repeated for a maximum of six units.

122a OIL PAINTING: Introductory 1.5-3 Units
Studio: 3-6 hours
Basic principles, techniques, and problems of oil painting.
May be repeated for a maximum of three units.

122b OIL PAINTING: Advanced 1.5-3 Units
Studio: 3-6 hours
Continuation of Art 122a emphasizing advanced oil painting techniques and problems.
May be repeated for a maximum of three units.

122c OIL PAINTING: Special Problems 1.5-3 Units
Studio: 3-6 hours
Study and application of 19th and 20th Century painting techniques to contemporary studio practice.
May be repeated for a maximum of six units.

123a WATERCOLOR: Introductory 1.5-3 Units
Studio: 3-6 hours
Introduction to the basic techniques and problems of transparent watercolors.
May be repeated for a maximum of three units.

123b WATERCOLOR: Advanced 1.5-3 Units
Studio: 3-6 hours
Continuation of Art 123a introducing opaque watercolors and various experimental techniques.
May be repeated for a maximum of three units.

123c WATERCOLOR: Special Problems 1.5-3 Units
Studio: 3-6 hours
Continuation of Art 123b with emphasis on further experimentation and development of personal expression.
May be repeated for a maximum of six units.

125 MIXED MEDIA PAINTING 1 Unit
Studio: 2 hours
Introduction to special techniques involving creative mixtures of traditional media; pen and ink over watercolor wash, oils and acrylics in combination.

128 MURAL PAINTING 3 Units
Studio: 6 hours
Group participation in planning, designing, and executing large scale wall paintings.

131a CERAMICS: Introductory 1.5-3 Units
Studio: 3-6 hours
Introduction to basic ceramic methods including hand building and wheel thrown forms.
May be repeated for a maximum of three units.

131b CERAMICS: Advanced 1.5-3 Units
Studio: 3-6 hours
Continuation of Art 131a with emphasis on glaze formulation.
May be repeated for a maximum of three units.

131c CERAMICS: Special Problems 1.5-3 Units
Studio: 3-6 hours
An extension of Art 131b with emphasis on personal expression and experimentation.
May be repeated for a maximum of six units.

133 PRIMITIVE AND ENVIRONMENTAL CERAMICS 3 Units
Laboratory: 6 hours
Discovery and refinement of local clay deposits; construction and use of primitive kilns and ceramics tools; survey of the styles, techniques, and materials common to primitive potters; study of primitive firing and glazing.
Field trips are required.

135 INTRODUCTION TO RAKU 1.5 Units
Prerequisite: Art 131a recommended.
Studio: 3 hours
Introduction to raku process, its origins and contemporary uses. Practical experience in clay bodies, glazes, and raku firing techniques.

141a PHOTOGRAPHY: Beginning 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Introduction to history, development, and capabilities of the art/science of photography and elementary procedures with camera and in darkroom.
Field trips may be required.

141b PHOTOGRAPHY: Intermediate 3 Units
Prerequisite: Art 141a or consent of instructor.
Lecture: 2 hours
Laboratory: 3 hours
Expansion of previous knowledge stressing creative expression through a variety of photographic techniques.
Field trips may be required.

141c PHOTOGRAPHY: Advanced 3 Units
Prerequisite: Art 141b. Art 102a recommended.
Lecture: 2 hours
Laboratory: 3 hours
Continuation of Art 141b with further attention to practical and aesthetic zone system technique and advanced negative and printmaking methods. Particular attention will be paid to medium and large format photography. Emphasis on visual literacy, elements of design, composition, and semeiology.
Field trips may be required.

142a COLOR PHOTOGRAPHY: Slide Making and Positive Printing 3 Units
Prerequisite: Art 141a or consent of instructor.
Lecture: 2 hours
Laboratory: 3 hours
Development and printing of color slides. Includes the history and theory of color photography, an analysis of color films, color balance, exposure latitude, film speed, pushed processing, positive to positive printing, print display and critique.
Field trips may be required.

142b COLOR PHOTOGRAPHY: The Color Negative 3 Units
Prerequisite: Art 142a
Lecture: 2 hours
Laboratory: 3 hours
Development and printing of color negatives. Course includes instruction in the procedures of most typical color negative printing processes as well as recent developments in the medium.
Field trips may be required.

144 ADVANCED PHOTOGRAPHY LABORATORY 1 Unit
Prerequisite: Art 141b or 142b or equivalent.
Laboratory: 3 hours
Continued exercise of darkroom skills in the production of negatives, slides and prints.
May be repeated one time.

145 FIELD PHOTOGRAPHY 1-2 Units
Lecture: .5-1 hour
Laboratory: 1.5-3 hours
The art of producing professional quality nature photographs. Field instruction in locations of natural beauty will be emphasized and followed up with lectures, demonstrations, and critique sessions.

148 SPECIAL TOPICS IN PHOTOGRAPHY 1-3 Units
Prerequisite: Will vary according to topic scheduled.
Lecture: .5-2 hours
Laboratory: 1.5-3 hours
Various field and studio oriented courses limited to particular photographic topics such as slide-tape presentations, landscape, architecture, portraiture, nude, product and still-life photography, photojournalism, alternative processes, and guest lecture forum.
Field trips may be required.
Course may be repeated for credit with different topics only.

149 PORTFOLIO AND EXHIBITION PREPARATION 2 Units
Prerequisite: Art 102a, Art 141c, Art 142b.
Lecture: 1 hour
Laboratory: 3 hours
Intended for photography majors, this course involves primarily the craft and technique involved in assembling and installing a photographic portfolio for exhibitions.

150a COMMERCIAL FREEHAND LETTERING: Beginning 2 Units
Lecture: 1 hour
Studio: 2 hours
Introduction to freehand lettering and calligraphy; practice in the three major calligraphic styles of sign writing and commerical lettering; Roman, Gothic, and script technique emphasis.

150b COMMERCIAL FREEHAND LETTERING: Intermediate 2 Units
Prerequisite: Art 150a
Lecture: 1 hour
Studio: 2 hours
Continuation of Art 150a with emphasis on various sign writing media such as banner writing, real estate signs, truck lettering, show cards, billboards, illustrations, wood routed signs, and concrete signs.

151 RELIEF PRINTMAKING 1.5-3 Units
Studio: 3-6 hours
Introduction to basic relief printmaking procedures emphasizing linoleum and woodcut.

152 INTAGLIO PRINTMAKING 1.5-3 Units
Studio: 3-6 hours
Introduction to basic intaglio printmaking procedures including etching, engraving and collograph.

153 SILKSCREEN PRINTING 1.5-3 Units
Studio: 3-6 hours
Introduction to basic silkscreen printing procedures.

165 APPLIED LEATHERWORK 1.5-3 Units
Studio: 3-6 hours
Design and creation of art work in leather and mixed media including leather; survey of related styles, techniques and processes. Emphasis will be placed on design in western tooling and other leather working processes.

167a TEXTILE DESIGN: Introductory 2 Units
Studio: 4 hours
Introduction to basic textile design. Problems and techniques of the fiber arts.

167b TEXTILE DESIGN Advanced 2 Units
Prerequisite: Art 167a or consent of instructor.
Studio: 4 hours
Continuation of Art 167a with emphasis on original concepts in textile design.

167c TEXTILE DESIGN Special Problems 2 Units
Prerequisite: Art 167b or consent of instructor.
Studio: 4 hours.
Continuation of Art 167b with special emphasis on advanced individual projects and non-traditional approaches.
May be repeated one time.

169a SILVERSMITHING: Introductory 1.5 Units
Studio: 3 hours
Manufacture of jewelry and related items made of silver. Selecting and polishing stones to be mounted.

169b SILVERSMITHING: Advanced 1.5 Units
Prerequisite: Art 169a or consent of instructor.
Studio: 3 hours
A continuation of Art 169a, emphasizing advanced problems and techniques of silversmithing.

169c SILVERSMITHING: Design 1.5 Units
Prerequisite: Art 169b or consent of instructor.
Studio: 3 hours.
Study of basic principles of design as they may relate to the art of silversmithing.

169d SILVERSMITHING: Special Problems 1.5 Units
Prerequisite: Art 169c or consent of instructor.
Studio: 3 hours
Continuation of Art 169c, with emphasis on experimentation and development of personal expression.

171a SCULPTURE: Introductory 1.5-3 Units
Studio: 3-6 hours
Basic principles, techniques, and problems of sculpture.

171b SCULPTURE: Advanced 1.5-3 Units
Studio: 3-6 hours
Continuation of Art 171a emphasizing advanced problems and techniques in sculpture.

171c SCULPTURE: Special Problems 1.5-3 Units
Studio: 3-6 hours
Continuation of Art 171b with emphasis on experimentation and development of personal expression.

172 METAL SCULPTURE 1.5-3 Units
Studio: 3-6 hours
Introduction to various metalworking techniques with an emphasis on aesthetic design.

AUTOMOTIVE TECHNOLOGY

See Page 27 for Certificate Requirements.

101 INTRODUCTION TO AUTOMOTIVE TECHNOLOGY 2 Units
Lecture: 2 hours
Theory of operation of automobile systems. Fundamentals of math, micrometers, fasteners. Shop safety and tools will be covered.

103 PREVENTIVE MAINTENANCE 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Preventive maintenance procedures, emphasis on lubrication and safety inspection as well as record keeping.

112 PULLING AND INSTALLING ENGINES 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Practical experience in pulling and installing engines.

116 ENGINE REBUILDING 5 Units
Prerequisite: Auto. Tech. 101 and Heavy Equipment 114.
Lecture: 2.5 hours
Laboratory: 7.5 hours
Techniques involved in engine rebuilding.

117a CARBURETION AND EMISSION CONTROL: Fuel Systems 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Techniques and procedures for overhaul and service of carburetor and accessories. Fuel injection service is also covered.

117b CARBURETION AND EMISSION CONTROL: Emission Control 2 Units
Prerequisite: Auto. Tech. 117a
Lecture: 1 hour
Laboratory: 3 hours
Installation, operation and repair of automotive pollution control devices. State and federal regulations are also covered.

119 GASOLINE ENGINE TUNE-UP 2 Units
Prerequisite: Auto. Tech. 117b
Lecture: 1 hour
Laboratory: 3 hours
Operation principles of various types of ignition systems. Emphasis on use of handheld test equipment as well as the oscilloscope and infrared analyzer.

130 MANUAL TRANSMISSION REBUILDING 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Principles and operation of automotive power trains including diagnosis and overhaul of clutches, manual transmission, overdrives, and transfer cases.

134 AXLES AND DRIVE LINES 2 Units
Prerequisite: Auto. Tech. 130
Lecture: 1 hour
Laboratory: 3 hours
Service, diagnosis and repair of drive lines, rear axles and third members, front wheel drive hubs, and 4 x 4 front axles and hubs.

136 AUTOMATIC TRANSMISSION (G.M) 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Theory of automatic transmissions and their advantages and disadvantages.

138 AUTOMATIC TRANSMISSION (Ford) 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Practical experience in disassembly and assembly, failure and analysis, trouble shooting, pressure testing, and automatic transmission rebuilding.

140a BRAKES: Drum 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Principles of operation of automotive drum brakes, including diagnosis and overhaul techniques.

140b BRAKES: Disc 2 Units
Prerequisite: Auto. Tech. 140a
Lecture: .5 hour
Laboratory: 1.5 hours
Service procedures, including overhaul techniques of disc brakes.

144a FRONT-END AND SUSPENSION 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Fundamentals and theory of automotive suspension and steering systems. Adjustment, diagnosis, inspection and repair of alignment problems, including wheel balancing and tire problems.

144b FRONT-END AND SUSPENSION 2 Units
Prerequisite: Auto. Tech. 144a
Lecture: 1 hour
Laboratory: 3 hours
Front-end and suspension rebuilding and maintenance. Rear axle alignment is included.

150a VEHICLE ELECTRICITY: Electrical Theory 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Fundamentals of electricity that apply to all electrical systems.

150b VEHICLE ELECTRICITY: Charging Systems 2 Units
Prerequisite: Auto. Tech. 150a
Lecture: 1 hour
Laboratory: 3 hours
Diagnosis and repair of the battery and charging systems.

150c VEHICLE ELECTRICITY: Starting and Ignition Systems 2 Units
Prerequisite: Auto. Tech. 150a.
Lecture: 1 hour
Laboratory: 3 hours
Diagnosis and repair of starting systems, magnetos and battery ignition systems.

150d VEHICLE ELECTRICITY: Lighting and Chassis Electrics 2 Units
Prerequisites: Auto. Tech. 150a.
Lecture: 1 hour
Laboratory: 3 hours
Diagnosis and repair of headlamp, stoplight, turn signals, as well as fuse box, trailer wiring, gauges.

162 AIR CONDITIONING 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Understanding the principles and operation of air conditioning, as well as the techniques of recharging diagnosis and service.

170a PRACTICAL LABORATORY 2 Units
Prerequisite: 8 units of shop classes with not more than 2 of the 8 units taken concurrently with Auto. Tech. 170a or consent of instructor.
Laboratory: 6 hours
Special repair projects are assigned to advanced students with emphasis on speed, accuracy, and work habits.

170b PRACTICAL LABORATORY 2 Units
Prerequisite: Auto. Tech. 170a.
Laboratory: 6 hours
Continuation of Auto. Technology 170a.

170c PRACTICAL LABORATORY 2 Units
Prerequisite: Auto. Tech. 170b
Laboratory: 6 hours
Continuation of Auto. Technology 170b.

170d PRACTICAL LABORATORY 2 Units
Prerequisite: Auto. Tech. 170c
Laboratory: 6 hours
Continuation of Auto. Technology 170c.

AVIATION

105 PRIVATE PILOT GROUND SCHOOL 3 Units
Lecture: 3 hours
Preparation for Federal Aviation Administration written examination for private pilot certificate. Instruction includes: aircraft operations, air traffic, pilot privileges and limitations, flight planning, map reading, radio communications, weather and safety.

110a COMMERCIAL PILOT GROUND SCHOOL 3 Units
Prerequisite: Aviation 105.
Lecture: 3 hours
Flight information, civil air regulations, radio and navigational aids.

110b COMMERCIAL PILOT GROUND SCHOOL 3 Units
Prerequisite: Aviation 110a
Lecture: 3 hours
Preparation for Federal Aviation Administration written examination for Commercial Pilot certificate.

115a INSTRUMENT RATING GROUND SCHOOL 3 Units
Prerequisite: Aviation 105
Lecture: 3 hours
Preparation for Federal Aviation Administration written examination for Instrument Rating certificate.

115b INSTRUMENT RATING GROUND SCHOOL 3 Units
Prerequisite: Aviation 115a
Lecture: 3 hours
Continuation of Aviation 115a.

130a AIRPORT AND OPERATIONS 3 Units
Lecture: 3 hours
An overview of the major functions of an airport from a management point of view.

130b AIRPORT AND OPERATIONS 3 Units
Prerequisite: Aviation 130a
Lecture: 3 hours
Continuation of Aviation 130a.

130c AIRPORT AND OPERATIONS 3 Units
Prerequisite: Aviation 130b
Lecture: 3 hours
Continuation of Aviation 130b.

150 LIGHT AIRCRAFT ENGINES 3 Units
Lecture: 3 hours
The operation and the principles of maintenance of light aircraft engines common to privately owned aircraft.

BIOLOGY

50 HORTICULTURE FOR THE HOME GARDENER 2 Units
Lecture: 2 hours
An introduction to the science of growing fruits, vegetables and turf. Demonstrations of plant propagation, tree planting, and grafting.
Field trips may be required.

53 ORGANIC LIVING 1 Unit
Lecture: 1 hour
A course in living a simple, self-sufficient life style. Producing and preserving foods, dietary requirements and food additives, and small animal husbandry are among topics discussed and demonstrated.

55 ORGANIC GARDENING 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Lecture and laboratory instruction in the techniques of organic gardening. The campus garden and greenhouse will provide the setting for instruction.

58 BIRDS OF THE MOTHER LODE 2 Units
Lecture: 1 hour
Laboratory: 3 hours
A survey of the birds of the Mother Lode area of California through field observations. Stresses recognition by plumage, song, and behavior patterns. Discusses ecological relationships, nesting habits, and economic importance.
Field trips may be required.
May be repeated one time.

59 WILDFLOWERS OF THE MOTHER LODE 1-3 Units
Lecture: 1-3 hours
Wildflowers of the Mother Lode with emphasis on their botanical beauty. A non-technical approach to botanical traits will be used to learn common and scientific names of wild flowers.

60 NATURAL HISTORY AND ECOLOGY 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Natural history of California flora and fauna with emphasis on ecological principles and relationships.
Field trips may be required.

65 DESERT WILDFLOWERS 1 Unit
Lecture: .5 hours
Laboratory: 1.5 hours
An introduction to desert wildflowers and their common names.
Field trips may be required.

68 BIRDS OF THE SIERRA NEVADA 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Study of bird species inhabiting alpine meadows and forests of the Sierra Nevada through field observations and lectures. Normally offered during summer only.
Field trips required.
May be repeated one time.

100 BIOLOGY AND CONTEMPORARY SOCIETY 4 Units
Lecture: 4 hours
A study of the biological concepts of ecology, genetics, and behavior as they relate to modern society. An introduction to human ecology which studies the present and future of our society or a component of the biosphere.

110 FUNDAMENTALS OF BIOLOGY 4 Units
Lecture: 3 hours
Laboratory: 3 hours
Modern concepts, inquiry methods, and historical background of biological unity and processes.

111 PRINCIPLES OF BIOLOGY 5 Units
Prerequisite: One year of high school chemistry with a B average or Chemistry 100.
Lecture: 3 hours
Laboratory: 6 hours
A general biology course with the emphasis on ecology, genetics, evolution, cell biology, and molecular biology and metabolism.
Field trips may be required.

115 HEREDITY AND EVOLUTION 4 Units
Lecture: 4 hours
Introductory genetic principles; inheritance, population variation and evolution in plants and animals. Social implications of genetics and evolution.

120 FUNDAMENTALS OF PLANT BIOLOGY 3 Units
Lecture: 2 hours
Laboratory: 3 hours
A survey course in botany with an emphasis on plant biology. The topics discussed are anatomy, physiology, ecology, horticulture, and relationships of plants to human history.
Field trips may be required.

121 PRINCIPLES OF PLANT BIOLOGY 5 Units
Prerequisite: Biology 111
Lecture: 3 hours
Laboratory: 6 hours
A general botany course with an emphasis on plant anatomy, plant physiology, and plant morphology.
Field trips may be required.

125 PLANT TAXONOMY OF THE SIERRA NEVADA 4 Units
Lecture: 3 hours
Laboratory: 3 hours
A study of the flora of the Sierra Nevada with emphasis on the classification of angiosperms. The taxonomy characteristics of 35 plant families are studied. The use of standard taxonomic manuals is a fundamental part of the laboratory.
Field trips may be required.

130 FUNDAMENTALS OF ANIMAL BIOLOGY 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Structure, functions, and diversity of the animal organism.
Field trips may be required.

131 PRINCIPLES OF ANIMAL BIOLOGY 5 Units
Prerequisite: Biology 111
Lecture: 3 hours
Laboratory: 6 hours
A general zoology course with emphasis on animal diversity, taxonomy, anatomy, and physiology.
Field trips may be required.

139 FIELD BIOLOGY 1-2 Units
Prerequisite: A previous course in biology is desirable.
Lecture: 1-2 hours.
A field course in biology to be held in natural surroundings. The site will vary with the seasons. The natural history, ecology, and biology of the locale will be the subject of the course.
May be repeated for a maximum of four units.

140 INTRODUCTORY HUMAN ANATOMY 4 Units
Prerequisite: Biology 110 or consent of instructor.
Lecture: 2 hours
Laboratory: 6 hours
A study of the gross anatomy of the human body with emphasis on skeletal, muscular, and nervous systems. Individual systems studied for their form, function, and interrelationships with other systems. The cat is used for laboratory dissection.

151 THE TERRESTRIAL ENVIRONMENT 3 Units
Prerequisite: Any one of the following: Biology 110, Biology 111, Biology 121, Biology 125 or consent of instructor.
Lecture: 2 hours
Laboratory: 3 hours
(1) Regular Quarters: Field studies of terrestrial ecosystems with emphasis on techniques for gathering and analysis of physical biological data.
Field trips are required.

151 (continued)

(2) Summer Session Only: Summer field course which studies terrestrial ecosystems from the Red Fir belt to Alpine zone in Tuolumne County. Flora, fauna, and physical parameters in each ecosystem studied. A photographic, written, or oral presentation of materials studied and a backpack trip of six days are required. (Students must provide own camping gear and food.)
May be repeated one time.

155 THE AQUATIC ENVIRONMENT 3 Units
Prerequisite: Biology 110, Biology 111, or Earth Science 110 or consent of instructor.
Lecture: 1 hour
Laboratory: 6 hours
Field studies of aquatic ecosystems with emphasis on techniques for gathering and analysis of physical and biological data.
Field trips are required.

160a INTRODUCTION TO HUMAN PHYSIOLOGY 3 Units
Prerequisite: Biology 110 or Biology 111 and a high school or college Chemistry course, or consent of instructor.
Lecture: 2 hours
Laboratory: 3 hours
Introduction to physiology of cells, body fluids, the circulatory, muscular, excretory, and respiratory systems.

160b INTRODUCTION TO HUMAN PHYSIOLOGY 3 Units
Prerequisite: Biology 160a.
Lecture: 2 hours
Laboratory: 3 hours
A continuation of Biology 160a including the physiology of the digestive, nervous, endocrine, and reproductive systems.

165a MICROBIOLOGY 3 Units
Prerequisite: High School Chemistry or Chemistry 100.
Lecture: 2 hours
Laboratory: 3 hours
General characteristics of microbic life, conditions influencing bacterial growth, bacteria in disease and aseptic procedures.
Field trips may be required.

165b MICROBIOLOGY 3 Units
Prerequisite: Biology 165a.
Lecture: 2 hours
Laboratory: 3 hours
Continuation of Biology 165a.
Field trips may be required.

BUSINESS

Banking and Finance

110 PRINCIPLES OF BANK OPERATION 4 Units
Lecture: 4 hours
The importance of banking to American economic functions, banking operations, legal relationships between bank and depositors, the Federal Reserve System, banking and public service.

113 FINANCING BUSINESS ENTERPRISE 4 Units
Lecture: 4 hours
A survey of financial institutions; problems and solutions of providing capital for American business.

120 INSTALLMENT CREDIT 4 Units
Lecture: 4 hours
Principles and practice of installment lending, establishing credit, obtaining and checking information, loan servicing and collections, inventory financing, special loan programs, business development and advertising and public relations.

125 MONEY AND BANKING 4 Units
Lecture: 4 hours
An introduction to and evaluation of banks and banking systems, price movements, international payments, and monetary theory and policies.

130 ANALYZING FINANCIAL STATEMENTS 4 Units
Prerequisite: Bus. Ad. 60ab or Bus. Ad. 61 or Bus. Ad. 130a or equivalent work experience with consent of instructor.
Lecture: 4 hours
Tools and techniques for the evaluation of financial condition and operating performance of a modern business enterprise. Topics include financial statement analysis and accounting, financial statements and business funds flow and analysis of operations, long-term financial strength, and asset utilization.

Business Administration

See Page 27-28 for Certificate Requirements.

58 PEGBOARD PAYROLL SYSTEM 1 Unit
Lecture: 1 hour
A business simulation designed to give realistic experience in keeping payroll records using a pegboard system.

60a BOOKKEEPING 5 Units
Lecture: 5 hours
Double entry bookkeeping; general journal and general ledger, business forms, financial statements, and completion of the bookkeeping cycle for service and trade businesses; notes in credit transactions.

60b BOOKKEEPING 5 Units
Prerequisite: Business Administration 60a
Lecture: 5 hours
Special journals and controlling accounts with subsidiary ledgers; discounts on purchases and sales; promissory notes and interest; bank services and petty cash; payroll records; adjustments for prepaid, unearned, and accrued items, bad debts, and depreciation.

61 SMALL BUSINESS ACCOUNTING 5 Units
Lecture: 5 hours
Accounting procedures and analysis for most small businesses. Includes study of the accounting cycle, accounts receivable and bad debts, notes receivable and payable, merchandise inventory, depreciation, accruals and deferrals, the voucher system, payroll, financial statements, costs for decision-making, partnerships and corporations.

63 BUSINESS MATHEMATICS 4 Units
Lecture: 4 hours
Mathematical problems of buying, selling, discounts, interest, credit, insurance, commissions, payrolls, depreciation, taxes, and bank reconciliations.

65 THE METRIC SYSTEM 1 Unit
Lecture: 1 hour
The new language of the modernized metric system in areas of common, everyday application: volume, weight, linear, and cubic measures, temperature, and electricity.

101 PRINCIPLES OF BUSINESS 3 Units
Lecture: 3 hours
Business and its functions. Business organization; governmental institutions and controls; economics in business.

104 HUMAN RELATIONS IN BUSINESS 3 Units
Lecture: 3 hours
Influence of industrial development on employer and employee unions, management practices, methods of supervision, employer-employee relationships, mass production and the employee.

112 INDUSTRIAL RELATIONS 3 Units
Lecture: 3 hours
Introductory course in labor relations, covering collective bargaining agreements, grievance procedures, arbitration, unfair labor practices.

115a COMMERCIAL LAW 3 Units
Lecture: 3 hours
Historical development of common law; statutes of California. Federal and State court decisions; legal aspects of business; law of contracts, agency and employment.

115b COMMERCIAL LAW 3 Units
Lecture: 3 hours
Law of sales, negotiable instruments, personal property, real property, partnerships, corporations, insurance, suretyship.

120 PRINCIPLES OF MARKETING 5 Units
Lecture: 5 hours
Marketing principles, policies, and functions, price policies and controls, trade channels, merchandising, market research, advertising, and competitive practices.

123 SALES 3 Units
Lecture: 3 hours
Description of the fundamental principles and practices of sales. Critical look at the selling process.

125 ADVERTISING AND DISPLAY PROMOTION 3 Units
Lecture: 3 hours
Fundamental principles and practices of merchandising through advertising and display.

130a ACCOUNTING 4 Units
Lecture: 4 hours
Accounting principles and procedures, closing books, revenue and expense adjustments, merchandising operations, statement and ledger organization, receivables and payables, deferrals and accruals.

130b ACCOUNTING 4 Units
Prerequisite: Business Ad. 130a.
Lecture: 4 hours
Plant and intangible assets; systems and controls; payroll; concepts and principles; partnerships; corporate organization, operation, stockholders equity, earnings, and dividends; long term liabilities and investments.

130c ACCOUNTING 4 Units
Prerequisite: Business Ad. 130b.
Lecture: 4 hours
Departments and branches, process and job order cost accounting for manufacturing, budgets and standard costs, income tax, cost and revenue relationships, managerial reports and analysis, statement of changes in financial position, financial statement analysis.

140 PRINCIPLES OF MANAGEMENT 5 Units
Lecture: 5 hours
The functions of management, techniques of decision making and problem solving, and methods used by managers to achieve organizational goals, various theories of management, lines of authority, functions of departments, and the importance of policies, procedures, and controls.

145 RETAIL BUSINESS MANAGEMENT 4 Units
Lecture: 4 hours
The retailing world and its functions including organization, buying, merchandising, store management and operations, customer operations, financial control, and systematic problem solving techniques.

150 SMALL BUSINESS MANAGEMENT 3 Units
Lecture: 3 hours
Small business operation with proper balance between business functions of purchasing, production, sales and finance, and the management functions of planning, organizing, actuating, and controlling.

160 INTRODUCTION TO PUBLIC ADMINISTRATION 3 Units
Lecture: 3 hours
Fundamental principles and practices underlying the field of public administration in federal, state, and local government, career opportunities, and responsibilities.

163 PUBLIC PERSONNEL ADMINISTRATION 3 Units
Lecture: 3 hours
Development and administration of various public personnel systems including recruitment, selection and training programs, labor relations and public unions, testing and evaluation processes.

165 PUBLIC FINANCE ADMINISTRATION 3 Units
Lecture: 3 hours
Fundamental principles and practices underlying public fiscal policy including budget process, taxing and revenue systems, federal government financial assistance, fiscal legislation and regulations.

Office Occupations

See Pages 30-31 for Certificate Requirements.

50 PERSONAL TYPING 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Instruction for personal use, including learning keyboard by the touch system, practical application of typing skills to simple letter writing, manuscripts, and tabulation.

53 REVIEW TYPING 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Development of speed and accuracy; review of correspondence, tabulation, manuscripts, and composition at the typewriter.

56 TYPING SPEED AND ACCURACY BUILDING 1-2 Units
Prerequisite: Beginning typing skill
Laboratory: 3 to 6 hours
Speed building and accuracy on straight copy, rough draft, script, and statistical writing. Intensified drills, timed writings and remedial work.
May be repeated for a maximum of 4 units of credit.

58 PROPORTIONAL SPACE TYPING 1 Unit
Prerequisite: Office Occupations 103 or equivalent course
Laboratory: 3 hours
Introduction and practice on the proportional space typewriter, special keys, centering, statistical typing, line justification, manuscript and business letter typing.

60 REVIEW SHORTHAND 4 Units
Prerequisite: Typing rate 30 words per minute.
Lecture: 3 hours
Laboratory: 3 hours
Review of Gregg dictation theory; transcription skills.

65 BUSINESS ENGLISH 3 Units
Lecture: 3 hours
The mechanics of English as applied to the field of business, including skills of written communication, sentence structure, punctuation, spelling, and use of the dictionary.

68 BUSINESS CORRESPONDENCE 3 Units
Lecture: 3 hours
Effective business practices in the construction of sentences, paragraphs, and letters; the writing of effective business letters such as sales, applications, orders, requests, adjustments, refusals, credit and collection.

70 REPORT WRITING 3 Units
Lecture: 3 hours
Study and practice of the skills necessary to write well organized reports.

101 BEGINNING TYPING 4 Units
Lecture: 3 hours
Laboratory: 3 hours
Development of speed and accuracy, typing skills for vocational or personal use.

103 INTERMEDIATE TYPING 4 Units
Prerequisite: Office Occupations 101 or typing rate of 40 words per minute.
Lecture: 3 hours
Laboratory: 3 hours
Development of speed and accuracy for advanced correspondence, tabulation, manuscripts, outlines, and business forms.

104 ADVANCED TYPING 4 Units
Prerequisite: Office Occupations 103 or typing rate of 45 words per minute.
Lecture: 3 hours
Laboratory: 3 hours
Further development of speed and accuracy; study of business forms, complicated tabulated material, legal forms, typing for reproduction, and special problems in letter placement.

107 WORD PROCESSING: THE MEMORY TYPEWRITER 1 Unit
Prerequisite: Office Occupations 103, Office Occupations 132.
Laboratory: 3 hours
Development of skills in performing secretarial operations on the automated or memory typewriter.

108 WORD PROCESSING: ELECTRONIC TYPEWRITER 1 Unit
Prerequisite: Office Oc. 103, Office Oc. 132.
Laboratory: 3 hours
Instruction on the electronic typewriter including document and phrase storage, revisions, storage procedures, tabulation, and repetitive documents.

109 WORD PROCESSING: DISPLAY SYSTEM 3 Units
Prerequisite: Office Oc. 103, Office Oc. 132 or current employment applying advanced typing techniques.
Lecture: 1 hour
Laboratory: 6 hours
Use of the display word processing system which includes document production and storage, editing, retrieval, formatting, local and global search, entry and execution of variable data. Word processing concepts relating to information processing are introduced.

110a BEGINNING SHORTHAND 4 Units
Prerequisite: Typing rate of 30 words per minute.
Lecture: 3 hours
Laboratory: 3 hours
Complete theory of Gregg shorthand; foundation for dictation and transcription.

110b BEGINNING SHORTHAND 4 Units
Prerequisite: Office Oc. 110a.
Lecture: 3 hours
Laboratory: 3 hours
Continuation of Office Oc. 110a.

111a MACHINE SHORTHAND: I 4 Units
Prerequisite: Office Occupations 101 or typing rate of 30 words per minute.
Lecture: 3 hours
Laboratory: 3 hours
Introduction to the machine system of shorthand including instruction in theory, keyboard, reading notes, and the ability to take dictation at 60 words per minute.

111b MACHINE SHORTHAND: II 4 Units
Prerequisite: Office Occupations 111a and typing rate of 45 words per minute.
Lecture: 3 hours
Laboratory: 3 hours
Continuation of the machine system of shorthand including theory mastery, keyboard development, and the ability to take dictation at 60 to 90 words per minute.

111c MACHINE SHORTHAND: III 4 Units
Prerequisite: Office Occupations 111b and Office Occupations 103 (or equivalent typing skill).
Lecture: 3 hours
Laboratory: 3 hours
Development of machine shorthand speed and dictation skill. Speed building and accuracy on straight copy taking dictation at speeds up to 120 words per minute.

112a INTERMEDIATE SHORTHAND 4 Units
Prerequisite: Dictation rate 60 words per minute for 3 minutes and typing rate of 45 words per minute.
Lecture: 3 hours
Laboratory: 3 hours
Sustained dictation speed on new material; accuracy on transcription; spelling, punctuation, and office-style dictation.

112b INTERMEDIATE SHORTHAND 4 Units
Prerequisite: Office Oc. 112a.
Lecture: 3 hours
Laboratory: 3 hours
Continuation of Office Oc. 112a.

113a ADVANCED SHORTHAND 4 Units
Prerequisite: Dictation rate of 80 words per minute for 3 minutes and typing rate of 45 words per minute.
Lecture: 3 hours
Laboratory: 3 hours
Development of speed and accuracy; correlation of grammar, spelling, punctuation, and typing.

113b ADVANCED SHORTHAND 4 Units
Prerequisite: Office Oc. 113a.
Lecture: 3 hours
Laboratory: 3 hours
Continuation of Office Oc. 113a.

130 FILING SYSTEMS AND RECORDS MANAGEMENT 3 Units
Lecture: 3 hours
Study of alphabetic, numeric, geographic, and subject filing systems; survey of records management procedures.

132 MACHINE TRANSCRIPTION 3 Units
Prerequisite: Office Occupations 103 or equivalent experience.
Lecture: 2 hours
Laboratory: 3 hours
Study and use of various transcribing machines.

135 TEN KEY ADDING MACHINES 1 Unit
Laboratory: 3 hours
Practical course instruction in the operation of the 10-key adding machine.

136 ELECTRONIC PRINTING CALCULATORS 1 Unit
Laboratory: 3 hours
Practical instruction in the operation of the electronic printing calculator, emphasizing business applications.

138 OFFICE PROCEDURES 4 Units
Prerequisite: Bus. Ad. 60a, Off. Oc. 103, or consent of instructor.
Lecture: 3 hours
Laboratory: 3 hours
Study of the office duties of receptionist, clerical worker, stenographer, and secretary. Practical application of business skills including telephone techniques, mailing, banking, communications and copying processes. Personality development with emphasis on efficient work habits and proper office attitudes.

140a MEDICAL TERMINOLOGY 3 Units
Lecture: 3 hour
An introduction to basic medical word structure, including word roots, prefixes and suffixes used in medical vocabulary by allied health field members.

140b MEDICAL TERMINOLOGY 3 Units
Prerequisite: Office Oc. 140a.
Lecture: 3 hours
A continuation of the study of medical terminology including the specialized vocabulary for the various anatomical systems used by allied health field members.

142a MEDICAL TRANSCRIPTION 3 Units
Prerequisite: Office Oc. 103 or equivalent; Office Oc. 132, Office Oc. 140a or consent of instructor.
Lecture: 1 hour
Laboratory: 6 hours
Development of advanced skill for medical transcription in physician's offices, clinics, hospitals and related allied health field positions. Students will type discharge summaries and surgical reports, using medical terminology and transcription skills.

142b MEDICAL TRANSCRIPTION 3 Units
Prerequisite: Office Oc. 142a
Lecture: 1 hour
Laboratory: 6 hours
Continuation of Office Oc. 142a.

154 LEGAL TRANSCRIPTION/ TERMINOLOGY 3 Units
Prerequisite: Off. Oc. 103, Off. Oc. 132
Lecture: 1 hour
Laboratory: 6 hours
Transcription of legal terminology from cassette tapes. Typing of legal documents and correspondence.

157 LEGAL OFFICE PROCEDURES 3 Units
Prerequisite: Off. Oc. 103, Off. Oc. 132, Off. Oc. 154.
Lecture: 2 hours
Laboratory: 3 hours
A course designed to train the student for employment as a secretary in a law office. Specialized training in preparation of legal papers and court documents, assistance in legal research, bookkeeping and filing in a law office.

160 OFFICE OCCUPATIONS 1-5 Units
Prerequisite: Consent of instructor.
Laboratory: 3-15 hours
Supervised office work experience.

Real Estate

See Page 31 for Certificate Requirements.

101 PRINCIPLES OF REAL ESTATE 3 Units
Lecture: 3 hours
Real and personal acquisition, ownership, estates, joint tenancies, partnerships, sales, contracts, deeds, taxes, and financing real estate.

105 REAL ESTATE PRACTICE 4 Units
Prerequisite: Real Estate 101 or Real Estate License.
Lecture: 4 hours
General real estate operations and the industry.

110 LEGAL ASPECTS OF REAL ESTATE 4 Units
Prerequisite: Real Estate 101.
Lecture: 4 hours
California real estate law; titles, encumbrances, recording, real property, acquisition and transfer; Penal Code.

115 REAL ESTATE FINANCE 4 Units
Prerequisite: Real Estate 101.
Lecture: 4 hours
Residential and commercial financing; lending institutions, money markets and interest rates.

120 REAL ESTATE APPRAISAL 4 Units
Prerequisite: Real Estate 105 and 110.
Lecture: 4 hours
Appraisal of residential and commercial properties; methods and techniques for determining market value; the appraisal report.

125 REAL ESTATE ECONOMICS 4 Units
Prerequisite: Real Estate 101.
Lecture: 4 hours
Economic factors influencing real estate; real estate market and business cycles; commercial, industrial, and residential properties; urban development and renewal; regulation of land uses.

Supervisory Training

110 ELEMENTS OF SUPERVISION 3 Units
Lecture: 3 hours
Supervisor's role in business and industry; organizational policies, management directives, personnel problems and practices; leadership techniques.

115 MIDDLE MANAGEMENT 3 Units
Prerequisite: Supervisory Training 110.
Lecture: 3 hours
The basis for management; planning, organization, staffing and controlling management functions.

CHEMISTRY

60 CONSUMER CHEMISTRY: FOOD 1 Unit
Lecture: 1 hour
A study of the chemicals found in our food; where they come from, what they are, and what happens to them when they are consumed.

71 CHEMICAL CALCULATIONS 1 Unit
Prerequisite: Mathematics 55 or equivalent.
Lecture: 1 hour
A basic math course designed to prepare the student for solving problems in Chemistry 100 and Chemistry 101abc.

100 FUNDAMENTALS OF CHEMISTRY 4 Units
Prerequisite: Mathematics 55 or one year of high school algebra.
Lecture: 3 hours
Laboratory: 3 hours
Fundamental theories and principles of inorganic chemistry: atomic and molecular structure, chemical and physical changes, solutions, colloids, gases, nonmetals, metals, and nuclear chemistry.

101a GENERAL CHEMISTRY 5 Units
Prerequisite: One year of high school chemistry with a "B" average and Math. 103 or equivalent; or Chemistry 100 and Math. 103; or consent of instructor.
Lecture: 3 hours
Laboratory: 6 hours
Survey of atoms, nuclear chemistry, molecules, ions, chemical bonding, gases, liquids and solids.

101b GENERAL CHEMISTRY 5 Units
Prerequisite: Chem. 101a or equivalent or consent of instructor.
Lecture: 3 hours
Laboratory: 6 hours
Survey of solutions, colloids, acids, bases, salts, kinetics, equilibria, thermodynamics, electrochemistry, and nonmetals.

101c GENERAL CHEMISTRY 5 Units
Prerequisite: Chemistry 101b or equivalent.
Lecture: 3 hours
Laboratory: 6 hours
Survey of the atmosphere, nonmetals, metals, organic compounds, coordination compounds and qualitative analysis.

108a CHEMISTRY OF CARBON COMPOUNDS 4 Units
Prerequisite: Chemistry 101a with a grade of "C" or better or consent of instructor.
Lecture: 3 hours
Laboratory: 3 hours
A study of the nomenclature, structure, synthesis and characteristic reactions of organic compounds with emphasis on chemicals of interest to students in the biological sciences.

108b CHEMISTRY OF CARBON COMPOUNDS 4 Units
Prerequisite: Chemistry 108a or consent of instructor.
Lecture: 3 hours
Laboratory: 3 hours
A study of the organic compounds found in living organisms.

*COMPUTER SCIENCE

See Page 28 for Certificate Requirements.

105 COMPUTERS AND SOCIETY 4 Units
Lecture: 4 hours
Computers and their relation to modern society. Includes history of computing, use of computers in various occupational fields, effects of computers upon the society in which we live.

110 COMPUTER LOGIC 4 Units
Lecture: 4 hours
A detailed survey of the use of truth functional logic in digital computers. The emphasis of the course will be on the logical functions of the connectives, "and," "or," "if...then," "if and only if" and their combinations in determining "truth" and "falsehood" in statements and their effect on computer logic, control and data manipulation. The course also includes an introduction to the mechanics of a computer.

120a COMPUTER PROGRAMMING: Introductory 3 Units
Prerequisite: Two years high school algebra or consent of instructor.
Lecture: 2 hours
Laboratory: 3 hours
Introduction to computer programming using the BASIC language. Includes systems commands, input/output statements, unconditional and conditional branching, loops, variables and operators, and singly subscripted arrays.

120b COMPUTER PROGRAMMING: Intermediate 3 Units
Prerequisite: Computer Science 120a.
Lecture: 2 hours
Laboratory: 3 hours
Continuation of Computer Science 120a. Includes doubly subscripted variables, logical operators, subroutines, computed branching and structured programming.

120c COMPUTER PROGRAMMING: Advanced 3 Units
Prerequisite: Computer Science 120b.
Lecture: 2 hours
Laboratory: 3 hours
Advanced techniques of programming in BASIC language, including disk operation and file management, optimization of core usage, algorithm efficiency, and advanced I.O. commands.

125 COMPUTER PROGRAMMING: PASCAL 3 Units
Prerequisite: Computer Science 120b.
Lecture: 2 hours
Laboratory: 3 hours
Structured programming in the Pascal language. Emphasis on writing, executing, and modifying programs that conform to industry standards. Topics will include structured software development and maintenance utilizing Pascal language techniques for logical operations, branching, and file management.

140 MACHINE LANGUAGE PROGRAMMING 3 Units
Prerequisite: Computer Science 120c.
Lecture: 2 hours
Laboratory: 3 hours
Techniques of writing machine language instructions utilizing the system monitor and the BASIC

140 (continued)
language to enter machine language programs or sub-routines and executing them directly through either the system monitor or the BASIC processor.

145 COMPUTER PROGRAMMING: APPLICATIONS 3 Units
Prerequisite: Two years of high school algebra or equivalent or consent of instructor.
Lecture: 2 hours
Laboratory: 3 hours
Various topics in computer programming including string variables and functions, array manipulation, files and record I/O, lists (sequential, linked, circular), computer graphics. Course individualized to meet specific individual needs.

150 COMPUTERS AND CONTROL 5 Units
Prerequisite: Computer Science 120a or consent of instructor.
Lecture: 3 hours
Laboratory: 6 hours
Introduction to the use of computers to control and monitor scientific equipment and the outside environment. Includes techniques for the use of temperature sensing, optical sensing, sound sensing, and motion sensing probes, analog/digital and digital/analog data acquisition and control techniques, the proper use of electronic test equipment, and bit programming of computers I/O ports and handshake conventions.

**Program pending state approval.*

CONSTRUCTION

Construction Technology

51 HOME MAINTENANCE AND REPAIRS 3 Units
Lecture: 3 hours
Provides essential technical information in cooling, heating, plumbing, electricity, carpentry, concrete, and painting to establish preventative maintenance routine and to make necessary repairs.

101 INTRODUCTION TO CARPENTRY 3 Units
Lecture: 3 hours
Theory and framing non-commercial buildings for private use. Construction of small non-structural projects. Local code ordinances governing such construction.

111 INTRODUCTION TO RESIDENTIAL WIRING 3 Units
Lecture: 3 hours
Electrical theory, blueprint reading, service, circuits, conduit, and flexible wiring in residential construction. Remodeling and large appliance installation procedures. Applicable local code ordinances.

121 INTRODUCTION TO RESIDENTIAL PLUMBING 3 Units
Lecture: 3 hours
Types of pipes and common fittings. Cold and hot water supply, soil pipe and drainage systems. Fixture mounting. Natural gas plumbing. Applicable local code ordinances.

DRAFTING

110a BASIC DRAFTING 3 Units
Lecture: 2 hours
Laboratory: 3 hours
The use of tools and materials, knowledge of lettering; geometry; freehand sketching, orthographic projection, sectioning and basic dimensioning.

110b BASIC DRAFTING 3 Units
Prerequisite: Drafting 110a.
Lecture: 2 hours
Laboratory: 3 hours
Orthographic projecting, auxiliary views, dimensioning, tolerancing, threads, fasteners and springs.

110c BASIC DRAFTING 3 Units
Prerequisite: Drafting 110b.
Lecture: 2 hours
Laboratory: 3 hours
Complete drawings (tracing and prints), applied design, shop process and fabrication.

115a ADVANCED DRAFTING 3 Units
Prerequisite: Drafting 110c.
Lecture: 2 hours
Laboratory: 3 hours
Review of basic drafting, lettering devices, and special templates. Intersections and developments in sheet metal, welding representations, and design of cams and gears.

115b ADVANCED DRAFTING 3 Units
Prerequisite: Drafting 115a.
Lecture: 2 hours
Laboratory: 3 hours
Map drafting, electrical and electronic, aerospace, and technical illustration.

115c ADVANCED DRAFTING 2 Units
Prerequisite: Drafting 115b.
Laboratory: 6 hours
Independent study in a concentrated area of drafting. Student's choice must involve current industrial practices.

123 BLUEPRINT READING 2 Units
Lecture: 2 hours
Residential and commercial print reading, printing processes applied to drafting and trade competency testing.

130a ARCHITECTURAL DRAFTING 3 Units
Prerequisite: Drafting 110c.
Lecture: 3 hours
Area planning, basic plans, locations, sections, foundations, framing, schedules and specification.

130b ARCHITECTURAL DRAFTING 3 Units
Prerequisite: Drafting 130a.
Lecture: 3 hours
Technical architectural plans, creative architectural drafting and design.

130c ARCHITECTURAL DRAFTING 3 Units
Prerequisite: Drafting 130b.
Lecture: 3 hours
Codes, related plans, modulars, design, theory, checking, and costs.

DRAMA

102 ORAL EXPRESSION & INTERPRETATION 5 Units
Lecture: 4 hours
Activity: 2 hours
Techniques in reading literature aloud; understanding and interpreting prose, poetry, and dramatic selections; oral presentation, and expression of thought.

122 INTRODUCTION TO READERS' THEATRE 4 Units
Lecture: 3 hours
Laboratory: 3 hours
Theory and practice of Readers' Theatre as an art form. Directed experiences in selecting, cutting, arranging and performing the Readers' Theatre script.

133a DRAMATIC LITERATURE: Greek to Renaissance 4 Units
Lecture: 4 hours
An investigation into the history and development of the theatre, its significant figures and selected plays from the Greeks through Renaissance, 500 B.C. - 1550 A.D.

133b DRAMATIC LITERATURE: Shakespeare to 19th Century 4 Units
Lecture: 4 hours
A study in-depth of the historical and literary development of the theatre from Shakespeare through the 19th Century with focus upon selected plays, significant theatrical figures, the physical theatre and the social and philosophical contexts.

133c DRAMATIC LITERATURE Contemporary 4 Units
Lecture: 4 hours
An in-depth study of historical and literary development of the theatre in the 20th century with focus upon selected plays, significant theatrical figures, the physical theatre and the social and philosophical contexts.

136 PLAYWRITING 5 Units
Lecture: 5 hours
Theory and practice of writing for the theatre; analysis of relevant literature and productions; investigation of dramatic methods appropriate to the playwright.
May be repeated one time.

143a ACTING: Fundamentals 4 Units
Lecture: 3 hours
Laboratory: 3 hours
Investigation of techniques and theories prerequisite to theatrical performances; psychological, philosophical, and practical preparation for the actor's art.

143b ACTING: Acting-Directing 4 Units
Prerequisite: Drama 143a or consent of instructor.
Lecture: 3 hours
Laboratory: 3 hours
A workshop in techniques of both acting and directing with specific focus upon the production of short scenes from a variety of theatrical genre.

143c ACTING: Advanced Projects 1-5 Units
Prerequisite: Drama 143b or consent of instructor.
Laboratory: 3 hours equals 1 unit of credit.
Lecture: 3 hours, Laboratory: 3 hours equals 4 units of credit.
Lecture: 3 hours, Laboratory: 6 hours equals 5 units of credit.
Advanced workshop activity for production of one-act plays, segments of longer plays or full length plays whose technical requirements are minimal; intensive workshop concentration designed for public performances in the areas of improvisation or mime.
May be repeated without limit.

144 Mime 4 Units
Lecture: 3 hours
Laboratory: 3 hours
Techniques of mime, pantomime, silent acting, and "the clown," concentration on classical mime illusions, elements of mime conditioning, movement, coordination, juggling exercises, and their incorporation into theatrical presentations.

145 IMPROVISATION 4 Units
Lecture: 3 hours
Laboratory: 3 hours
Intensive study of the basic techniques of improvisational acting with specific concentration on improvisational theatre production formats as well as development of group inspired and created scenarios and one-act plays.
May be repeated one time.

147 AUDITIONS 3 Units
Lecture: 2 hours
Activity: 2 hours
Theory, techniques, and practice in auditioning for performance, development of audition materials, practical audition experience.

152 MEDIA TECHNOLOGY 5 Units
Lecture: 5 hours
A technical survey of television production, audio production, theatre lighting and related elec-

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tronics; designed to prepare student technicians for practical application.

155 SURVEY OF TECHNICAL THEATRE 3 Units
Lecture: 3 hours
An overview of the basic techniques, materials and concepts of design and construction related to physical theatre production. Survey of costume, make-up, stagecraft, properties, lighting and sound.

156 TECHNICAL THEATRE LABORATORY 1-3 Units
Prerequisite: Drama 155 or consent of instructor.
Laboratory: 3-9 hours
Applied laboratory experience in all phases of technical theatre related to mounting a production; practical projects in design and construction involving costumes, stage settings, stage properties, lighting, sound, and make-up for a specific theatre production.

157 THEATRE TOURING COMPANY 5 Units
Prerequisite: Audition.
Lecture: 2 hours
Laboratory: 9 hours
A production company offering a variety of theatrical expressions ranging from a full length play to improvisations, mime and puppetry for touring performances to schools and community organizations in the Mother Lode area.
May be repeated without limit.

158 THEATRE PRODUCTION 5 Units
Lecture: 1 hour
Laboratory: 12 hours
Directed activities in acting and technical theatre with participation in public performances and related production activities.
May be repeated without limit.

160 CHILDREN'S THEATRE-CREATIVE DRAMATICS 5 Units
Lecture: 5 hours
An investigation into the literature and techniques of children's theatre, including appropriate plays, theatre games, pantomime, improvisation, storytelling, play production, children's puppetry, creative crafts, and simplified technical production skills; methods and concepts of creative dramatics in communication, problem-solving, and presentational activities for and with children; supervised practical field experience involving local elementary school children.

161 APPLIED DRAMA WORKSHOP 1 Unit
Lecture: 1 hour
A practical workshop in theatre arts appropriate to the elementary school; varying emphases on techniques in puppetry, mime, improvisation, theatre

161 (continued)

games, creative dramatics, and simplified production for the elementary classroom.

162 APPLIED DRAMA LABORATORY 1 Unit
Prerequisite: Drama 160 or Drama 161 or consent of instructor.
Laboratory: 3 hours
Supervised drama activities and projects conducted in the elementary school.
May be repeated two times.

163a PUPPETRY 4 Units
Lecture: 3 hours
Laboratory: 3 hours
The design and construction of puppets and puppet theatres; techniques in manipulation and puppet play production; the survey and adaptation of appropriate literature for the puppet stage; rehearsal and performance experience in creative puppetry.

163b PUPPETRY 4 Units
Prerequisite: Drama 163a or consent of instructor.
Lecture: 3 hours
Laboratory: 3 hours
Rehearsal and performance of puppet theatre productions; advanced techniques in design, construction, manipulations, direction and performance of puppet theatre; survey and adaptation of literature appropriate to the puppet stage.

EARTH SCIENCE

59 GEOLOGY OF THE MOTHER LODE 3 Units
Prerequisite: High School Earth Science course or equivalent or consent of instructor.
Lecture: 3 hours
A synoptic view of the geologic history of the Sierra Nevada.
Field trips may be required.

63 MOTHER LODE SKIES .5 Units
Lecture: .5 hours
Viewing and understanding the night sky in the latitude of the Mother Lode identifying constellations, determining sunrise and sunset; using star charts; observing celestial objects with telescopes.
May be repeated three times.

101 SURVEY OF GEOLOGY 2 Units
Lecture: 1.5 hours
Laboratory: 1.5 hours
A brief survey of the principles and processes of geology, including an introduction to volcanoes, earthquakes, glaciers, the motion of continental plates, and the methods of identifying rocks.

110 INTRODUCTION TO PHYSICAL GEOLOGY 1 Unit
Lecture: 1 hour
The role of energy and matter in the geologic process, rocks and minerals, the contents of the

110 (continued)

universe, the earth as an astronomical body, and the chemical principles needed for the study of rocks and minerals.

Completion of the sequence Earth Science 111, 112, 113 is equivalent to the course "Physical Geology" and meets the Physical Science General Education Breadth Requirement.

111 ROCKS AND MINERALS 2 Units
Prerequisite: Previous or concurrent enrollment in E.S. 110 recommended.
Lecture: 1 hour
Laboratory: 3 hours
Composition, structure, formation, and identification of crystals and minerals as well as igneous, sedimentary and metamorphic rocks.

112 EROSION — WATER, WIND AND ICE 1 Unit
Lecture: 1 hour
The shaping of land by water, wind and ice — erosional and depositional features.

113 MOUNTAINS AND EARTHQUAKES 1 Unit
Lecture: 1 hour
The earth's interior, types of mountains, earthquakes, introduction to global tectonics.

125 GEOLOGY OF THE NATIONAL PARKS 4 Units
Lecture: 4 hours
Interpretation of the geologic features of our national parks and monuments with an introduction to the geologic processes responsible for their formation. Students may choose a particular park for their in-depth study.
Field trips may be required.

133 GLOBAL TECTONIC GEOLOGY 4 Units
Lecture: 4 hours
An introduction to the new global geology and how it has revolutionized man's understanding of the way the earth works. For all who wish to learn about the earth's wandering continents and spreading sea floors; what causes rising mountain ranges, volcanoes, and earthquakes.

139 FIELD GEOLOGY 1-3 Units
Prerequisite: A previous course in Earth Science is desirable.
Lecture: .5-1.5 hours
Laboratory: 1.5-4.5 hours
A field study of selected geologic features and related Earth Science topics. A one to seven day field trip will be taken with pre and post-classroom sessions.
May be repeated for a maximum of 6 units of credit.

141 SURVEY OF ASTRONOMY 2 Units
Lecture: 1.5 hours
Laboratory: 1.5 hours
A brief survey of the principles of astronomy with emphasis on selected astronomical methods.

142 DESCRIPTIVE ASTRONOMY 3 Units
Lecture: 3 hours
A non-mathematical survey course in astronomy for non-science majors. Topics include history of astronomy, telescopes, solar system, stars, galaxies, origin of universe, and extra-terrestrial life.

144 GENERAL ASTRONOMY 4 Units
Prerequisite: A high school science and Mathematics 55 or consent of instructor.
Lecture: 3 hours
Laboratory: 3 hours
History of astronomy, modern astronomy, tools of astronomy, the solar system and its relationship to the galaxies, properties and evolution of stars.
Field trips may be required.

149 OBSERVATIONAL ASTRONOMY 2 Units
Prerequisite: Previous or concurrent enrollment in Earth Science 144 or consent of instructor.
Lecture: 2 hours
Development of observatory skills such as setting up and using telescopes; learning astrophotographic procedures; determining sunrise, sunset and sidereal time; and learning constellations.
Field trips may be required.

150 SPACE SCIENCE 4 Units
Lecture: 4 hours
History and development of space technology. Basic understanding of the problems of man in space.

155 INTELLIGENT EXTRATERRESTRIAL LIFE 4 Units
Lecture: 4 hours
A scientific and factual analysis of the possibility of intelligent life in outer space and the possibility of finding such life in time and space.

161 SURVEY OF METEOROLOGY 2 Units
Lecture: 1.5 hours
Laboratory: 1.5 hours
A brief survey of the principles of meteorology and their effect on modern society.

171 SURVEY OF OCEANOGRAPHY 2 Units
Lecture: 1.5 hours
Laboratory: 1.5 hours
A brief survey of the principles of oceanography and their effect on modern society.

Note: Completion of any two of the courses Earth Science 101, 141, 161, and 171 or all three of the courses Earth Science 111, 112, and 113 will fulfill General Education Breadth Requirements of a laboratory science.

ECONOMICS

55 UNDERSTANDING THE AMERICAN ECONOMY 3 Units
Lecture: 3 hours
Introduction to macro-economic principles with

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an emphasis on U.S. economic policies and institutions. Topics are gross national product, recession, inflation, fiscal policy, money and the Federal Reserve System, monetary policy, wage and price controls, balance of payment policies.

101a PRINCIPLES OF ECONOMICS 5 Units
Lecture: 5 hours
Macro-economics. Introduction to the U.S. economy, capitalism, and socialism. National income and employment analysis, economic fluctuations, monetary and fiscal policy.

101b PRINCIPLES OF ECONOMICS 5 Units
Lecture: 5 hours
Micro-economics. The corporation, analysis of costs, theory of production, pricing factor inputs including wages, rent, and industry.

105 TOPICS IN ECONOMICS 3 Units
Lecture: 3 hours
Topics of current interest to economics such as international economics and imperialism, pollution, and environment economics, developing countries, land use, and poverty problems.

107 CONSUMER ECONOMICS 3 Units
Lecture: 3 hours
Values and attitudes which result in "conspicuous consumption" habits. Emphasis will be placed on family financial planning, buying, borrowing, investing, and investment protection.

ENGLISH

51 COLLEGE COMPOSITION 4 Units
Lecture: 4 hours
or
Lecture: 3 hours
Laboratory: 3 hours
Training in basic composition skills, reading, interpretation, and discussion of college-level materials. Basic mechanics, sentence structure, paragraph development, essay and report organization.

75 WRITING LABORATORY .5-1 Units
Laboratory: 1.5-3 hours
Individualized instruction in the basic fundamentals of writing.
May be repeated for a maximum of 2 units.

101a READING AND COMPOSITION: Beginning 5 Units
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours
Development of reading and composition skills with emphases on applying techniques of logic in interpreting and writing the expository essay and reading and interpretation of the short story.

101b READING AND COMPOSITION: Advanced 5 Units
Prerequisite: English 101a.
Lecture: 5 hours
Further development of reading and composition skills with an emphasis on reading and interpreting one novel with secondary sources, poetry, and drama, with the composition of a longer, documented paper.

110 CREATIVE WRITING 5 Units
Prerequisite: English 101a, English 51, or consent of instructor.
Lecture: 5 hours
Instruction and practice in writing poetry, fiction, and drama. Analysis of contemporary works with respect to literary techniques.
May be repeated one time.

111 FILM APPRECIATION 4 Units
Lecture: 4 hours
Development of sensitivity and critical judgment in audience response to film.
Field trips may be required.

117a LITERATURE OF THE UNITED STATES 4 Units
Prerequisite: English 51 or English 101a.
Lecture: 4 hours
A study of the literature of the United States from the beginning of the English colonization to the work of Hawthorne, Poe, and Melville. Reading, analysis, and discussion of the major literary trends and authors of the time.

117b LITERATURE OF THE UNITED STATES 4 Units
Prerequisite: English 51 or English 101a.
Lecture: 4 hours
A study of the literature of the United States from the Transcendentialists until the beginning of the 20th Century. Writers to be studied include Emerson, Thoreau, Whitman, Dickinson, Longfellow, Twain, Bret Harte, Steven Crane.

117c LITERATURE OF THE UNITED STATES 4 Units
Prerequisite: English 51 or English 101a.
Lecture: 4 hours
A study of the literature of the United States from 1900 to the present. Focus will be upon reading poetry and fiction by authors whose works exemplify contemporary literary trends.

146a SURVEY OF ENGLISH LITERATURE 4 Units
Prerequisite: English 51 or English 101a or consent of instructor.
Lecture: 4 hours
English literature from the Anglo-Saxons through the 18th century.

146b SURVEY OF ENGLISH LITERATURE 4 Units
Prerequisite: English 51 or English 101a or consent of instructor.
Lecture: 4 hours
English literature of the 19th century.

146c SURVEY OF ENGLISH LITERATURE 4 Units
Prerequisite: English 51 or English 101a or consent of instructor.
Lecture: 4 hours
English literature of the 20th century.

149 CALIFORNIA LITERATURE 5 Units
Prerequisite: English 51 or English 101a or consent of instructor.
Lecture: 5 hours
A chronological survey of California literature in the 19th and 20th centuries with emphasis on selected works of major American authors living and writing in California.

150 INTRODUCTION TO SHAKESPEARE 4 Units
Prerequisite: English 101a.
Lecture: 4 hours
An introduction to the representative works by Shakespeare including the characteristics of the different genres — comedy, history, and tragedy, and a study of a number of sonnets. In addition, students will study the literary, social, and historical backgrounds of Shakespeare's time as they affect the meaning of the works studied.

FIRE TECHNOLOGY
See Page 28 for Certificate Requirements.

55a VOLUNTEER FIREFIGHTER TRAINING 2 Units
Lecture: 2 hours
Laboratory: 1 hour
Basic concepts, techniques, skills and theories for volunteer firefighters.

55b VOLUNTEER FIREFIGHTER TRAINING 2 Units
Prerequisite: Fire Science 55a.
Lecture: 2 hours
Laboratory: 1 hour
Continuation of Fire Technology 55a.

61 ORGANIZATION AND FIRE CONTROL 3 Units
Lecture: 3 hours
Basic concepts in fire service organization and theories of fire control, including the laws and regulations affecting the fire service, fire service personnel and functions, professional fire service organizations, principles of fire behavior and the basic considerations in fire strategy and tactics.

62 EQUIPMENT OPERATION 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Manipulative and technical training in the identification and operation of fire service tools and equipment. The course also includes basic considerations of building construction and the tying and employment of fire service knots and hitches.

63 EXTINGUISHERS AND PROTECTIVE EQUIPMENT 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Manipulative and technical training in the identification, actuation, and employment of portable fire service extinguishers of all types; donning and testing of protective breathing apparatus and clothing; operation of building protective systems, elevators, and fire escape ladders and stairs; employment of life lines, life belts, life guns, and life nets.

64 HOSE, NOZZLES AND FITTINGS 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Manipulative and technical training in basic hose evolutions and recognition of fire service equipment used in hose evolution, including the operation of hydrants. Determining range and reaction of fire streams; identifying the characteristics of good fire streams; and loading hose on apparatus.

65 HOSE EVOLUTIONS 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Manipulative and technical training in hose evolutions, including the laying of multiple lines of hose; extending and reducing lines of hose; joining and wyeing lines of hose; connecting hose lines to auxiliary appliances; operating master stream appliances; laying and operating hose lines above and below street level.

66 FIRE SERVICE LADDERS 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Manipulative and technical training in fire service ladder evolutions, including removing, carrying, raising, and lowering of ladders; climbing, locking-in on, working on and footing of ladders; employing ladders as improvised equipment in foreground situations.

67 SALVAGE AND OVERHAUL PROCEDURES 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Manipulative and technical training in basic salvage and overhaul techniques, including salvage cover operations, protection of property, removal of water, overhaul and fire investigation.

101 INTRODUCTION TO FIRE TECHNOLOGY 3 Units
Lecture: 3 hours
An introduction to fire protection; career opportunities in fire protection and related fields; history of fire protection; fire loss analysis; public, quasi-public and private fire protection services; specified fire protection functions; basic fire chemistry and physics. Designed to give the learner an overview of fire technology, the fire service and the fire protection field as career potentials.

102 FUNDAMENTALS OF PERSONAL FIRE SAFETY AND EMERGENCY ACTION 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Designed to provide basic skills in assessing fire dangers, handling common fire situations in the home and/or industry, basic CPR and Standard First Aid.

103 FUNDAMENTALS OF FIRE PROTECTION 3 Units
Lecture: 3 hours
Theory and fundamentals of fire protection, including fire protection laws, water systems and public fire protection systems; fire protection in buildings and open areas.

104 FUNDAMENTALS OF FIRE BEHAVIOR AND CONTROL 3 Units
Lecture: 3 hours
Theory and fundamentals of how fires start, spread and are controlled. An in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents and fire control techniques. Designed to give the learner a comprehensive exposure to basic fundamentals of fire behavior and control in preparation for more advanced study in the field of fire protection.

105 FUNDAMENTALS OF FIRE PREVENTION 4 Units
Lecture: 4 hours
Organization and function of fire prevention, inspections, surveying and mapping procedures, recognition of fire and life hazards, engineering a solution of a fire hazard, enforcing the solution of a fire hazard, public education aspects of fire prevention.

108 FIRE FIGHTING STRATEGY AND TACTICS 3 Units
Prerequisite: Fire Technology 101.
Lecture: 3 hours
Fire chemistry; equipment and manpower; fire fighting tactics and strategy; pre-planning fire problems.

110 RURAL FIRE COMPANY OPERATIONS 2 Units
Lecture: 2 hours
Emphasis on utilization of resources at maximum potential where conditions peculiar to small and remote fire service operations exist. Includes training, pre-planning and incident control in the rural setting.

114 FIRE APPARATUS AND EQUIPMENT 3 Units
Prerequisite: Fire Technology 101.
Lecture: 2 hours
Laboratory: 3 hours
Driving laws and techniques. Construction and operation of pumping engines, tank trucks, and trailers.

115 PUBLIC FIRE EDUCATION 4 Units
Lecture: 3 hours
Laboratory: 3 hours
Concepts and processes in designing, implementing, and evaluating fire education programs. Includes specific instruction in establishing programs through the media, use of appropriate audio/visual aids and use and selection of household safety appliances and equipment.

117 WILDLAND FIRE CONTROL 3 Units
Lecture: 3 hours
Factors affecting wildland fire prevention, fire behavior, and control techniques.

120 HEAVY EQUIPMENT IN FIRE CONTROL 3 Units
Lecture: 3 hours
Theory of heavy equipment used by a coordinated fire control team in fighting range fires.

123 FIRE HYDRAULICS 3 Units
Prerequisite: Mathematics 55 or consent of instructor.
Lecture: 3 hours
Review of basic mathematics, hydraulic laws and formulas as applied to the fire service; application of formulas and mental calculation to hydraulic problems; water supply problems; underwriters' requirements for pumps.

125 FIRE EQUIPMENT REPAIR AND MAINTENANCE 3 Units
Prerequisite: Fire Technology 61 through 67 or equivalent.
Lecture: 2 hours
Laboratory: 3 hours
Repair of commonly used fire service equipment, including hand tools, small and auxiliary gas or electric powered tools, hydraulic mechanisms and personnel safety devices. Includes preventive maintenance, inspection procedures and measuring tolerances of calibrated equipment and devices.

127 FIRE INVESTIGATION 3 Units
Lecture: 3 hours
Determining causes and types of fires; possible evidence at the scene; interviewing witnesses and suspects; arrest, detention, and court procedures; and giving court testimony.
(Students may not receive credit for both Fire Science 127 and Law Enforcement 140ab.)

129 HAZARDOUS MATERIALS INCIDENT CONTROL 3 Units
Prerequisite: Fire Technology 104 and Fire Technology 130 or equivalent.
Lecture: 3 hours
Hazardous materials storage, handling laws, standards and emergency practices with emphasis on firefighting and incident control at the company officer level.

130 FIRE PROTECTION EQUIPMENT AND SYSTEMS 3 Units
Prerequisite: Fire Technology 101.
Lecture: 3 hours
Portable fire extinguishing equipment, sprinkler systems, protection systems for special hazards, fire alarm and detection systems.

145 FIRE VEHICLE MAINTENANCE 3 Units
Prerequisite: Fire Technology 101 or consent of instructor.
Lecture: 3 hours
Fundamentals of all vehicle structure. Basic construction of the vehicles, including the main powering systems (fire pumps excluded) and techniques of maintenance.

FOREIGN LANGUAGE

French

50 CONVERSATIONAL FRENCH 1 Unit
Laboratory: 3 hours
Practice in vocabulary, idioms and grammatic usage.
May be repeated for a maximum of 6 units.

Italian

50 CONVERSATIONAL ITALIAN 1 Unit
Laboratory: 3 hours
Practice in vocabulary, idioms and grammatic usage.
May be repeated for a maximum of 6 units.

Spanish

100a CONVERSATIONAL SPANISH: Beginning 3-4 Units
Lecture: 3 hours
Laboratory: 3 hours
or
Lecture: 3 hours
Practice in vocabulary, idioms, and grammatic usage with emphasis in conversational use of the language as spoken in Mexico.
May be repeated one time.

100b CONVERSATIONAL SPANISH: Intermediate 3-4 Units
Prerequisite: Spanish 100a or consent of instructor.
Lecture: 3 hours
Laboratory: 3 hours
or
Lecture: 3 hours
Continuation of Spanish 100a.
May be repeated one time.

100c CONVERSATIONAL SPANISH: Advanced 3-4 Units
Prerequisite: Spanish 100b or consent of instructor.
Lecture: 3 hours
Laboratory: 3 hours
or
Lecture: 3 hours
Continuation of Spanish 100c.
May be repeated one time.

FORESTRY

101 INTRODUCTION TO FORESTRY 4 Units
Lecture: 3 hours
Laboratory: 3 hours
History of the forest industry, survey of forest resources, forestry management and utilization techniques, career opportunities, legislation, and forest practices.
Field trips may be required.

105 FOREST SURVEYING 5 Units
Prerequisite: Math 102 recommended.
Lecture: 3 hours
Laboratory: 6 hours
Utilization of basic forest surveying instruments and equipment. Techniques of collecting, recording, plotting, and drafting field data.
Field trips may be required.

110 DENDROLOGY 4 Units
Prerequisite: Biology 120 or 121 recommended.
Lecture: 3 hours
Laboratory: 3 hours
Characteristics, identification, and range of native trees and shrubs of the Western United States; emphasis on plants of economic importance to forest practices in California.
Field trips may be required.

FORESTRY TECHNOLOGY

See Page 28 for Certificate Requirements.

50 INTRODUCTION TO TECHNICAL FORESTRY 4 Units
Lecture: 3 hours
Laboratory: 3 hours
Nature and scope of the forest technician's work; knowledge and skills for employment; employment opportunities. Survey of forest resources, history of forestry, forest utilization, and applied forest management.
Field trips may be required.

51 INTRODUCTION TO FOREST SURVEYING INSTRUMENTS 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Use of various forest surveying instruments; storage, transportation, and basic maintenance. Recording and interpretation.

53 FOREST SURVEYING TECHNIQUES 3 Units
Prerequisite: Forestry Technology 51.
Lecture: 2 hours
Laboratory: 3 hours
Basic forest surveying instruments. Application of hand and staff compass, topographic and engineer's chain, abney and dumpy level, pocket altimeter, and engineer's transit.
Field trips may be required.

56 TREE AND PLANT IDENTIFICATION 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Classification and identification of major western United States timber species with emphasis on local and California plant cover. Description of physical, economic and silvicultural characteristics of these trees as related to forest management and utilization.
Field trips may be required.

59 FOREST INVENTORY 5 Units
Prerequisite: Forestry Technology 53.
Lecture: 3 hours
Laboratory: 6 hours
Forest inventory techniques; applied timber cruising, scaling and marketing. Field tabulation and computation techniques.
Field trips may be required.

62 APPLIED FOREST MANAGEMENT 5 Units
Prerequisite: Forestry Technology 56. Forestry Technology 59 and Natural Resources Technology 60 recommended.
Lecture: 2 hours
Laboratory: 9 hours
Locate and inventory a given forest property in the field; develop property boundaries; inventory timber and other natural resources. Design topographic and timber type map and road system for property.

GEOGRAPHY

102 INTRODUCTION TO CULTURAL GEOGRAPHY 5 Units
Lecture: 5 hours
The study of humankind's relationship with the earth's environment. An inter-disciplinary approach will be emphasized. The techniques and resources of the cultural and political geography, anthropology, environmental science, history, and sociology will be included.

105 PHYSICAL GEOGRAPHY 5 Units
Lecture: 5 hours
An introduction to the distribution over the earth of selected aspects of climate, plant and animal life, soils and landforms, and the processes and conditions giving rise to these distributions. Attention to map construction, interpretation and use in comparative analysis.
Field trips may be required.

GUIDANCE

101 CAREER EXPLORATION 3 Units
Lecture: 3 hours
Designed to clarify thinking regarding the selection of and preparation for a career. Personal assessment of interests, aptitudes and values (may include use of selected interest and aptitude inventories); relationship between education and occupations; occupational trends; and development of skills in resume writing and interviewing. Offered for CR/NC only.

HEALTH EDUCATION

101 HEALTH AND FITNESS EDUCATION 4 Units
Lecture: 4 hours
Personal and community health: an understanding of contemporary health issues and problems with an emphasis on personal fitness and adjustment. An informative material survey contributing to a person's physical, mental, and social well being.

105 CONSUMER HEALTH 3 Units
Lecture: 3 hours
A survey of health fads, frauds, and fallacies most frequently encountered by today's health consumer in the marketplace; emphasis on developing individual awareness of questionable advertising and outright quackery.

110 SAFETY AND FIRST AID EDUCATION 3 Units
Lecture: 3 hours
Causes and prevention of accidents. Covers Red Cross Standard First Aid with certificate available upon satisfactory completion of course.
May be repeated one time.

113 ADVANCED FIRST AID AND EMERGENCY CARE 5 Units
Lecture: 5 hours
To develop functional capabilities of individuals who as a part of everyday experiences may be required to provide emergency first aid care prior to care by qualified medical personnel.
May be repeated one time.

115 ADVANCED FIRST AID AND EMERGENCY CARE REFRESHER 2 Units
Prerequisite: A valid certificate in advanced first aid.
Lecture: 2 hours
A review of emergency first aid care. Upon the successful completion of the course, a certificate is issued for Advanced First Aid and Emergency Care.
May be repeated without limit.

120 NUTRITION 4 Units
Prerequisite: One year of high school or college chemistry.
Lecture: 4 hours
Introductory study of energy and nutrient requirements of the body in relation to growth, maintenance, and reproduction; factors influencing normal metabolism; construction of the adequate diet. Emphasis is placed upon the chemical aspects of nutrition.

HEALTH OCCUPATIONS

60 COPING WITH STRESS 1 Unit
Lecture: 1 hour
Laboratory: .5 hour
The nature of stress and the coping strategies that can lead to effective stress management and self regulation; combined with relaxation exercises, visualizing techniques, and demonstrations.

103 EMERGENCY MEDICAL TECHNICIAN TRAINING 8 Units
Prerequisite: Advanced First Aid Certificate within the last two years or consent of instructor.
Lecture: 8 hours
An intensive course to assist the student in developing skill in recognition of illness and injuries and proper procedures in administering emergency care.

105a HOME HEALTH AIDE 4 Units
Lecture: 3 hours
Laboratory: 3 hours
An orientation to local health facility procedures. Basic patient care. Introduction to personal hygiene, body systems, illness and nutrition.

105b HOME HEALTH AIDE 4 Units
Prerequisite: Health Occupations 105a.
Lecture: 3 hours
Laboratory: 3 hours
Post hospital patient care using prescribed exercises, assisting with self administered medications, and performing household services essential to patients' care in the home.
Field trips may be required.

107 EMERGENCY MEDICAL TECHNICIAN REFRESHER 2 Units
Prerequisite: E.M.T. Certificate
Lecture: 2 hours
Laboratory: .5 hour
Update of the existing E.M.T. certificates which are expiring.
May be repeated without limit.

VOCATIONAL NURSING

See Page 32 for Certificate Requirements.

The Vocational Nursing Program is accredited by the California State Board of Vocational Nurse and Psychiatric Technician Examiners. Students who successfully complete all courses with a grade of "C" or better are eligible to take a state examination leading to licensure as a vocational nurse.

Eligibility requirements for admission are established by the California State Board of Vocational Nursing and by the affirmative action guidelines of the college. A variety of screening and testing techniques are used culminating with a personal interview. A part of the screening process will be the findings of a required physical examination. All applicants must file two applications: one to the college for admission and one to the program specifically. Students interested in applying should contact the Admission and Records office for further information.

Vocational Nursing courses are intended for health oriented professional students. They may not be used for continuing education credit required for renewal of licensure by registered or licensed vocational nurses. Students may be admitted to certain courses provided they have met the prerequisite either by enrollment in the current LVN class, transfer from another vocational nursing program, as a refresher course, or by consent of the instructor. The nursing courses must be taken in numerical sequence and at least a grade of "C" must be maintained in courses required for licensure.

110 INTRODUCTION TO VOCATIONAL NURSING 5 Units
Prerequisite: Current enrollment in Vocational Nursing Program.
Lecture: 5 hours
An introduction to the Licensed Vocational Nurses' role in the allied health field including law, professional ethics, hospital routine, calculation of dosages and maternity nursing.

113a ANATOMY AND PHYSIOLOGY FOR VOCATIONAL NURSES 5 Units
Prerequisite: Current enrollment in Vocational Nursing Program or consent of instructor.
Lecture: 5 hours
A study of the human body with emphasis on the individual systems and their function.

113b ANATOMY AND PHYSIOLOGY FOR VOCATIONAL NURSES 5 Units
Prerequisite: Health Occupations 113a.
Lecture: 5 hours
A continuation of Health Occupations 113a including study of food metabolism and energy requirements.

115 MATERNITY NURSING 3 Units
Prerequisite: Health Occupations 110 or consent of instructor.
Lecture: 3 hours
Knowledge of the signs, symptoms and care of the obstetrical patient.

118 PHARMACOLOGY FOR VOCATIONAL NURSES 2 Units
Prerequisite: Health Occupations 110 or consent of instructor.
Lecture: 2 hours
Drug sources, standards, and dosages. Basic procedures for administrating drugs.

120a EFFECTS OF MEDICATION ON BODY SYSTEMS 2 Units
Prerequisite: Satisfactory completion of Health Occupations 118 or consent of instructor.
Lecture: 2 hours
Medications used to alleviate patient discomfort. Medications used for the treatment of common symptoms of allergy, neoplastic, circulatory, and respiratory diseases.

120b EFFECTS OF MEDICATION ON BODY SYSTEMS 2 Units
Prerequisite: Health Occupations 120a.
Lecture: 2 hours
Medications used in the treatment of diseases of the gastro-intestinal system, diseases with an endocrine disorder, and diseases of the specialized systems.

123 PEDIATRICS 3 Units
Prerequisite: Health Occupations 115 or consent of instructor.
Lecture: 3 hours
The child's growth, development and care. Diseases of children and their treatment.

125a MEDICAL-SURGICAL NURSING 5 Units
Prerequisite: Health Oc. 113ab or consent of instructor.
Lecture: 5 hours
A study of abnormalities and diseases and an introduction to the care of the surgical patient.

125b MEDICAL-SURGICAL NURSING 5 Units
Prerequisite: Health Occupations 125a.
Lecture: 5 hours
A continuation of Health Occupations 125a with emphasis on care and treatment of the medical patient.

128 COMMUNITY HEALTH 3 Units
Prerequisite: Health Occupations 110 or consent of instructor.
Lecture: 3 hours
Disease control and prevention, mental health and first aid, the community services available in prevention of disease and promotion of good health.

140 abcd CLINIC 8 Units
Prerequisite: Current enrollment in Vocational Nursing Program.
Laboratory: 25 hours
Practical clinical experience in a hospital; to include hospital routine, departments, and patient care.

HEAVY EQUIPMENT AND TRUCK REPAIR

See Pages 28-29 for Certificate Requirements.

50 BUS DRIVER TRAINING 2 Units
Prerequisite: Possession of a valid California drivers license.
Lecture: 2 hours
The driver's responsibility for pupils, care and operation of a school bus, and laws relating to pupil transportation.

52 RECREATIONAL VEHICLE ENGINE REPAIR 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Maintenance and repair of all terrain vehicles, trail bikes, vans, snowmobiles, motorcycles and boat engines.

70 LOGGING EQUIPMENT 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Use of heavy equipment in the lumbering industry and land clearing. Safety training and accident prevention; fire laws and equipment.

101 INTRODUCTION TO HEAVY EQUIPMENT 3 Units
Lecture: 3 hours
The use of on-road and off-road equipment in transportation and construction. Safety and accident prevention, fundamentals of math, fasteners. Use of hoisting and lifting equipment and devices and shop safety. Students may be requested to arrange a basic skills class including math and reading with the Learning Skills Center.

102 PREVENTIVE MAINTENANCE (TRACTORS) 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Principles of basic preventive maintenance. Lubricants, filters, and air systems, as well as basic lubrication processes are stressed.

103 HEAVY EQUIPMENT APPRENTICESHIP 1 Unit
Prerequisite: Previous or concurrent enrollment in Heavy Equip. 101.
Lecture: 1 hour
Historical and legal background, administration of apprenticeship systems, the operating engineer apprenticeship, federal and state laws that provide worker security.

104 PREVENTIVE MAINTENANCE (TRUCKS) 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Care and maintenance of trucks. Preventive maintenance schedules, tire repair, lubrication and

104 (continued)
cooling systems of the engine, air systems maintenance, chassis lubrication, safety inspection and maintenance. Axles and brakes are covered.

114 MACHINE SHOP PROCEDURES 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Practical experience in head, block service and common machine shop procedures used in repair shops.

115a DIESEL ENGINE REBUILDING: Caterpillar 3 Units
Prerequisite: Heavy Equipment 114.
Lecture: 1.5 hours
Laboratory: 4.5 hours
Understanding of the principles, construction, and operation of diesel engines. Practical experience in the dismantling, assembly, operation and maintenance of Caterpillar diesel engines.

115b DIESEL ENGINE REBUILDING: Detroit 3 Units
Prerequisite: Heavy Equipment 114.
Lecture: 1.5 hours
Laboratory: 4.5 hours
Understanding of the principles, construction, and operation of diesel engines. Practical experience in the dismantling, assembly, operation and maintenance of Detroit diesel engines.

115c DIESEL ENGINE REBUILDING: Cummins 3 Units
Prerequisite: Heavy Equipment 114.
Lecture: 1.5 hours
Laboratory: 4.5 hours
Understanding of the principles, construction, and operation of diesel engines. Practical experience in the dismantling, assembly, operation and maintenance of Cummins diesel engines.

116a DIESEL ENGINE TUNE-UP: Caterpillar 1 Unit
Lecture: .5 hour
Laboratory: 1.5 hours
Techniques and procedures for tuning a Caterpillar diesel engine.

116b DIESEL ENGINE TUNE-UP: Detroit 1 Unit
Lecture: .5 hour
Laboratory 1.5 hours
Techniques and procedures for tuning a Detroit diesel engine.

116c DIESEL ENGINE TUNE-UP: Cummins 1 Unit
Lecture: .5 hour
Laboratory: 1.5 hours
Techniques and procedures for tuning a Cummins diesel engine.

130 TRANSMISSIONS 3 Units
Lecture: 1.5 hours
Laboratory: 4.5 hours
Maintenance and repair procedure of truck clutches and transmissions.

134 REAR AXLES AND DRIVE LINES 3 Units
Lecture: 1.5 hours
Laboratory: 4.5 hours
Maintenance and repair procedures of rear axles and drive lines, power dividers.

136 TRACTOR POWER TRAINS 3 Units
Lecture: 1.5 hours
Laboratory: 4.5 hours
Repair of clutches, transmission, bevel gears, and cross shafts, steering clutches, and steering brakes as well as clutches and transmission of rubber tire tractors.

140 HEAVY DUTY BRAKE SYSTEMS 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Operation and principles of air brake systems as well as the techniques of diagnosis and service.

142 TRACTOR UNDERCARRIAGE 3 Units
Lecture: 1.5 hours
Laboratory: 4.5 hours
Maintenance and repair of undercarriage part on crawler tractors such as track frames, rollers, tracks, final drives.

144 STEERING AND SUSPENSION SYSTEMS 3 Units
Lecture: 1.5 hours
Laboratory: 4.5 hours
Wheel alignment and adjustments of front axles and steering mechanisms. Rear axles and suspension system maintenance and adjustments are covered.

160a ELECTRICITY: DC Electricity 3 Units
Prerequisite: Mathematics 55 or equivalent.
Lecture: 3 hours
Elementary principles of direct current generation, distribution and utilization in light and power with a special emphasis on power plant production.

160b ELECTRICITY: AC Electricity 3 Units
Prerequisite: Heavy Equipment 160a.
Lecture: 3 hours
Elementary principles of alternating current generation, distribution and utilization in light and power with a special emphasis on power plant production.

165 HYDRAULIC SYSTEMS 3 Units
Lecture: 1.5 hours
Laboratory: 4.5 hours
Understanding the operation and principles of hydraulic systems as well as techniques of diagnosis and service as it applies to the hydraulic mechanic.

170a PRACTICAL LABORATORY 2 Units
Prerequisite: 8 units of shop classes with not more than 2 of the 8 units taken concurrently with Heavy Equipment 170a or consent of instructor.
Laboratory: 6 hours
Special repair projects are assigned to advanced students with emphasis on speed, accuracy, and work habits.

170b PRACTICAL LABORATORY 2 Units
Prerequisite: Heavy Equipment 170a.
Laboratory: 6 hours
Continuation of Heavy Equipment 170a.

170c PRACTICAL LABORATORY 2 Units
Prerequisite: Heavy Equipment 170b.
Laboratory: 6 hours
Continuation of Heavy Equipment 170b.

170d PRACTICAL LABORATORY 2 Units
Prerequisite: Heavy Equipment 170c.
Laboratory: 6 hours
Continuation of Heavy Equipment 170c.

HISTORY

104a WORLD CIVILIZATION 4 Units
Lecture: 4 hours
Rise and decline of civilizations to 500 A.D. Prehistoric cultures, the ancient Near East, the ancient Far East, Greek history and civilization, Roman history and civilization.

104b WORLD CIVILIZATION 4 Units
Lecture: 4 hours
Development of major civilizations from 500 to 1700 A.D. Rise of medieval Europe, the Byzantine Empire, the Moslem world and Africa; contemporary India, China and Japan; the Renaissance and Reformation periods; the expansion of Europe into the non-Western world to the age of Louis XIV.

104c WORLD CIVILIZATION 4 Units
Lecture: 4 hours
Development of European, American and non-Western civilizations from 1700 A.D. to the present. Emergence of national states, their struggle for world power, and their impact on the non-western world.

111 ASIA 4 Units
Lecture: 4 hours
Survey of the political and cultural history of India, China, Japan, and Southeast Asia; the response of Asian nations to the impact of the West, and resulting contemporary problems.

113 CHINA 4 Units
Lecture: 4 hours
Survey of the development of China from its earliest civilization to its major place in the contemporary world.

117a UNITED STATES 5 Units
Lecture: 5 hours
Survey of United States history from Colonization to Reconstruction. Analysis and interpretation of English Imperialism, Revolution, Nationalism, Political Democracy, slavery, and Civil War.

117b UNITED STATES 5 Units
Lecture: 5 hours
Survey of United States history from Reconstruction to the present. Analysis and interpretation of Industrialism, Progressivism, Internationalism, New Deal, and Contemporary America.

121a CALIFORNIA 3 Units
Lecture: 3 hours
Survey of California history from the pre-Columbian period through the transcontinental railroad. Emphasis will be on the native Californians, Spanish-Mexican institutions, Immigration, Conquest, and Gold Rush.
Field trips may be required.

121b CALIFORNIA 3 Units
Lecture: 3 hours
Survey of California history from the Gold Rush to the present. Emphasis will be on the mineral wealth, agriculture, transportation, water systems, and Contemporary California.

133 ORAL HISTORY 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Fundamentals of the tape-recorded interview. Demonstrations and discussions of the interview as a method in historical research and writing.

149 THE MOTHER LODE 3 Units
Lecture: 3 hours
History and lore of the Gold Rush country, with emphasis on the Central Sierra communities.
Field trips may be required.

155 THE AMERICAN FRONTIER 4 Units
Lecture: 4 hours
Study of successive frontier zones and hostile environments in reshaping imported customs and habits into uniquely "American" characteristics. Emphasis will be on the 19th Century.

HOSPITALITY MANAGEMENT

See Page 29 for Certificate Requirements.

101 INTRODUCTION TO THE HOSPITALITY INDUSTRY 4 Units
Lecture: 4 hours
Survey of the hotel-motel, food services, travel-tourism, club and recreation business. Analysis of

101 (continued)
the organizational structure of the hospitality industry, including historical development and examination of industry trends. Major emphasis will be placed on career planning and management in the hospitality industry.
Field trips may be required.

103 MARKETING OF HOSPITALITY SERVICES 4 Units
Lecture: 4 hours
A study of people, product, package, price, and promotion, and how they interrelate and constitute the ingredients in a marketing program.
Field trips may be required.

112 FRONT OFFICE MANAGEMENT/ LAWS OF INNKEEPING 4 Units
Prerequisite: Hosp. Management 101 or consent of instructor.
Lecture: 2 hours
Laboratory: 6 hours
Essential equipment, routines, and duties of the front desk clerk and relationship to other hotel departments. Legal relationships between California innkeepers and others; rights, duties, and liabilities of innkeepers and their personnel.

114 INTRODUCTION TO MAINTENANCE AND HOUSEKEEPING 3 Units
Lecture: 1 hour
Laboratory: 6 hours
Provides essential technical information on equipment and its servicing to establish a preventive maintenance routine. Provides broad scope of the housekeeping position, stressing employee responsibilities, record-keeping, and use of equipment and materials.

120 HOTEL CATERING 3 Units
Lecture: 1.5 hours
Laboratory: 4.5 hours
Planning and preparation for private parties, dinners, meetings, and other special events that a hotel or restaurant may cater.

Food Services

130 FOOD SERVICE MANAGEMENT 3 Units
Lecture: 3 hours
Introduction to culinary nomenclature, cost controls, kitchen equipment, planning, management reports, menu planning, food purchasing, nutrition and sanitation.
Field trips may be required.

131 DINING ROOM SERVICE 3 Units
Prerequisite: Hospitality Management 101 or consent of instructor.
Lecture: 1 hour
Laboratory: 6 hours
Service techniques, table setting, and etiquette

131 (continued)
used in all aspects of dining room service. Emphasis on developing the finer points in skill and showmanship.
Field trips may be required.

134 FAST FOODS 3 Units
Prerequisite: Previous or concurrent enrollment in Hospitality Management 130 or consent of instructor.
Lecture: 1.5 hours
Laboratory: 4.5 hours
Introduction to the fast food style of service; packaging, promotion, design, labor problems, food preparation, storage and control of supplies.

135 COMMERCIAL BAKING 3 Units
Prerequisite: Hosp. Management 130 or consent of instructor.
Lecture: 1 hour
Laboratory: 6 hours
Tools, terms, and functions in preparation of baked goods, cake decorating, and gourmet desserts.
Field trips may be required.

136 ADVANCED BAKING 3 Units
Prerequisite: Hosp. Management 135 or consent of instructor.
Lecture: 1 hour
Laboratory: 6 hours
Formulas used in commercial pastry shop; gum paste work, design, sugar decoration, wax work.
Field trips may be required.

137 BUFFET CATERING 3 Units
Prerequisite: Hosp. Management 130 or consent of instructor.
Lecture: 1.5 hours
Laboratory: 4.5 hours
Selecting and handling of specialized equipment, planning and preparation of foods, advertising and customer relations, food service costs, beverages.

138 FAMILY RESTAURANT SERVICE 3 Units
Prerequisite: Previous or concurrent enrollment in Hospitality Management 130 or consent of instructor.
Lecture: 1.5 hours
Laboratory: 4.5 hours
Introduction to the family restaurant, use of equipment, preparation of foods, table service, employee development controls.

140a CLASSICAL CUISINE: Beginning 3 Units
Prerequisite: Hosp. Management 134, Hosp.Management 137 and Hosp. Management 138.
Lecture: 2 hours
Laboratory: 3 hours
Safety, sanitation, culinary nomenclature, cook's tools, recipe conversion, and food costs; preparation of beverages, breakfasts, and salads; commissary control and ordering of supplies for the Continental and French kitchen.

140b CLASSICAL CUISINE: Intermediate 3 Units
Prerequisite: Hospitality Management 140a.
Lecture: 1.5 hours
Laboratory: 4.5 hours
A continuation of Hospitality Management 140a with emphasis on preparation of vegetables, sauces, rice and farinaceous products. Basic techniques of broiling, roasting, sauteing, and deep fat frying.

140c CLASSICAL CUISINE: Advanced 3 Units
Prerequisite: Hospitality Management 140b.
Lecture: 1 hour
Laboratory: 6 hours
Preparation of gourmet and more complicated foods using representative selections from the eight entree groups.
Field trips may be required.

144 MEAT ANALYSIS 3 Units
Prerequisite: Hosp. Management 130 or consent of instructor.
Lecture: 2 hours
Laboratory: 3 hours
Study of various grades and cuts of meat, and their use in restaurant sales. Cost control and fabrication.
Field trips may be required.

147a BEVERAGE MANAGEMENT 3 Units
Prerequisite: At least 21 years of age and Hospitality Management 101 or consent of instructor.
Lecture: 2 hours
Laboratory: 3 hours
Study of all aspects of beverage management including federal, state and local regulations, mixology, background, and future of beverage industry.
Field trips may be required.

147b BEVERAGE MANAGEMENT 3 Units
Prerequisite: Hosp. Management 147a or consent of instructor.
Lecture: 3 hours
Control, distribution, planning of bar inventories and purchases, labor planning, laws.

148 HISTORY AND PRODUCTION OF CALIFORNIA WINES 3 Units
Lecture: 3 hours
Introduction to the history, development, production, and types of wines, pronunciations and label reading, and service.
Field trips may be required.

Recreation Industry

151 INTRODUCTION TO PARKS AND RECREATION 3 Units
Lecture: 2 hours
Laboratory: 3 hours
An introductory course for individuals interested

151 (continued)
in parks and recreation, with exposure to park management, design, maintenance and construction. Recreational aspects, job opportunities and duties.

160 INTRODUCTION TO THE TRAVEL-TOURISM INDUSTRY 3 Units
Lecture: 1.5 hours
Laboratory: 4.5 hours
Evolution of tourism as an industry. Survey of domestic and international travel, laws, services, communications systems, and interaction with other sectors of the hospitality industry.
Field trips may be required.

163 TOURS 3 Units
Prerequisite: Hosp. Management 160 or consent of instructor.
Lecture: 1.5 hours
Laboratory: 4.5 hours
The principles and procedures of group tour management and planning.

HUMANITIES

101 OLD WORLD CULTURE 4 Units
Lecture: 4 hours
An introductory survey of humanistic culture, historically structured from classical Greece to the Renaissance, presenting highlights from history, philosophy, literature, drama, art, and music.

102 MODERN CULTURE 4 Units
Lecture: 4 hours
An introductory survey of humanistic culture, historically structured from the Enlightenment to the present scene, presenting highlights from history, philosophy, literature, drama, art and music.

110 CURRENT RELIGIOUS MOVEMENTS 3 Units
Lecture: 3 hours
The search for religious meaning in the contemporary world, reflected in modern cults like Eckankar, Scientology, Urantia, Satanism, and Transcendental Meditation, and current trends in old religions like the Jesus Movement, the Ecumenical Movement, Hari Krishna Hinduism and Zen Buddhism.

120 AMERICA'S RELIGIOUS HERITAGE 3 Units
Lecture: 3 hours
Historical forces in American Religion traced from their European origins and colonial development up to modern American religious trends and their impact upon society.

130 WORLD RELIGIOUS CONSCIOUSNESS 3 Units
Lecture: 3 hours
Development of religious consciousness from

130 (continued)
primitive beliefs in ancient times to the major religions of the world: Hinduism, Buddhism, Taoism, Judaism, Christianity, and Islam.

INDUSTRIAL ARTS

55 BASIC WOODWORKING 1 Unit
Laboratory: 3 hours
Woodworking skills and processes and the safe use of hand and woodworking tools.

56 ADVANCED WOODWORKING 1 Unit
Prerequisite: Industrial Arts 55.
Laboratory: 3 hours
Development of skills using hand and machine tools. Students will design and complete a major project. Advanced machine skills will include tapering, mitering, and dovetailing.

70 AUTO MAINTENANCE I 1 Unit
Laboratory: 3 hours
Designed to provide the student with information needed to maintain his/her own vehicle.
May be repeated one time.

71 AUTO MAINTENANCE II 1 Unit
Prerequisite: Industrial Arts 70 or auto maintenance experience.
Laboratory: 3 hours
A continuation of Industrial Arts 70 to provide the student with additional supervised experience and subject area knowledge.

74 BASIC ENGINE TUNE-UP 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Beginning class in basic ignition system tune-up using hand tools and meters reasonably affordable for home use; will include practical experience on the student's vehicles.

INTERDISCIPLINARY STUDIES

50 INTRODUCTION TO MOTHER LODE STUDIES 1 Unit
(Six Week Short Course)
Lecture: 3 hours
An introduction to the Mother Lode. Topics covered may include any of a wide variety such as history and folklore, wildflowers, art, music, geology, the environment, and writers of the Mother Lode.
Field trips may be required.

101 INTRODUCTION TO FINE ARTS 4 Units
Lecture: 3 hours
Laboratory: 3 hours
A cross-disciplinary introduction to contemporary styles, important works, major figures, trends, and techniques common to art, drama, and music;

101 (continued)
practicum and field experiences in fine arts toward understanding and appreciation.
Field trips may be required.

105 HUMANITIES THROUGH THE ARTS 4 Units
Lecture: 4 hours
Humanities through the arts: a cross-disciplinary historical survey of the origins and development common to art, music, and drama; a survey of the major literature, periods, styles, works, and figures in art, music, and drama within the context of prevailing historical, social and philosophical periods.

JOURNALISM

101a INTRODUCTION TO JOURNALISM 3 Units
Prerequisite: Typing speed of 30 words per minute recommended.
Lecture: 2 hours
Laboratory: 3 hours
Introduction to basic newsgathering, writing techniques, production methods, photography, commercial art, advertising, libel and slander laws, journalism careers.

101b INTRODUCTION TO JOURNALISM 3 Units
Prerequisite: Journalism 101a
Lecture: 2 hours
Laboratory: 3 hours
Continuation of Journalism 101a.

101c INTRODUCTION TO JOURNALISM 3 Units
Prerequisite: Journalism 101b
Lecture: 2 hours
Laboratory: 3 hours
Continuation of Journalism 101b.

107 NEWSPAPER PRODUCTION 1-3 Units
Prerequisite: Previous or concurrent enrollment in Journalism 101a.
Laboratory: 3-9 hours
Laboratory using campus newspaper publications and other programs for application of newsgathering, writing skills and production methods.
Field trips may be required.
May be repeated to a maximum of 9 units of credit.

LAW ENFORCEMENT

100 INTRODUCTION TO ADMINISTRATION OF JUSTICE 4 Units
Lecture: 4 hours
The history and philosophy of administration of justice in America. Theories of crime, punishment, and rehabilitation; ethics, education, and training of professionalism in the system.

102 PRINCIPLES AND PROCEDURES OF THE JUSTICE SYSTEM 4 Units
Lecture: 4 hours
An in-depth study of the role and responsibilities

102 (continued)
of each segment within the Administration of Justice system: law enforcement, judicial, corrections, and the relationship each segment maintains with its system members.

106 CONCEPTS OF CRIMINAL LAW 4 Units
Lecture: 4 hours
Historical development, philosophy of law and constitutional provisions; definitions, classification of crime, and their application to the system of administration of justice: legal research, study of case law, methodology, and concepts of law as a social course.

108 LEGAL ASPECTS OF EVIDENCE 4 Units
Lecture: 4 hours
Origin, development, philosophy, and constitutional basis of evidence; constitutional and procedural considerations affecting arrest; search and seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies.

110 POLICE, COMMUNITY RELATIONS 4 Units
Lecture: 4 hours
An in-depth exploration of the roles of the Administration of Justice practitioners and their agencies. Principal emphasis will be placed upon the professional image of the system of Justice Administration and the development of positive relationships between members of the system and the public.

120 SUBSTANTIVE LAW 4 Units
Prerequisite: Law Enforcement 100.
Lecture: 4 hours
An in-depth study of the substantive laws commonly encountered by the municipal, county, or state police officer or investigator or other criminal justice employee. The scope of the course includes misdemeanor and felony violations of the criminal statutes.

122 CONCEPTS OF ENFORCEMENT SERVICES 4 Units
Prerequisite: Law Enforcement 100.
Lecture: 4 hours
Exploration of theories, philosophies, and concepts related to the role expectations of the line enforcement officer. Emphasis on the patrol, traffic, and public service responsibilities and their relationship to the administration of justice system.

124 PRINCIPLES OF INVESTIGATION 4 Units
Prerequisite: Law Enforcement 100.
Lecture: 4 hours
The study of basic principles of all types of investigations utilized in the justice system. Coverage will include human aspects in dealing with the public, specific knowledge necessary for handling crime scenes; interview, evidence,

124 (continued)
surveillance, followup, technical resources, and case preparations.

130 CALIFORNIA PENAL CODE 4 Units
Prerequisite: Law Enforcement 100.
Lecture: 4 hours
Law relating to criminal offenders and inmates of California institutions; administration of California Penal Code.

132 JUVENILE PROCEDURES 4 Units
Prerequisite: Law Enforcement 100.
Lecture: 4 hours
The organization, functions, and jurisdiction of juvenile agencies; the processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures.

134 SELF DEFENSE 2 Units
Prerequisite: Law Enforcement 100.
Lecture: 1 hour
Laboratory: 3 hours
Protection against persons armed with dangerous and deadly weapons; demonstration and drill in a limited number of holds and come-alongs; restraint of prisoners and the mentally ill; use of the baton.

138 FIREARMS 1 Unit
Prerequisite: Law Enforcement 100.
Laboratory: 3 hours
The moral aspects, legal provisions, safety precautions and restrictions covering the use of firearms; firing of the sidearm and shotgun; gas weapons.

140a ARSON INVESTIGATION: Beginning 4 Units
Lecture: 4 hours
Designed to prepare fire suppression officers and police patrol officers to carry out the responsibility of arson detection and establish the foundations for an indepth arson investigation.

140b ARSON INVESTIGATION: Advanced 4 Units
Prerequisite: Law Enforcement 140a or consent of instructor.
Lecture: 4 hours
A continuation of the introductory course emphasizing preservation of evidence, explosive devices, testimony as an expert, insurance laws, and advanced fire problems.
(Students may not receive credit for both Fire Science 127 and Law Enforcement 140ab.)

150 SUPERVISED FIELD WORK 4 Units
Prerequisite: Law Enforcement 100.
Lecture: 2 hours
Laboratory: 6 hours
Supervised field work with experiences in several of the surrounding facilities involved in crime prevention.

160 ADVANCED OFFICERS' TRAINING 2-4 Units
Prerequisite: Law Enforcement 100.
Lecture: 2-4 hours
Designed to upgrade officers currently working in any phase of law enforcement. Studies include administration of justice, patrol procedures, criminal law, and criminal investigation.

LIBRARY

101 INTRODUCTION TO LIBRARY RESOURCES 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Instruction and practice in locating and utilizing library resources. Emphasis on basic library techniques with respect to preparing bibliographies.

MATHEMATICS

The five unit Mathematics courses may be offered either as five lecture hours or as four lecture and three laboratory hours. Refer to the Schedule of Classes.

50 BASIC MATHEMATICS 2 Units
Lecture: 1 hour
Laboratory: 3 hours
A basic course in arithmetic.

55 BEGINNING ALGEBRA 5 Units
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours
Algebraic structures of real numbers, development of algebraic techniques, rational operations, radicals, polynomials, factoring, linear equations, inequalities, and quadratic equations.

60 GEOMETRY 5 Units
Prerequisite: Math 55 or one year high school algebra recommended.
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours
Plane geometry, solid geometry, and coordinate geometry.

100a LOGIC 5 Units
Lecture: 5 hours
Basic principles of classical logic and some major aspects of modern logic: deductive reasoning, including syllogisms, fallacies, truth functions, and techniques of symbolic logic.

100b LOGIC 5 Units
Prerequisite: Mathematics 100a or equivalent.
Lecture: 5 hours
A brief review of syllogistic and truth-functional logic, and a survey of quantificational logic, induction, probability, and the logic of the scientific method.

101 INTERMEDIATE ALGEBRA 5 Units
Prerequisite: Math 55 or one year high school algebra.
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours
Extension of elementary algebra; includes complex numbers.

102 TRIGONOMETRY 5 Units
Prerequisite: Math 60 or Math 101 or second year high school algebra and one year geometry.
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours
An analytic approach to trigonometric functions.

103 COLLEGE ALGEBRA 5 Units
Prerequisite: Mathematics 101 or equivalent high school course.
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours
Extension of algebraic concepts; includes quadratic equations, inequalities, complex numbers, mathematical induction, binomial theorem, determinants, permutations, combinations and logarithms.

105 ELEMENTS OF STATISTICS 5 Units
Prerequisite: Math 101 or second year high school algebra.
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours
Statistical concepts of probability, analysis and significance of measurements, measures of central tendency, correlation, variation, distributions, and reliability and validity of tests.

110 FINITE MATHEMATICS 5 Units
Prerequisite: Math 55 or one year of high school algebra.
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours
Symbolic logic, sets, probability, vectors, matrices, and game theory.

115 MATRIX MATHEMATICS FOR COMPUTERS 2 Units
Prerequisite: Mathematics 55 or one year high school algebra.
Lecture: 1 hour
Laboratory: 3 hours
Matrix properties and operations, matrix identity and inverse, matrix translation and rotation, systems of equations, and applications.

120a CALCULUS WITH ANALYTIC GEOMETRY 5 Units

Prerequisite: Two years of high school algebra, one year of plane geometry, and one-half year of trigonometry or Math 102. Math 103 recommended.
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours

Inequalities, relations, functions, graphs, limits, the derivative, continuity, lines, circles, and conics with geometric and physical interpretations of the derivative.

120b CALCULUS WITH ANALYTIC GEOMETRY 5 Units

Prerequisite: Math 120a.
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours

Elements of analytic geometry, introduction to integral calculus with applications and continuation of differential calculus; trigonometric, logarithmic, exponential, and hyperbolic functions.

120c CALCULUS WITH ANALYTIC GEOMETRY 5 Units

Prerequisite: Math 120b.
Lecture: 5 hours
or
Lecture: 4 hours
Laboratory: 3 hours

Polar coordinates, vectors in the plane, techniques in integration, and applications of the integral.

MUSIC

100 STANDARD NOTATION 3 Units

Lecture: 3 hours

Introduction to traditional musical notation, key signatures, scales, intervals and chords, sight singing and ear training.

102 INTRODUCTION TO MUSIC 4 Units

Lecture: 4 hours

Study and analysis of music, including instrumentation, form, basic elements, and general background of styles and composers.

109 PERFORMANCE PRACTICUM .5 Units

Activity: 1 hour

A series of concerts and recital demonstrations involving students, staff and visiting artists for the development of performance methodology and critical listening skills.

110a SURVEY OF MUSIC HISTORY AND LITERATURE 5 Units

Lecture: 5 hours

Ancient, Medieval, Renaissance, and Baroque periods. Study of composers, masterpieces, and elements of style from the 16th through 17th Centuries.

110b SURVEY OF MUSIC HISTORY AND LITERATURE 5 Units

Lecture: 5 hours

Classic and Romantic periods. Study of composers, masterpieces and elements of style during the 18th and 19th Centuries.

110c SURVEY OF MUSIC HISTORY AND LITERATURE 5 Units

Lecture: 5 hours

Late Romantic, Impressionistic, and Contemporary periods. Study of composers, masterpieces, and elements of style from 1890 to the present.

Field trips may be required.

112 SURVEY OF JAZZ AND POPULAR MUSIC 4 Units

Lecture: 4 hours

Nature, processes and history of jazz and popular music from its origins to the present.

Field trips may be required.

115 SURVEY OF EASTERN MUSIC 4 Units

Lecture: 4 hours

Introduction to the music cultures of the Near East, Asia, the Orient, and the Pacific Islands.

120a MUSIC THEORY 5 Units

Lecture: 4 hours
Activity: 2 hours

Analysis of the essentials for understanding and writing music. Included are rhythm, scales, intervals, chords, notation, melody writing, elementary harmony, ear training, and keyboard applications.

120b MUSIC THEORY 5 Units

Prerequisite: Music 120a.
Lecture: 4 hours
Activity: 2 hours

Study of diatonic 4-part harmony with analysis of Bach chorales, figured bass, chord progressions, harmonic motion, orchestration, harmonic ear training, and keyboard harmony.

120c MUSIC THEORY 5 Units

Prerequisite: Music 120b.
Lecture: 4 hours
Activity: 2 hours

Continuing study in harmony and composition with secondary key centers, modulation, altered chords, non-harmonic notes, form and analysis of contemporary music.

122a ADVANCED MUSIC THEORY 5 Units

Prerequisite: Music 120c or equivalent.
Lecture: 4 hours
Activity: 2 hours

Further study in dominant harmony, extended diatonic chords, unusual chord progression, borrowed chords, irregular resolutions, beginning counterpoint, and advanced harmonic analysis. Continuing study in sightsinging, ear training, and keyboard applications.

122b ADVANCED MUSIC THEORY 5 Units

Prerequisite: Music 122a.
Lecture: 4 hours
Activity: 2 hours

Study of advanced tonal harmony with modulation to distant keys, non-dominant resolutions, the Neapolitan chord, the augmented sixth chords, chromatic harmony, and further study in melody, counterpoint, sightsinging, ear training, and keyboard applications.

122c ADVANCED MUSIC THEORY 5 Units

Prerequisite: Music 122b.
Lecture: 4 hours
Activity: 2 hours

Study of music beyond the common practice period, modern analytical systems, scalar and non-tertian harmony, pandiatonicism, model harmony, tonality supporting and weakening elements, atonality, atonal harmony, chromatic sightsinging and ear training.

May be repeated one time.

126 COMPOSITION 3 Units

Prerequisite: Music 120b.
Lecture: 2 hours
Laboratory: 3 hours

Composing in various musical styles as well as synthesis of student's own style. Study and analysis of different methods of composition of music in relation to project chosen by student.

May be repeated one time.

130 BEGINNING GUITAR 3 Units

Prerequisite: Concurrent enrollment in Music 109 recommended.
Lecture: 2 hours
Activity: 2 hours

Beginning group instruction in methods and techniques of playing the guitar.

131 BEGINNING KEYBOARD 3 Units

Prerequisite: Concurrent enrollment in Music 109 recommended.
Lecture: 2 hours
Activity: 2 hours

Group instruction in performance methods and techniques on keyboard instruments.

May be repeated one time.

134 BEGINNING STRINGS 3 Units

Prerequisite: Concurrent enrollment in Music 109 recommended.
Lecture: 2 hours
Activity: 2 hours

Beginning performance methods and techniques on string instruments.

May be repeated one time.

136 BEGINNING VOICE 3 Units

Prerequisite: Concurrent enrollment in Music 109 recommended.
Lecture: 2 hours
Activity: 2 hours

Group instruction in the techniques of singing.

136 (continued)

Practice in correct tone production, diction, stage presence, and reading of musical notation.

May be repeated one time.

138 BEGINNING JAZZ IMPROVISATION 3 Units

Lecture: 2 hours
Activity: 2 hours

Beginning study in jazz improvisation with emphasis on style, rhythm, and pentatonic and diatonic scales.

140 INTERMEDIATE GUITAR 3 Units

Prerequisite: Music 130, or consent of instructor. Concurrent enrollment in Music 109 recommended.
Lecture: 2 hours
Activity: 2 hours

Intermediate instruction in a class situation of methods and techniques of playing the guitar.

May be repeated one time.

141 INTERMEDIATE KEYBOARD 3 Units

Prerequisite: Music 131, or consent of instructor. Concurrent enrollment in Music 109 recommended.
Lecture: 2 hours
Activity: 2 hours

Group instruction in performance methods and techniques on keyboard instruments with emphasis on repertoire and elements of style.

May be repeated one time.

144 INTERMEDIATE STRINGS 3 Units

Prerequisite: Music 134, or consent of instructor. Concurrent enollment in Music 109 recommended.
Lecture: 2 hours
Activity: 2 hours

Intermediate instruction in a class situation of methods and techniques of playing string instruments.

May be repeated one time.

146 INTERMEDIATE VOICE 3 Units

Prerequisite: Music 136, or consent of instructor. Concurrent enrollment in Music 109 recommended.
Lecture: 2 hours
Activity: 2 hours

Group instruction in techniques of singing for those with demonstrated interest in developing solo capability. Practice in correct tone production, diction, stage presence, and reading of musical notation.

May be repeated one time.

148 INTERMEDIATE JAZZ IMPROVISATION 3 Units

Prerequisite: Music 138 or consent of instructor.
Lecture: 2 hours
Activity: 2 hours

Study and practice of jazz improvisation techniques including basic chord scales, style, selected ear training, and analysis of transcribed solos.

May be repeated one time.

150 SERIES — APPLIED MUSIC
Prerequisite: Audition. Concurrent enrollment in Music 109 recommended.
Lecture: 1 hour
Study of performance techniques, interpretation, and repertoire related to private music instruction. Designated for music majors and minors.
May be repeated for a maximum of six units.

150 APPLIED MUSIC, Guitar 1 Unit
151 APPLIED MUSIC, Keyboard 1 Unit
152 APPLIED MUSIC, Woodwinds 1 Unit
153 APPLIED MUSIC, Brass 1 Unit
154 APPLIED MUSIC, Strings 1 Unit
155 APPLIED MUSIC, Percussion 1 Unit
156 APPLIED MUSIC, Voice 1 Unit
157 APPLIED MUSIC, Synthesizer 1 Unit

160 CHOIR 1-2 Units
Prerequisite: Concurrent enrollment in Music 109 recommended.
Activity: 2-4 hours
Study and performance of mixed choral works of various periods and styles.
May be repeated without limit.

164 JAZZ CHOIR 1-3 Units
Prerequisite: Audition.
Activity: 2-6 hours
Study and performance of vocal jazz and improvisation in an ensemble of limited size.

165 THEATRE PRODUCTION: Music Emphasis 1-3 Units
Prerequisite: Audition.
Laboratory: 3-9 hours
Directed activities in theatre production for public performance with a concentration in vocal or instrumental music.
May be repeated without limit.

166 COMMUNITY CHORUS 1-2 Units
Prerequisite: Concurrent enrollment in Music 109 recommended.
Activity: 2-4 hours
Study and performance of mixed choral works of various periods and styles.
May be repeated without limit.

169 ENSEMBLE: Vocal Emphasis 1 Unit
Prerequisite: Audition, concurrent enrollment in Music 109 recommended.
Activity: 2 hours
Study and performance of vocal chamber music with emphasis on the Renaissance and Contemporary periods.
May be repeated without limit.

170 WIND ENSEMBLE 1-2 Units
Prerequisite: Audition; concurrent enrollment in Music 109 reommended.
Activity: 2-4 hours
Study and performance of advanced wind ensemble literature. Attendance at all scheduled performances is required.
May be repeated without limit.

172 JAZZ ENSEMBLE 1-2 Units
Prerequisite: Audition; concurrent enrollment in Music 109 recommended.
Activity: 2-4 hours
Study and performance of instrumental jazz and improvisation; techniques of improvisation will be explored.
May be repeated without limit.

176 ORCHESTRA 2 Units
Prerequisite: Audition; concurrent enrollment in Music 109 recommended.
Activity: 2-4 hours
Study and performance of orchestral literature of various styles and media.
May be repeated without limit.

179 ENSEMBLE: INSTRUMENTAL EMPHASIS 1 Unit
Prerequisite: Audition; concurrent enrollment in Music 109 recommended.
Activity: 2 hours
Study and performance of music for small ensembles, duets, and chamber groups.
May be repeated without limit.

NATURAL RESOURCES
See Page 30 for Certificate Requirements.

100 CONSERVATION OF NATURAL RESOURCES 4 Units
Lecture: 4 hours
Natural resources conservation; history of land use, field practices, and current problems of physical and biological natural resources conservation.
Field trips may be required.

101 INTRODUCTION TO SOIL, WATER AND ATMOSPHERIC RESOURCES 4 Units
Prerequisite: Biology 110 recommended.
Lecture: 4 hours
Characteristics, properties, formation, development, and utilization of soils, water and atmosphere. Problems of wildlands and agricultural management.
Field trips may be required.

102 PROPERTIES OF SOILS 4 Units
Prerequisite: Previous or concurrent enrollment in Chemistry 100.
Lecture: 3 hours
Laboratory: 3 hours
Physical, chemical, and biological properties of soils related to wildland and cultivated soils.
Field trips may be required.

105 ALTERNATIVE ENERGY SOURCES: SOLAR AND WIND 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Cause and effect relationships of the energy crisis. Home energy conservation and construction methods. Practical application of solar and wind energy systems for heating, cooling, food drying, water pumping, and electrical production.
Field trips may be required.

106 ALTERNATIVE ENERGY SOURCES: WATER, METHANE, AND GEOTHERMAL 3 Units
Lecture: 3 hours
Practical applications of waterwheels, turbines, and hydraulic rams as examples of water power. Design, use and limitations of methane digesters. Discussions on geothermal, tidal, pedal power, animal power, biofuels, nuclear, and fossil fuel energy.
Field trips may be required.

107 LAND USE PLANNING 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Introduction to resources inventory, planning processes and environmental impact report preparation.

109 PARKS AND FORESTS LAW ENFORCEMENT 4 Units
Lecture: 4 hours
A general understanding of the rights and responsibilities of both the visitor and the employee in a wildland recreation setting.
Field trips may be required.

122 FIRE ECOLOGY 3 Units
Lecture: 3 hours
The use of fire and its relationship to Sierra plant and animal communities.

130 WILD EDIBLE PLANTS 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Survey of wild edible plants with particular emphasis on Tuolumne County. Methods of collection, preserving and preparing plant material for domestic use. Historical uses of plant material, emphasizing acorn preparation. Survey of poisonous plants included.

133 WILD EDIBLE AND USEFUL PLANTS 3 Units
Prerequisite: Natural Resources 130.
Lecture: 2 hours
Laboratory: 3 hours
Survey of wild edible and useful plants, emphasizing nutrient content of plants and forms of plant preservation and preparation. Survey of maple sugaring and mushrooms. Exposure to plants used in the areas of basketry; dyeing; flute, clapper and pipe making; and herbal preparations.
Field trips may be required.

NATURAL RESOURCES TECHNOLOGY
See Page 30 for Certificate Requirements.

52 APPLIED WILDLANDS MANAGEMENT 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Techniques of managing wildlands for maximum forage, water, and soil quality. Field observations and applications for restoration and protection of range and watershed values. Field identification of important forage and browse species.
Field trips may be required.

55 INTERPRETIVE GUIDED TOURS 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Methods of meeting and serving diverse public groups in their social, cultural, and recreational use of multiple recreation lands.
Field trips may be required.

60 AERIAL PHOTOGRAPHY AND MAP INTERPRETATION 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Basic photogrammetric instruments and equipment. Techniques of delineating soil-vegetation types and distinguishing physical features on aerial photographs and topographic maps.
Field trips may be required.

63 WATER FOR CONSUMPTION 4 Units
Lecture: 4 hours
Study of present and future sources of community water supply with special attention to state standards for potable water. Analysis processing, treatment, quality control, storage and distribution of community water.
Field trips may be required.

81 CALIFORNIA WILDLIFE — GAME MAMMALS AND FURBEARERS 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Methods and problems of manipulating and appraising game mammals and furbearers. Field identification and life history of local game mammals and furbearers.
Field trips may be required.

83 CALIFORNIA WILDLIFE — UPLAND GAME AND FISH 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Methods and problems of manipulating and appraising upland game and fisheries habitats. Field identification and life history of local game birds and fish.
Field trips may be required.

PHILOSOPHY

101 KNOWLEDGE AND REALITY 4 Units
Lecture: 4 hours
Survey of the problems of philosophy with emphasis on epistemology, metaphysics and existentialism.

102 ETHICS AND RELIGION 4 Units
Lecture: 4 hours
Problems in ethics and philosophy of religion (Western and Oriental).

103 VALUES IN POLITICS AND ESTHETICS 4 Units
Prerequisite: Philosophy 101 or consent of instructor.
Lecture: 4 hours
Problems of individual and social values in political philosophy and esthetics.

105 ALTERNATE VIEWS IN PHILOSOPHY 4 Units
Prerequisite: Philosophy 101 or 102, or consent of instructor.
Lecture: 4 hours
Major viewpoints in philosophy studied by reading and discussing the original writings of the philosophers.

108 HUMANISTIC AND SCIENTIFIC THOUGHT 4 Units
(See also **Physics 108**)
Lecture: 4 hours
A study of the relationships between the sciences and the humanities, and the major problems in the philosophy of science.
(Credit for this course will be awarded for either Philosophy 108 or Physics 108 but not both. May not be repeated.)

125 TWENTIETH CENTURY PHILOSOPHY 4 Units
Lecture: 4 hours
A brief survey of the twentieth century philosophy emphasizing the leading exponents of each school of thought and their contributions to our understanding of humankind, nature, society, history, science, technology, human values, and the meaning of life.

PHYSICAL EDUCATION

Materials fees, special clothing, and field trips are required for some courses. These will be designated on the current class schedules.

101 INTRODUCTION TO PHYSICAL EDUCATION 2 Units
Lecture: 2 hours
Background and principles of Physical Education and sports. Study of the aims and objectives of

101 (continued)
modern physical education with a view toward development of basic philosophy and background for professional education.
Field trips may be required.

103 BASKETBALL: ADVANCED—THEORY AND PRACTICE 3 Units
Prerequisite: P.E. 120, Basketball, or consent of instructor.
Lecture: 1 hour
Activity: 4 hours
Advanced concepts, strategy, and practice necessary in the playing and understanding of collegiate basketball.
May be repeated two times.

105 PERSONAL FITNESS CONCEPTS AND EVALUATION 3 Units
Lecture: 2 hours
Activity: 2 hours
A study of "how," "why," and "what" of physical activity and exercise. This course is intended to help students make important lifetime decisions about their own personal fitness directions. Evaluative laboratory testing includes oxygen capacity, rest and exercise electrocardiography, flexibility strength and body composition analyses. An ensuing exercise prescription is individually designed to ameliorate determined weaknesses.

106 THEORY AND PRACTICE OF ADAPTIVE PHYSICAL EDUCATION 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Designed to provide formal training and practical experience for students interested in pursuing a career in physical education, physical therapy, corrective rehabilitative physical education, therapeutic recreation, corrective therapy and cardiac rehabilitation or any other area which involves working with the physically limited.

107 CORRECTIVE REHABILITATIVE PHYSICAL EDUCATION -ASSISTING 1-3 Units
Prerequisite: Physical Education 106.
Laboratory: 3-9 hours
Designed to allow P.E. 106 students who have gone through the training program to assist in P.E. 144 at the level of teaching assistants. Students will be able to effectively use the knowledge and skills learned in P.E. 106 and learn advanced techniques.

108 WEIGHT TRAINING PRINCIPLES AND PROGRAMMING 1 Unit
Lecture: 1 hour
A study of major theoretical concepts of weight training. Students are led in a clear, meaningful fashion from the physiological mechanisms underlying training techniques to actual practices of them.

110 INTRAMURAL LEADERSHIP 2 Units
Lecture: 2 hours
Instruction and practical experience in the organization and administration of the intramural sports program. Students will be required to coordinate and supervise an activity within the college program.

111a LEADERSHIP LABORATORY 1 Unit
Prerequisite: Previous or concurrent enrollment in P.E. 110.
Laboratory: 3 hours
Practical experience in the organization and administration of the intramural sports program. Students will be required to coordinate and supervise an activity within the college program.

111b LEADERSHIP LABORATORY 1 Unit
Prerequisite: P.E. 111a.
Laboratory: 3 hours
Continuation of P.E. 111a.

111c LEADERSHIP LABORATORY 1 Unit
Prerequisite: P.E. 111b.
Laboratory: 3 hours
Continuation of P.E. 111b.

112 THEATRE PRODUCTION: DANCE EMPHASIS 1-3 Units
Prerequisite: Audition
Laboratory: 3-9 hours
Directed activities in theatre production for public performance with a concentration in dance.
May be repeated without limit.

116 DANCE PRODUCTION 4 Units
Prerequisite: Audition.
Lecture: 1 hour
Laboratory: 9 hours
Dance production for public performance; theory and practice in choreography, performance styles, and dance rehearsal combined with theatrical structure, non-verbal dramatic techniques, and technical staging designed for concert presentation.
May be repeated without limit.

117 CHOREOGRAPHY AND COMPOSITION 4 Units
Prerequisite: Previous or concurrent enrollment in Modern Dance I or Modern Dance II or Ballet I or Jazz I or Physical Education 116.
Lecture: 3 hours
Laboratory: 3 hours
Exploration of choreography fundamentals through a problem solving approach. Studies deal with aspects of time, space, dynamics and design in movement with emphasis on extending communication skills of the body. Offered only once a year and not offered the same quarter as P.E. 116.

119 DANCE TOURING COMPANY 3 Units
Prerequisite: Physical Education 116 or consent of instructor.
Lecture: 1 hour
Laboratory: 6 hours
Dance performance company offering a variety of dances in styles ranging from modern, jazz and ballet to character and comedy, which will tour the Mother Lode Area performing for schools and community organizations. Dance workshops will be offered at selected sites.
May be repeated without limit.

Activity Courses

120 Series: Courses meeting 2 hours per week for 1 unit of credit.

BADMINTON
The techniques involved in basic strokes. Emphasis on rules, use and care of equipment, and singles and doubles class competition.
May be repeated three times.

BASKETBALL
Instruction and practice in the basic fundamentals of the game, including individual and team concepts with intra-class competition.
May be repeated three times.

BODY MECHANICS
Exercise for body balance, agility, coordination, confidence, poise, and weight control.
May be repeated three times.

BOWLING
Instruction and practice in the basic fundamentals of bowling emphasizing the four step approach. Lines (games) are bowled and scored for record.
May be repeated three times.

DANCE, AEROBIC
The development of aerobic dance routines for the non-dance student emphasizing cardiovascular fitness, coordination, flexibility, and balance.
May be repeated three times.

DANCE, FOLK
Instruction and participation in folk dances from countries around the world. Background information on dances, and an introduction to basic folk dance steps.
May be repeated three times.

FENCING
Introduction to foil fencing. Instruction in basic skills and rules of the sport.
May be repeated three times.

HATHA YOGA
Fitness through the practice of Hatha Yoga posture, movement, and breath exercises; progressive exercise emphasizing balance, coordination, strength, flexibility, concentration, and relaxation.
May be repeated three times.

VOLLEYBALL I
Basic techniques with emphasis on offensive and defensive tactics of team play. Rules and intraclass competition included.

130 Series: Courses meeting 3 hours per week for 1 unit of credit.

BALLET I
Introduction to fundamental classical ballet forms, including basic concepts, positions, and combinations designed to acquaint the student with the technical and expressive elements of ballet.

BALLET II
Prerequisite: Ballet I or consent of instructor.
Study of advanced techniques and principles of classical ballet including phrasing, combinations, and stylistic elements.
May be repeated three times.

DANCE, JAZZ I
Introduction to the fundamentals of jazz dance with emphasis on basic technique, rhythmical analysis, and various cultural and historical styles.

DANCE, JAZZ II
Advanced work in jazz dance with emphasis on developing stylistic elements and performance techniques. Specific attention given to learning extended movement combinations and compositional forms indigenous to American jazz.
May be repeated three times.

DANCE, MODERN I
Introduction to modern dance movement. Fundamentals, basic movement, and composition presented and practiced as an opportunity for the student to express himself/herself creatively through dance forms.

DANCE, MODERN II
Prerequisite: Modern Dance I or consent of instructor.
Advanced work on Modern Dance movement and elements of rhythm, space and dynamics, emphasis on contemporary dance techniques, individual and group choreography, and cultural influences on expressive dance forms.
May be repeated three times.

DANCE, SOCIAL I
Instruction and practice in the beginning ballroom and social dance steps including waltz, fox-trot,

tango, swing, Latin dances, and current fad dances.
May be repeated three times.

FOOTBALL, TOUCH
Rules, techniques, and strategy of touch and flag football with emphasis on strong fundamentals. Class participation in team play to enhance improvement.
May be repeated three times.

GOLF I
Instruction and practice in fundamentals.

GOLF II
Prerequisite: Golf I or consent of instructor.
Instruction and practice in skills, rules and strategy.
May be repeated three times.

GYMNASTICS
Class participation in all fundamental routines. Individualized instruction in basic stunts and use of gymnastic apparatus.
May be repeated three times.

INTRAMURALS
Intramural participation in varied sports activities. Low key approach to competition, with participation being the meaningful factor.
May be repeated three times.

JOGGING AND CONDITIONING
Instruction in progressive exercises: hiking, running and jogging techniques for physical fitness.

KARATE
Instruction and practice in the martial art of Karate. Emphasis on individual development in mental concentration and physical skills.
May be repeated three times.

MOVEMENT IMPROVISATION
Introduction to movement improvisation with emphasis on esthetic awareness through generation of new movement material and forms. Directed opportunity to explore physical exercise through creativity in dance movement motivated by various sources such as music, voice, shape, sports, etc.
May be repeated three times.

PADDLE TENNIS
Instruction and practice of the fundamental skills employed; an indoor activity adapted for court tennis.
May be repeated three times.

SELF-DEFENSE
A practical course in self-defense. Practice of various basic techniques and principles of balance, leverage, and momentum. Discussion of how to

avoid threatening situations in the home or on the street.
May be repeated three times.

SKIING CONDITIONING
Instruction, practice, and conditioning for intercollegiate competition in the Alpine and Nordic events of snow skiing.
May be repeated three times.

TENNIS I
Instruction and practice in fundamentals of Eastern grip tennis. Emphasis on development of sound ground strokes, serve and volley. Includes rules, scoring, and game play.

TENNIS II
Prerequisite: Tennis I or consent of instructor.
Instruction and practice in the advanced aspects of Eastern grip tennis. Emphasis on learning the different methods of serving, spins, pace, placement and their tactical application to the singles and doubles game.
May be repeated three times.

VOLLEYBALL II
Prerequisite: Volleyball I or consent of instructor.
An intermediate level of skills and strategies for the experienced player; and introduction to power volleyball play.
May be repeated three times.

WEIGHT TRAINING
Instruction in use of weights and body building equipment with emphasis upon individual program development.
May be repeated three times.

WRESTLING
Instruction in basic skills, knowledge, and strategy. Class participation to develop fundamental holds and movements.
May be repeated three times.

140 Series: Courses meeting 4 hours per week for 2 units of credit.

BACKPACKING I
Practical experience in the sport of backpacking. Selection and use of equipment, preparation, planning and physical performance of hiking and backpacking. Natural history interpretation related to backpacking experience.
Field trips may be required.

BACKPACKING II
Prerequisite: Backpacking I or consent of instructor.
Advanced practical experience in the sport of backpacking; intensive field activity in extended trail and cross-country packing; related techniques and equipment.
May be repeated three times.

BACKPACKING, WINTER
Prerequisite: Backpacking I or consent of instructor.
Introduction to snow camping, winter travel, and survival techniques. Practical experience in constructing and sleeping in igloos and snow caves. Discusses winter perils, mountain safety, and navigation.
May be repeated three times.

HORSEMANSHIP I
Fundamentals of Western style riding, as well as the care of the horse and equipment, feeding, grooming, tack, shoeing problems, common ailments, and their prevention. What to look for when purchasing a horse.

HORSEMANSHIP II
Prerequisite: Horsemanship I or consent of instructor.
An in-depth study of various horse training techniques and fundamentals. The use of training equipment and aids. A close study of ailments, unsoundnesses and their prevention and cure. Emphasis on training and corrective measures.
May be repeated three times.

JOGGING AND CONDITIONING: ADVANCED (Old Mill Run)
Designed to prepare students to run in the annual 6.2 mile Old Mill Run which starts and ends in Columbia State Park.
May be repeated three times.

MOUNTAINEERING I
Introduction to rope management, knots, and technical climbing equipment. Experience and practice in belaying, rappeling and the basic climbing skills.

MOUNTAINEERING II
Prerequisite: Mountaineering I or consent of instructor.
Introduction to direct aid climbing, jumar techniques, mountain rescue techniques, and advanced knots and rope management. Experience and practice in difficult free climbing, chock and piton placement, aid climbing, and rescue work.
May be repeated three times.

SOCCER
Instruction, practice, and participation in game play. Emphasis on rules, individual skills and strategy in the field.
May be repeated three times.

WINTER EXPEDITIONS
Prerequisite: Winter Backpacking or consent of instructor.
Practical experience in planning and carrying out a major winter expedition into or across the Sierra Nevada mountains. A three or four day expedition involving cross country travel on snow and snow camping is required. Covers mountain perils and

WINTER EXPEDITIONS (continued)

safety, special equipment, and high altitude physiology. Special equipment required.
May be repeated three times.

144 ADAPTIVE PHYSICAL EDUCATION 1-3 Units
Activity: 2-6 hours
Designed to offer individually prescribed fitness direction to the physically limited with emphasis on the improvements of cardiovascular flexibility and strength components.
May be repeated three times.

150 Series: Courses meeting 5 hours per week for 2 units of credit.

ALPINE SKIING
Instruction and practice in basic fundamentals of snow skiing on the slopes. Care and selection of equipment, terminology and safety included.

CROSS COUNTRY SKIING
Instruction and practice for snow skiing in the open country. Care and selection of equipment, safety, and outdoor orientation emphasized.
May be repeated one time.

INTERCOLLEGIATE ATHLETICS

These courses are for full-time students and require daily practice plus travel time and competition with other colleges.

160 Series: Courses meeting 10 or more hours per week for 2 units of credit. May be repeated for credit to limit of student's eligiblity.

BASKETBALL

TENNIS

VOLLEYBALL (Women's Rules)
Preparation and training for intercollegiate varsity competition. Participation in contests with other colleges will be scheduled.
Field trips are required.

ADULT FITNESS PROGRAM

170a CARDIAC THERAPY: PHASE IV 2 Units
Prerequisite: Primary Physician Referral.
Lecture: 1 hour
Laboratory: 3 hours
A secondary prevention program designed for patients with angina pectoris, healed myocardial infarctions, or post-cardiac surgical referrals whose functional capacity is relatively uncompromised. (Primary physician referral is mandatory.)
May be repeated without limit.

170b CARDIAC THERAPY: PHASE IV 2 Units
Prerequisite: Physical Education 170a.
Lecture: 1 hour
Laboratory: 3 hours
Continuation of Physical Education 170a.
May be repeated without limit.

171 INTRODUCTION TO ADULT FITNESS 3 Units
Lecture: 3 hours
An overview of the essential principles of physical fitness theory and health appropriate to adults; a survey of exercise theory and techniques designed for adults.

172 MULTIPHASIC FITNESS TESTING PROGRAM 1 Unit
Prerequisite: Physician Release Form.
Lecture: .5 hour
Activity: 1 hour
Physician supervised multiphasic fitness evaluation including exercise stress test on a treadmill or bicycle ergometer with electrocardiographic monitoring for the purpose of determining functional capacity and an ensuing safe exercise prescription. Evaluations also include pulmonary function, body composition to determine percent fat and blood chemistry.

173a ADULT FITNESS PROGRAM 2-3 Units
Activity: 4-6 hours
Individual evaluation of cardio-vascular function and development of a personalized prescription program for aerobic fitness improvement; monitoring and supervision of exercise regimens and related fitness activities for continued health and fitness maintenance.

173b ADULT FITNESS PROGRAM 2-3 Units
Prerequisite: Physical Education 173a.
Activity: 4-6 hours
A continuation of Physical Education 173a.
May be repeated three times.

175 HEALTH AND PHYSICAL FITNESS WORKSHOP 2 Units
Lecture: 1 hour
Activity: 2 hours
Instruction in the relationship between the human body, health and physical fitness. Testing to establish individual fitness status involves exercise electrocardiogram, body composition analysis, flexibilty and strength evaluations followed by the design of and participation in a personal fitness program with particular emphasis on aerobic type activities.
May be repeated without limit.

177 INTRODUCTION TO EXERCISE STRESS TESTING 3 Units
Lecture: 2 hours
Activity: 2 hours
The study of graded exercise tolerance testing; concepts, protocols, and practices in measuring cardio-vascular response and functional capacity employing the treadmill and bicycle ergometer.

PHYSICS

100 MODERN PHYSICS 3 Units
Prerequisite: Mathematics 101.
Lecture: 3 hours
An algebra level investigation of the special and general theories of relativity as well as the later physical theories that gave rise to the concepts of anti-matter and black holes.

108 HUMANISTIC AND SCIENTIFIC THOUGHT 4 Units
(See also **Philosophy 108**)
Lecture: 4 hours
A study of the relationships between the sciences and the humanities, and of major problems in the philosophy of science.
(Credit for this course will be awarded for either Physics 108 or Philosophy 108 but not both. May not be repeated.)

110a APPLIED PHYSICS 4 Units
Prerequisite: Mathematics 102.
Lecture: 3 hours
Laboratory: 3 hours
A trigonometry level investigation of physics that includes mechanics, heat, light, sound, electricity and magnetism, and an introduction to modern physics.

110b APPLIED PHYSICS 4 Units
Prerequisite: Physics 110a.
Lecture: 3 hours
Laboratory: 3 hours
Continuation of Physics 110a.

110c APPLIED PHYSICS 4 Units
Prerequisite: Physics 110b.
Lecture: 3 hour
Laboratory: 3 hours
Continuation of Physics 110b.

120a GENERAL PHYSICS 6 Units
Prerequisite: Mathematics 120abc or Mathematics 102 and concurrent enrollment in Mathematics 120a.
Lecture: 4 hours
Laboratory: 6 hours
A general calculus level investigation of physics covering the topics of mechanics, heat, light, sound, electricity and magnetism as well as modern physics.

120b GENERAL PHYSICS 6 Units
Prerequisite: Physics 120a.
Lecture: 4 hours
Laboratory: 6 hours
Continuation of Physics 120a.

120c GENERAL PHYSICS 6 Units
Prerequisite: Physics 120b.
Lecture: 4 hours
Laboratory: 6 hours
Continuation of Physics 120b.

POLITICAL SCIENCE

101 CONSTITUTIONAL GOVERNMENT 5 Units
Lecture: 5 hours
Basic principles of United States and California constitutional governments with emphasis on the dynamics of the American federal system, governmental powers and sources of power at the national, state, and local levels, and the rights and responsibilities of democratic citizenship.

110 AMERICAN POLITICAL THOUGHT 4 Units
Lecture: 4 hours
Historical survey of American political doctrines and issues; influence of political traditions on American politics; contemporary American political issues.

112 INTERNSHIP IN GOVERNMENT 1-12 Units
Prerequisite: Political Science 101 and acceptance in approved program (such as legislative internship).
Laboratory: 3 to 36 hours
Laboratory experience in the practical operation of Political Science through individual student participation in an approved internship program in national, state or local government.
May be repeated for a maximum of 12 units.

115 INTERNATIONAL RELATIONS 4 Units
Lecture: 4 hours
Dynamics of interstate power relations; diplomacy and international law; international, regional and supranational organizations; war and peace; foreign policy.

125 COMPARATIVE POLITICAL SYSTEMS 4 Units
Lecture: 4 hours
Comparative analysis of major political cultures and systems in the Western and non-Western world.

PSYCHOLOGY

101a GENERAL PSYCHOLOGY 5 Units
Lecture: 5 hours
An introduction to the field of psychology. Topics to be covered include conditioning, personality development, aggression, emotions, stress, anxiety, therapy, sexuality, values, self-direction, and self-control.

101b GENERAL PSYCHOLOGY 5 Units
Prerequisite: Psychology 101a.
Lecture: 5 hours
More advanced areas in psychology, including abnormal behavior and its treatment; stress and mental health; psychosomatic medicine; hypnosis and imagery; the nervous system; perception and optical illusions; memory; IQ testing. Also current issues in the field.
Field trips may be required.

103 SOCIAL PSYCHOLOGY 5 Units
Prerequisite: Psychology 101a.
Lecture: 5 hours
Interrelationship between the individual and social environment. Social influence upon motivation,

103 (continued)
perception, group pressure, conformity, attraction, prejudice, behavior. Development of changes of attitudes and opinions. Psychological analysis of small groups, social stratification and mass phenomena.
Field trips may be required.

105 PHYSIOLOGICAL PSYCHOLOGY 5 Units
Prerequisite: Psychology 101a.
Lecture: 5 hours
Study of the biological basis of behavior; body behavior relationships, neural, mechanical, and chemical integrating sytems.

107 SEARCH FOR SELF 2 Units
Lecture: 2 hours
An inquiry into "What does it mean to be me?"
Field trips may be required.
May be repeated one time.

115 INTRODUCTION TO TRANSACTIONAL ANALYSIS 2 Units
Lecture: 2 hours
Theory of transactional analysis and its application to interpersonal situations.

120 INTERPERSONAL GROWTH 2 Units
Lecture: 2 hours
A small group experience affording the opportunity to share opinions and feelings.
Field trips may be required.
May be repeated one time.

122 ASSERTIVE BEHAVIOR 2 Units
Lecture: 2 hours
Exploring responsible independence.
Field trips may be required.
May be repeated one time.

124 PSYCHOLOGY OF CONSCIOUSNESS 4 Units
Lecture: 4 hours
A cross-cultural approach to the study of human awareness using a bimodal or left brain, right brain model of consciousness including: EEG studies, psychoactive drugs, meditation, near-death experiences, non-western psychologies, and other non-traditional approaches to mind-brain and mind-body theories.

125 BIOFEEDBACK AND SELF-CONTROL 3 Units
Lecture: 2 hours
Laboratory: 3 hours
An introduction to and a practical application of the self-regulatory technique of biofeedback training.
(This course will be offered on a Credit-No Credit grading system except for those students who opt for a letter grade before the end of the fourth week of the quarter.)
May be repeated one time.

126 BIOFEEDBACK AND SELF-CONTROL LABORATORY 1 Unit
Prerequisite: Psychology 125 or consent of instructor.
Laboratory: 3 hours
A practical application of the self-paced regulatory technique of biofeedback training.
(This course will be offered on a Credit-No Credit grading system, except for those students who opt for a letter grade before the end of the fourth week of the quarter.)
May be repeated two times.

130 PERSONAL AND SOCIAL ADJUSTMENT 5 Units
Lecture: 5 hours
Group process experience in which students have the opportunity to learn more about themselves in relation to others.
Field trips may be required.
May be repeated one time.

144 CREATIVE PROCESS IN GROUPS 4 Units
Prerequisite: Psychology 101a.
Lecture: 4 hours
Creative process of small groups; understanding the creative potential in interpersonal relations.

145a DEVELOPMENTAL PSYCHOLOGY 4 Units
Prenatal Through Early Childhood
Prerequisite: Psychology 101a.
Lecture: 4 hours
Research and theories in developmental psychology from prenatal life through early childhood, covering physical, social, emotional, cognitive, language, and personality development. Issue of heredity and environment considered.

145b DEVELOPMENTAL PSYCHOLOGY 4 Units
Later Childhood Through Adulthood.
Prerequisite: Psychology 101a. Psychology 145a recommended.
Lecture: 4 hours
Research and theories in developmental psychology from later childhood through adulthood, covering continuing developmental changes and special concerns of these years, e.g., peer acceptance, sexuality, sex roles, drug usage, parent-child relations, career choices, mid-life crisis, etc.

160 PERSONALITY THEORY 5 Units
Prerequisite: Psychology 101a.
Lecture: 5 hours
A survey course of the various theories of personality development.

SEARCH AND RESCUE
See Page 31 for Certificate Requirements.

103 ENVIRONMENTAL INJURIES 2 Units
Prerequisite: Health Education 115 or Health Occupations 103 recommended.
Lecture: 2 hours
A review of injuries caused by recreational and vocational activities in the outdoors, including heat, cold, water, altitude, and animal-caused injuries.

105 MOUNTAIN MEDICINE 1 Unit
Prerequisite: Health Education 115 or Health Occupations 103 recommended.
Lecture: 1 hour
Review of common injuries and illness encountered in the outdoors. Emphasis on improvised treatment of trauma with a minimum of manpower, equipment and mobility, includes discussion of psychological aspects, proper nutrition and diseases arising from travel in rural areas and recommended first aid supplies.

110 INTRODUCTION TO SEARCH THEORY 3 Units
Lecture: 3 hours
An overview of search theories as developed by the National Park Service and the National Association for Search and Rescue.

111 INTRODUCTION TO SEARCH MANAGEMENT 3 Units
Prerequisite: Search and Rescue 110.
Lecture: 3 hours
An in-depth presentation of those areas unique to search management. The student will be taken through selected chalkboard search missions and assume the role of a search management person. Special considerations will be given to base camp and communications management as well as proper utilization of personnel, statistical justifications, and termination factors.

112 MANAGING THE SEARCH FUNCTION 3 Units
Lecture: 3 hours
A five-day intensive training seminar in search management. This course is a comprehensive review of Search and Rescue 110 and expands into multi-agency considerations. Designed for the in-service professional or volunteer. National Association of Search and Rescue certification available to the student upon successful completion of course.

114 INTRODUCTION TO TRACKING AND SIGN CUTTING 1 Unit
Lecture: 1 hour
An overview of current tracking theories and techniques as developed by the U.S. Border Patrol.
Field trips may be required.

116 THE USE OF DOGS IN SEARCH AND RESCUE OPERATIONS 1 Unit
Lecture: 1 hour
Designed to familiarize search and rescue personnel with the uses and limitations of SAR dogs; availability of dog units, call-out procedures, OES transportation availability, weather, terrain factors, avalanche dogs and night searching.
Field trips may be required.

118 BASIC SURVIVAL SKILLS 2 Units
Lecture: 2 hours
A seminar in short-term survival in various wilderness environments.

120 COLD WEATHER SURVIVAL SKILLS 1.5 Units
Lecture: 1.5 hours
A seminar in short-term survival in cold and wet wilderness environments. Topics to include psychological skills, equipment preparedness, emergency prevention, adaptation of basic skills to the factors of snow, rain, and high winds.

122 WILDERNESS NAVIGATION 2 Units
Lecture: 1.5 hours
Laboratory: 1.5 hours
Review of useful maps, compass and navigation techniques for outdoor activities; wilderness route-finding and orientation using terrain clues, map and compass, reduction of error via multi-person techniques and concise communicaton of location.

126 INTRODUCTION TO NON-WINTER GRID TECHNIQUES 1 Unit
Lecture: 1 hour
An overview of current non-winter grid search techniques as developed by William G. Syrotuck and the National Association of Search and Rescue.

130 INTRODUCTION TO RESCUE TECHNIQUES 4 Units
Lecture: 4 hours
A survey course covering the following three specialized areas critical to an effective and field safe search and rescue person; rescue carries, rope management and communication.

132 ASCENDING AND DESCENDING TECHNIQUES IN RESCUE 2 Units
Prerequisite: Search and Rescue 130 or consent of instructor
Lecture: 1.5 hours
Laboratory: 1.5 hours
Review of rope safety techniques for rescue personnel with emphasis on methods of ascent and descent for rescuer and ambulatory victims in various rescue environments. Instruction and demonstration of safe techniques for the ascent and descent of slopes, buildings and cliffs. Emphasis on rope-safety techniques; knots, belaying and anchors; basic four-point climbing techniques and use of friction knots and mechanical ascenders. Handling and safe use of fire-service ladders reviewed.
Field trips may be required.

134 HELICOPTER OPERATIONS AND PERSONNEL SAFETY 1 Unit
Lecture: 1 hour
The role of the helicopter in rescue situations with emphasis on the role of ground rescue personnel.

134 (continued)
Helicopter safety rules, interagency helicopter request information and procedures, selecting a landing zone, evaluations, inserts, crash procedures, and communications.

136 INTRODUCTION TO LITTER MANAGEMENT 2 Units
Lecture: 2 hours
Instruction in techniques used to evacuate injured parties over gentle and moderate terrain in urban settings. Demonstration of the use of the Stokes litter in conjunction with mechanical advantage rope systems in gentle and moderate terrain situations. Review of rope safety belaying and anchoring techniques.

138 TECHNICAL LITTER EVACUATION *2 Units*
Prerequisite: Search and Rescue 130, Search and Rescue 132, or consent of instructor.
Lecture: 1 hour
Laboratory: 3 hours
Instruction and demonstration of techniques used to evacuate injured parties over steep terrain in various settings; use of rescue litters in conjunction with mechanical advantage rope systems in high angle ascending, descending, and traversing rescue situations; review of rope safety belaying and anchoring techniques.

142 VEHICLE EXTRICATIONS 2 Units
Lecture: 2 hours
Use of the Hurst Tool and Black Hawk Extrication kits; hands-on instruction on various extrication techniques with special emphasis given to patient management and handling at the accident scene.
Field trips may be required.

144 INTRODUCTION TO DIVE RESCUE 3 Units
Prerequisite: Basic scuba diver certificate.
Lecture: 2 hours
Laboratory: 3 hours
A course designed to train persons as basic rescue scuba divers. Students must supply their own dive gear.

145 DIVE RESCUE 2 Units
Prerequisite: Search and Rescue 144 or consent of instructor.
Lecture: .5 hours
Laboratory: 4.5 hours
Designed to develop basic rescue scuba divers who have completed Search and Rescue 144 into fully certified advanced open water divers and Public Safety Scuba Divers. Students must supply their own dive gear.

146 INTRODUCTION TO SWIFTWATER RESCUE 2 Units
Prerequisite: Search and Rescue 130 or consent of instructor.
Lecture: 1.5 hours
Laboratory; 1.5 hours
Designed to develop a sense of confidence in rescue personnel dealing with swift water rescue situations. Topics include: swift water physiology,

146 (continued)
equipment, and basic swiftwater rescue techniques.

147 ADVANCED SWIFT WATER RESCUE 1 Unit
Prerequisite: Search and Rescue 146.
Lecture: .5 hour
Laboratory: 1.5 hours
Organization of swiftwater rescue. The practical and theoretical aspect of water rescue. Special consideration given to the applicable aspects of technical alpine rescue.

152 RESPONSE TO RADIATION EMERGENCIES 1 Unit
Lecture: 1 hour
An overview of the problem of radiation emergencies including the history of radiation accidents and basic radiation physics; monitoring devices, emergency response to radioactive accidents and procedures for emergency department personnel.

154 INTRODUCTION TO AVALANCHE RESCUE 2 Units
Lecture: 1.5 hours
Laboratory: 1.5 hours
Introduction to the basic concept of avalanche. Study of the snowpack, meterology, stability evaluation, avalanche phenomena, avalanche safety, avalanche search and rescue.

158 HEAVY DUTY RESCUE 3 Units
Prerequisite: Search and Rescue 130 recommended.
Lecture: 2 hours
Laboratory: 3 hours
Training in safe rescue techniques relating to disasters associated with building collapse, mass transportation, caves and mines, including organization, procedures, and resources.

160 EMERGENCY AND DISASTER PLANNING 3 Units
Lecture: 3 hours
A course designed primarily for persons responsible for preparing emergency and disaster plans for public and private organizations, or other persons with an interest in the mitigation of emergencies.

SKILLS DEVELOPMENT

50 BASIC READING 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Improvement of reading and study skills necessary for college level work.
May be repeated one time.

55 G.E.D. PREPARATION 2 Units
Lecture: 1 hour
Laboratory: 3 hours
Designed to teach the general skills needed to pass the General Educational Development test.

60 MATHEMATICS SKILLS 1-3 Units
Laboratory: 3-9 hours
Individualized instruction in fundamental operations with whole numbers, fractions, decimals.
May be repeated for a maximum of 3 units of credit.

61 BASIC ARITHMETIC 1-3 Units
Laboratory: 3-9 hours
Basic course in arithmetic, starting with percentages.
May be repeated for a maximum of 3 units of credit.

62 REVIEW ALGEBRA 1 Unit
Prerequisite: High School Algebra
Laboratory: 3 hours
Individualized instruction in review of high school algebra.
May be repeated for a maximum of 2 units of credit.

70 WRITING SKILLS 1 Unit
Laboratory: 3 hours
Individualized instruction and self-instructional material in specific writing skills units.
May be repeated for a maximum of 3 units of credit.

75 COLLEGE SPELLING 1-2 Units
Laboratory: 3-6 hours
A course to help students improve their spelling skills.
May be repeated for a maximum of 3 units of credit.

80 READING DEVELOPMENT 1-3 Units
Laboratory: 3-9 hours
Individualized instruction and self-instructional materials in specific reading skills units.
May be repeated for a maximum of 3 units of credit.

87 VOCABULARY DEVELOPMENT 1 Unit
Laboratory: 3 hours
A course to help readers improve their vocabulary skills.
May be repeated for a maximum of 3 units of credit.

88 SPEED READING 1-2 Units
Laboratory: 3-6 hours
Designed to help competent readers improve their reading rate and skimming and scanning skills, to facilitate rapid reading for any purpose.
May be repeated for a maximum of 3 units of credit.

90 STUDY SKILLS 1-3 Units
Laboratory: 3-9 hours
Improvement of the basic study skills.
May be repeated for a maximum of 3 units of credit.

92 LIBRARY SKILLS 1 Unit
Laboratory: 3 hours
A course to help students develop skill in using the library.

95 TEST TAKING SKILLS 1 Unit
Laboratory: 3 hours
A course designed to help students develop skills in taking tests and examinations.

97 DIAGNOSTIC LEARNING 1-4 Units
Prerequisite: Diagnostic assessment.
Lecture: 1-4 hours
Intensive diagnostic-prescriptive instruction for students with learning disabilities who require specialized assistance in order to pursue regular college courses. An individualized educational plan based upon the unique learning needs of the student will be designed and implemented.
May be repeated for a maximum of 8 units of credit.

98 PEER TUTORING 2 Units
Prerequisite: Approvals of tutoring instructor, tutorial coordinator, and instructor in the discipline to be tutored.
Lecture: 1 hour
Laboratory: 3 hours
Provides students with an opportunity to give academic assistance to other students.
(Course will be offered for Credit-No Credit only).
May be repeated one time.

SOCIAL SCIENCE

55 INTRODUCTION TO CRISIS INTERVENTION 3 Units
Lecture: 3 hours
Examination of knowledge and skills necessary for effective initial intervention when a social crisis occurs in families or for an individual.

140 HUMAN SEXUAL BEHAVIOR 3-5 Units
Lecture: 3-5 hours
Exploration of issues in human sexuality from the perspective of the social sciences. Discussion of sexual behavior, feelings and attitudes as they affect one's self and others.
(Three unit course offered evenings only).

SOCIOLOGY

See Page 29 for Human Services Certificate Requirement.

101 PEOPLE IN GROUPS: INTRODUCTION TO SOCIOLOGY 5 Units
Lecture: 5 hours
People in relation to their physical, cultural, and social environment, with emphasis on the socialization process, stratification, sex roles, deviance, and social control.

102 AMERICAN SOCIAL PATTERNS 5 Units
Lecture: 5 hours
The study of social organization focusing on the major components, such as family, religion, education, economics, politics, and technology; group networks and formal organizations; and social change.

110 DEVIANCE AND CONFLICT 5 Units
Lecture: 5 hours
The analysis of deviant behavior and social disorganization theories and trends in selected topics such as sexual deviance, family disorganization, aging, death, suicide, mental illness, drugs, medical care, population problems, poverty, crime, war.
Field trips may be required.

111 CRIME AND DELINQUENCY 4 Units
Lecture: 4 hours
Sociological analysis of criminal behavior related to social structure and the criminalization process. Juvenile delinquency related to the family, peer groups, community, and institutional structures. Roles of law enforcing and other community agencies in crime and delinquency control.

112 FAMILY, MARRIAGE AND THE INDIVIDUAL 4 Units
Lecture: 4 hours
The family as a social unit of interacting personalities; historical and structural development of the family life in different cultures; functions, duties, and problems of family life, factors underlying family disorganization.

119 WOMEN IN SOCIETY 4 Units
Lecture: 4 hours
Study of women's role in the modern world. Emphasis on the changing role of women in America: sex roles, alternative family structures, problems in the areas of employment, child care, legal rights, educational opportunities and political representation.
Field trips may be required.

127 AGING 4 Units
Lecture: 4 hours
Selected issues concerning the process of aging; the socio-psychological perspectives of older persons, and public concerns with which the society becomes involved.
Field trips may be required.

128 DEATH AND DYING 4 Units
Lecture: 4 hours
Examination of the student's feelings, beliefs, and values regarding death and dying; study of the changing technology and ethical concerns with which the society becomes involved.
Field trips may be required.

140 HUMAN SERVICES 4 Units
Prerequisite: Sociology 101 or Psychology 101a or consent of instructor.
Lecture: 2 hours
Laboratory: 6 hours
Study and development of the skills needed for community social services and some of the helping professions; direct participation in an organized community human service agency.

141 HUMAN SERVICES LABORATORY 2 Units
Prerequisite: Sociology 140 in the quarter immediately preceding.
Laboratory: 6 hours
Continuation of skills needed for community social services and some of the helping professions through direct participation in an organized community service agency.

SPEECH

101 FUNDAMENTALS OF SPEECH 5 Units
Lecture: 5 hours
Principles of oral communication; speech composition and techniques of presenting informal and formal speeches. Emphasis given to organization, ideas, critical thinking, and evaluative listening.

115 GROUP DISCUSSION 4 Units
Lecture: 4 hours
Communication processes applied to informal group discussions. Individual and group participation in problem solving discussions, parliamentary procedures, and various speaking activities.

135 EFFECTIVE INTERPERSONAL COMMUNICATION 2 Units
Lecture: 2 hours
Understanding and utilizing techniques of communication in an effective manner for better interaction between people in one-to-one and small group situations.

150a SIGN LANGUAGE 2 Units
Lecture: 2 hours
Developing receptive and expressive skills in sign language, including skills in finger spelling. Receptive skills emphasized.

150b SIGN LANGUAGE 2 Units
Prerequisite: Speech 150a or consent of instructor.
Lecture: 2 hours
Developing advanced level receptive and expressive skills in conversational sign language and finger spelling.
May be repeated one time.

TEACHER AIDE TRAINING
See Page 32 for Certificate Requirements

50 SURVEY OF EDUCATION 3 Units
Lecture: 3 hours
Personal orientation to teaching as a paraprofessional. The goals and objectives of public education, the teacher's role, the school system and its organization; students as learners.

55a TEACHER AIDE TRAINING: Beginning 3 Units
Lecture: 3 hours
Preparation for teacher aide duties which assist teachers in the classroom learning process with emphasis on the school environment as the place for learning.

55b TEACHER AIDE TRAINING: Intermediate 3 Units
Prerequisite: Teacher Aide 55a or consent of instructor.
Lecture: 3 hours
The classroom environment focused on the personalities in the classroom: teachers, students, teacher aides, and interpersonal relationships.

55c TEACHER AIDE TRAINING: Advanced 3 Units
Prerequisite: Teacher Aide Training 55b.
Lecture: 3 hours
Continuation of Teacher Aide Training 55b. Focuses on classroom organization in local school districts; elementary student characteristics which enhance learning; and basic teaching techniques. Students will be required to spend a minimum of 20 hours observing and assisting a certified teacher in a local elementary school.

60 AUDIO-VISUAL MATERIALS IN CLASSROOM USE 3 Units
Lecture: 2 hours
Laboratory: 3 hours
Exploratory course in ways to assist classroom teacher to prepare, present, and fully utilize instructional media such as still and motion picture projection, graphic arts, audio systems, programmed material, bulletin boards, and other audio-visual materials.

65 READING FUNDAMENTALS FOR TEACHER AIDES 3 Units
Prerequisite: Teacher Aide 55a.
Lecture: 3 hours
Principles of teaching reading and the role of a teacher's aide. Includes approaches to reading; development of reading lessons; word analysis including phonics; use of manipulative aides; and individualized skill development.

WELDING TECHNOLOGY
See Page 32 for Certificate Requirements.

101 INTRODUCTION TO WELDING 3 Units
Lecture: 1.5 hours
Laboratory: 4.5 hours
Basic arc and oxygen-acetylene welding as it applies to shop and field techniques.

103 ADVANCED ARC WELDING TECHNIQUES 3 Units
Prerequisite: Welding Technology 101.
Lecture: 1 hour
Laboratory: 6 hours
Arc welding in all positions (flat, horizontal and overhead). Special emphasis on control of heat and distortion.

110 BLUEPRINT READING FOR WELDERS 2 Units
Prerequisite: Welding Technology 101.
Lecture: 2 hours
Designed to develop in the student the ability to interpret shop drawings and blueprints common to the welding trades.

120 PIPE WELDING 3 Units
Prerequisite: Welding Technology 103 or consent of instructor.
Lecture: 1 hour
Laboratory: 6 hours
Designed to familiarize students with all phases of pipe welding. Includes pipeline design and the fundamental skills involved in construction of the pipe weld.

122 ADVANCED PIPE WELDING 3 Units
Prerequisite: Welding Technology 120 or consent of instructor.
Lecture: 1 hour
Laboratory: 6 hours
Technical training and manipulative projects in construction of the pipeline weld, practical exercises in blueprint reading, shop drawing and pipe fitting. Designed to qualify the student for certification according to American Welding Society codes.

130 MAINTENANCE WELDING 2 Units
Prerequisite: Welding Technology 103.
Lecture: 1 hour
Laboratory: 3 hours
Special techniques used in building up shafts, pins, gears, housings, frames, logging bunks; fabrication repair and sheet metal.

132 ATTACHMENT REPAIR 2 Units
Prerequisite: Welding Technology 103.
Lecture: 1 hour
Laboratory: 3 hours
Repair of major heavy equipment components—emphasis on straightening bent and misaligned members, special electrodes, and hard surfacing techniques.

140 WELDING NON-FERROUS METALS 2 Units
Prerequisite: Welding Technology 103.
Lecture: 1 hour
Laboratory: 3 hours
Welding non-ferrous metals with the electric arc, oxygen-acetylene, and MIG and TIG processes.

145 METAL FABRICATION 3 Units
Prerequisite: Welding Technology 103 and Welding Technology 110.
Lecture: 1 hour
Laboratory: 6 hours
Project-oriented course designed to give students experience in building or modifying frames, chassis and support equipment. Aspects of layout,

145 (continued)

quality control, appearance and utility will be emphasized, as well as cost estimation.

160 PRACTICAL LABORATORY 2 Units

Prerequisite: Welding Technology 103.
Laboratory: 6 hours

The student shall gain practical experience by working on an individual project (including certification projects). Emphasis on quality, appearance and function.

May be repeated one time.

WORK EXPERIENCE

95 OCCUPATIONAL WORK EXPERIENCE (ALTERNATE TERM PLAN) 1-8 Units

Prerequisite: Employment approved by Work Experience Coordinator. Must have successfully completed 7 units at Columbia College. Must be enrolled in at least seven units including Work Experience. During Summer Session, must be enrolled in at least one other course.

Provides students with vocational learning opportunities through quarters of full-time employment alternated with quarters of instruction. The student employment must be related to educational or occupational goals.

May be repeated for a maximum of 24 units of credit.

97 GENERAL WORK EXPERIENCE 1-4 Units

Prerequisite: Employment must be approved by Work Experience Coordinator and concurrent enrollment in General Work Experience Coordinating class. Must be enrolled in at least seven units including Work Experience. During Summer Session must be enrolled in at least one other course.
50 hours of satisfactory paid employment equals one quarter unit.
40 hours of satisfactory non-paid work equals one quarter unit.

Provides students an opportunity to experience supervised employment in order to acquire desirable work habits and attitudes and to develop career awareness. The student's employment need not be related to the college program or occupational goal.

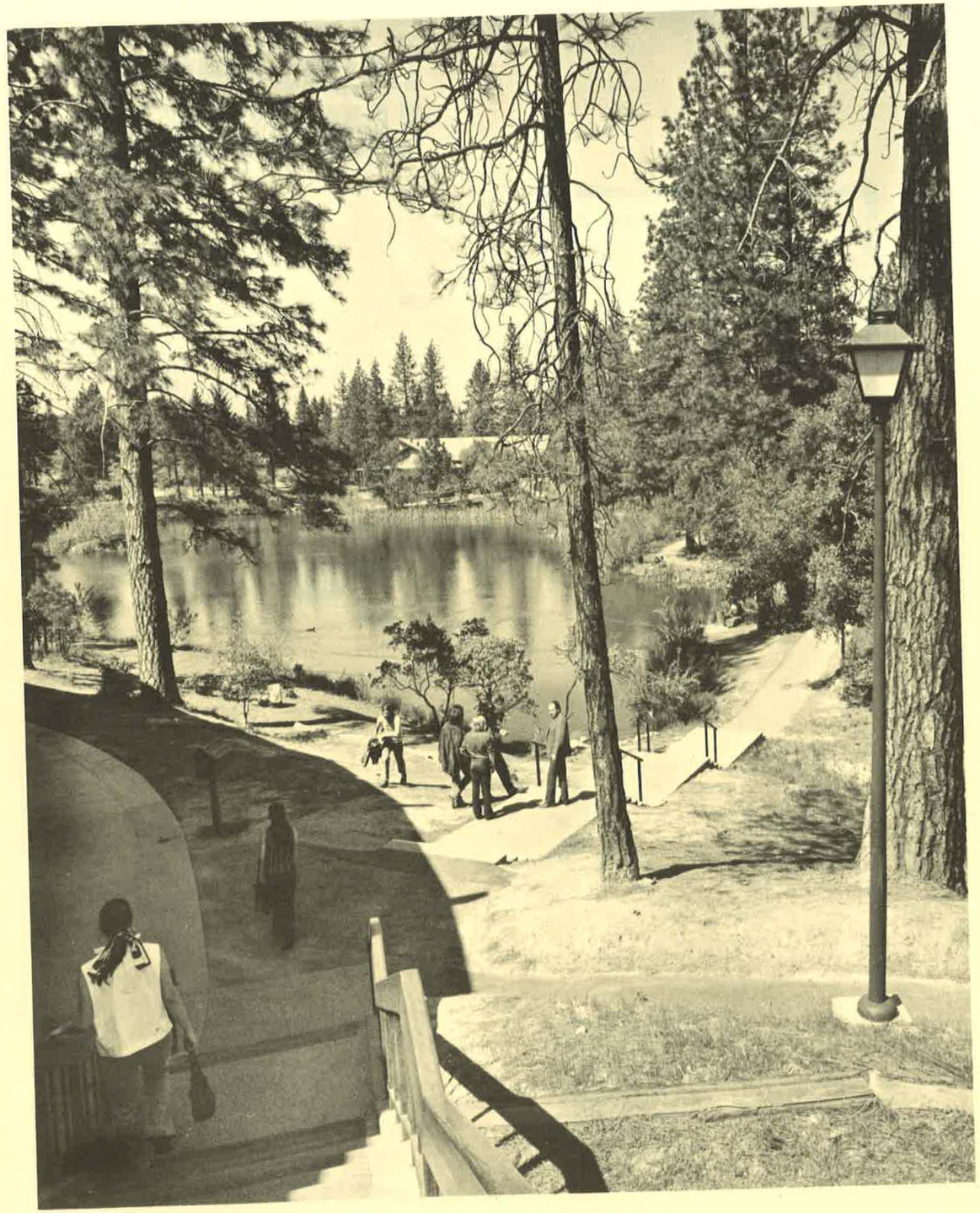
May be repeated for a maximum of 9 units of credit.

98 OCCUPATIONAL WORK EXPERIENCE 1-4 Units

Prerequisite: Employment must be approved by Work Experience Coordinator and concurrent employment in Occupational Work Experience Coordinating class. Must be enrolled in at least seven units including Work Experience. During Summer Session must be enrolled in at least one other course.
50 hours of satisfactory paid employment equals one quarter unit.
40 hours satisfactory non-paid employment equals one quarter unit.

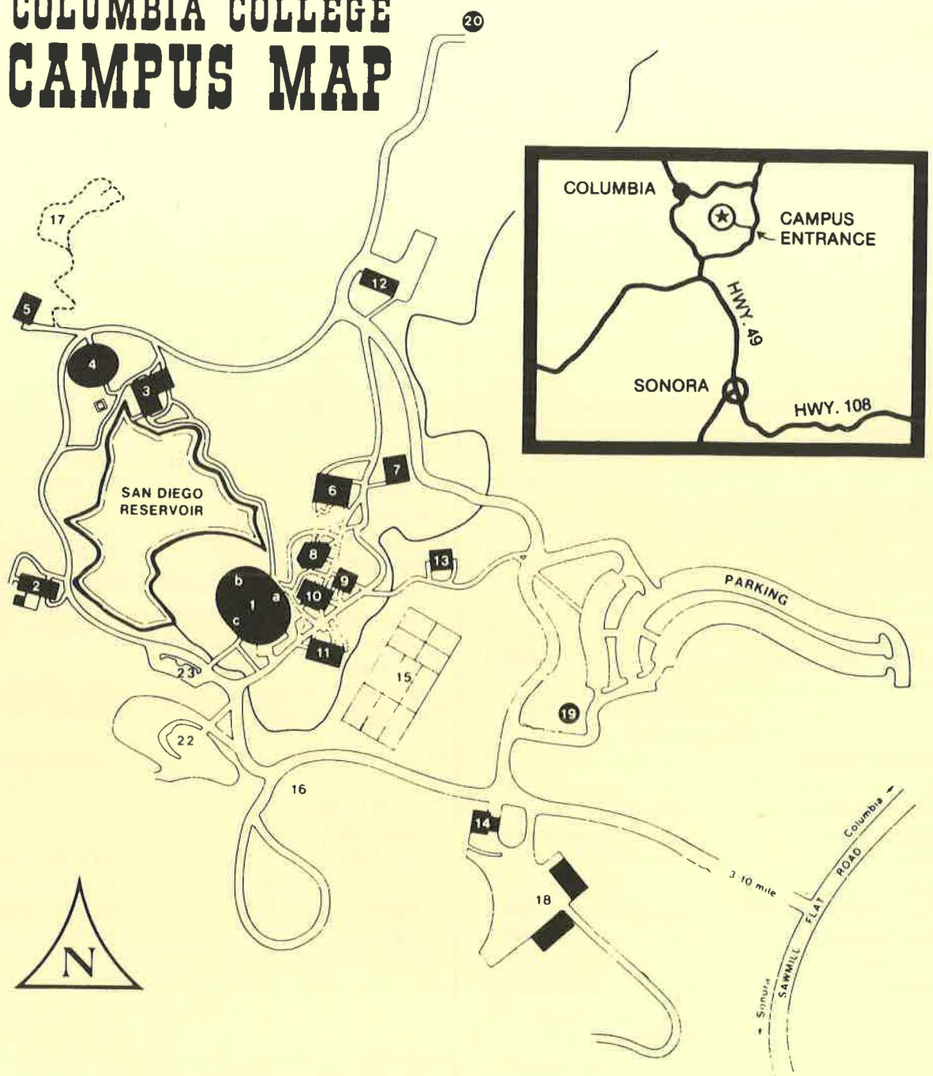
Provides students occupational learning opportunities through supervised employment. The student's employment must be related to educational or occupational goals.

May be repeated for a maximum of 24 units of credit, less any units earned in Work Experience 95 or 97.



· NOTES ·

COLUMBIA COLLEGE
CAMPUS MAP



KEY

1 Learning Resource Center, Rms. 100-110*
a) Admission Information b) Library c) President's Office
2 Creative Arts Center, Rm. 200*
3 Physical Science Center, Rms. 300-302*
4 Biological Science Center, Rms. 350-360*
5 Forestry and Natural Resources Center, Rms. 310-312
6 Interdisciplinary Center, Rms. 400-403*
7 Health Occupations Center, Rms. 500-501*
College Nurse
8 Forum, Rm. 600
9 Seminar Building, Rms. 610-611
10 General Education, Rms. 620-622
11 Business Education Center, Rms. 700-702*
12 Heavy Equipment Center, Rm. 800*
13 Physical Education Center, Rm. 900*
14 Fire Science Center, Rms. 1000-1001*
15 Tennis Courts
16 Judge Ross Carkeet Community Park
17 Nature Trail
18 Warehouse, Shipping, Receiving, and Maintenance
19 Mi-Wok Cultural Center
20 Astronomy Dome
21 Career Center—Job Placement (Building #1 lower floor)
22 Staff Parking
23 Handicapped Parking

* Restrooms in building

INDEX

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