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FALL SEMESTER, 1985

May 1 ........................... Beginning advisement and registration for continuing students for Fall Semester
July 1 ........................ Applications for admission and transcripts for day students should be on file
July 31 ........................ Beginning advisement and registration for Fall Semester for former students
August 2 ........................ Beginning advisement and registration for Fall Semester for new students
August 19 ........................ Instruction begins
August 30 ........................ Last day to enter a class
September 2 ........................ Labor Day Holiday
September 27 ........................ Last day to elect for CR/NC or letter grade
October 4 ........................ Deadline for filing for graduation or certificate for Fall Semester
November 11 ........................ Veterans Day Holiday
November 19 ........................ Beginning advisement and registration for Spring Semester for continuing students
November 25 ........................ Application for admission and transcripts for day students should be on file
November 26 ........................ Beginning advisement and registration for Spring Semester for former students
December 2 ........................ Beginning advisement and registration for Spring Semester for new students
December 21-January 7 ........................ Winter Recess
December 26 ........................ Application for admission and transcripts for day students should be on file
December 29 ........................ Deadline for filing for graduation or certificate for Spring Semester

SPRING SEMESTER, 1986

November 19 ........................ Beginning advisement and registration for Spring Semester for continuing students
November 25 ........................ Application for admission and transcripts for day students should be on file
November 26 ........................ Beginning advisement and registration for Spring Semester for former students
December 2 ........................ Beginning advisement and registration for Spring Semester for new students
January 8 ........................ Instruction begins
January 21 ........................ Last day to enter a class
February 14 ........................ Lincoln Day Holiday
February 17 ........................ Washington Day Holiday
February 18 ........................ Last day to elect for CR/NC or letter grade
March 20 ........................ Deadline for filing for graduation or certificate for Spring Semester
March 21-30 ........................ Spring Recess
February 18 ........................ Last day to enter a class
April 23 ........................ Last day to withdraw from course without penalty
May 19-22 ........................ Final examinations
May 22 ........................ Spring Semester ends
May 23 ........................ Graduation

SUMMER SESSION, 1986

June 9 ........................ Instruction begins
July 4-8 ........................ Independence Day Holiday
July 11 ........................ Six Week Summer Intersession Ends

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

1985

JULY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

AUGUST

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

SEPTEMBER

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

OCTOBER

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

NOVEMBER

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

DECEMBER

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1986

JULY

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AUGUST

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SEPTEMBER

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OCTOBER

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

NOVEMBER

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

DECEMBER

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
CERTIFIED STAFF
(Date of District appointment follows name.)

JERSEY H. JONES (1976)  B.A., University of California, Berkeley
                               M.A., Mills College

JAMES R. HASTINGS (1973)  A.A., American River College
                               B.A., California State University, Sacramento
                               M.A., University of Arizona, Tucson

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

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

LLOYD H. HOPPER (1976)  B.A., University of Nevada
                               M.A., California State University, Long Beach

NANCY T. HORNERBERG (1974)  B.S., University of Rochester
                               M.A., California State University, Los Angeles

WALTER L. LEINDE (1968)  B.A., Northern Illinois University
                               M.A., Northern Illinois University

RAYMOND D. LIEDELLICH (1981)  B.S., Bowling Green State University
                               M.A., California State University, Los Angeles

ROBERT H. PALMER (1976)  B.A., University of Arizona
                               M.A., University of Arizona

CUSTER H. PALMER (1976)  B.A., University of Arizona
                               M.A., University of Arizona

                               Computer Science

DAVID G. PURDY (1971)  B.A., California State University, San Jose
                               M.A., California State University, Fullerton

BLAINE D. ROGERS (1972)  A.A., Bakersfield College
                               B.A., California State University, Humboldt
                               M.A., California State University, Hayward

RICHARD L. ROGERS (1972)  B.A., University of the Pacific
                               Health Education, Health Occupations, Search and Rescue

MELBORN N. SIMMONS (1940)  Mathematics
                               B.S.E., Henderson State College
                               M.S., University of Southern California, San Jose

RAYMOND L. STEUBEN (1974)  B.A., University of California, Santa Barbara
                                M.S., University of California, Los Angeles
                                M.C., Library Services/ J.M.C.

V. PETER SULLIVAN (1961)  B.A., Modesto Junior College
                               M.A., California State University, San Jose

JANET M. SWEENEY (1984)  B.A., San Jose State College
                               M.A., California State University, San Francisco

CANDACE L. WILLIAMSON (1979)  B.A., California State University, Humboldt
                                M.A., California State University, Hayward

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

                               B.S., San Diego State University
                               M.S., State University of New York, New Paltz

JAMES R. KELLY (1968)  B.A., Pennsylvania State University
                               M.S., University of the Pacific

FLOYD L. HOPPER (1974)  Sociology
                               M.A., University of the Pacific

DEPARTMENT OF STUDENT SERVICES

DENISE F. DEATSCH (1978)  coordinator
                               B.A., California State College, San Diego
                               M.A., California State University, Los Angeles

                               B.S., California State University, San Jose
                               M.S., University of Southern California, Los Angeles

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

MELBORN N. SIMMONS (1940)  Mathematics
                               B.S.E., Henderson State College
                               M.S., University of Southern California, San Jose

RAYMOND L. STEUBEN (1974)  Director of Library Services/ J.M.C.
                               B.A., University of California, Santa Barbara

V. PETER SULLIVAN (1961)  Physical Education
                               B.A., Modesto Junior College
                               M.A., University of California, Los Angeles

JANET M. SWEENEY (1984)  Business
                               B.A., San Jose State College

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

DAVID I. WILLSON (1975)  Automotive Technology,
                               B.S., California Polytechnic State University

                               B.A., San Jose State College

ROBERTA A. BAKER (1974)  Assistant

RICHARD L. ROGERS (1972)  Health Education, Health Occupations, Search and Rescue

JERRY D. LYNCH (1971)  Business
                               B.A., Simon's College

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

CERTIFIED STAFF (Date of District appointment follows name.)

KATHLEEN L. ABBOTT (1976)  Account Clerk
                               B.S., California State University, Fullerton

ROSS L. ALDRICH (1975)  Business Services
                               Performing Arts Production Technician

MERLIN BART (1974)  Business
                               Instructional Aide, Art Technology

DOROTHEY M. BENTLEY (1976)  Secretary
                               Instructional Materials Center

SUZANNE K. COTE (1984)  Assistant Dean of Instruction

L. C. CRAIN (1976)  Accounting
                               Disabled Student Center

DOROTHY A. DANZ (1969)  Secretary
                               Disabled Student Services

DENISE F. DEATSCH (1978)  Assistant Dean of Instruction

TERRILL O. DEATSCH (1975)  Bus Driver/ Groundskeeper

DANIEL DEVITT (1984)  Supervisor
                               Life Skills

SALLY K. DIETSCHE (1985)  Assistant
                               Assistant, Life Skills

WILLIAM J. Gaiser (1978)  Secretary
                               Equipment Mechanic

Hazel Garaventa (1986)  Instructional Aide
                               Business

Doris I. Goldson (1979)  Media Assistant
                               Library

Linnette C. Grady (1975)  Media Assistant
                               Library

Laurel M. Grissly (1983)  Manager, Bookstore
                               Instructional Aide

Ruth O. Hagstrom (1980)  Manager, Bookstore
                               Library

doRoRs C. Hall (1975)  Manager, Bookstore
                               Library

NORINE D. HolmeS (1978)  Manager, Bookstore
                               Library

Amos Hannah (1984)  Admissions and Records
                               Laboratory Assistant

Dwain Jack (1974)  Skilled Maintenance Worker

Johnny Jack (1975)  Business
                               Public Information Writer

CLASSIFIED STAFF
(Date of District appointment follows name.)
LINDA J. KALEND (1976)  Tutorial Coordinator, Learning Skills
ELIZABETH KREPS (1984)  Program Aide, Career Center
FRANCES K. LEONE (1983)  Instructional Aide, Computer Science, Earth Science, Psychology
WENDY LINK (1984)  Media Assistant, Library A.V.
KENNETH R. LUCAS (1967)  Supervisor, Transportation/Grounds
WILLIAM L. LUCE (1976)  Custodian
DOROTHY A. MAECHLER (1981)  Accompanist/Instructional Aide, Music
JUDY MANN (1984)  Media Assistant, Library
TIMOTHY MANN (1983)  Athletic Equipment Attendant
ARDIS MARTINEZ (1984)  Typist Clerk, Student Services
PAULA A. MAUCERE (1979)  Instructional Aide, Learning Disabilities Center
ANDREW B. MAURER (1974)  Graphic Artist, Instructional Materials Center
JOHN H. MILLER (1972)  Supervisor, Buildings and Maintenance
NANCY M. MYERS (1982)  Media Assistant, Library

PATRICIA PANTALEONI (1985)  Secretary, Assistant Dean of Instruction
LUIS C. RAMIREZ (1970)  Supervising Custodian
MARGARET A. SCIARONI (1975)  Coordinator, College Re-entry and Student Placement Clerk, Admissions and Records
KATHLEEN SMITH (1984)  Account Clerk, Bookstore
JILL L. SOUTHARD (1983)  Instructional Aide, Physical Education
PATRICIA C. THOMAS (1972)  Account Clerk, Business Services
CAROL A. VAUGHN (1976)  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
JAMES B. WOOD, SR. (1977)  Custodian
MELINDA G. WRIGHT (1975)  Instructional Aide, Learning Skills

NOTES

ADVISORY COMMITTEES
ROBERT CRAVEIRO, M.D.
TED FERNISH, M.D.
RUSSELL HOENES, M.D.
JAMES HONGOLA, M.D.
DIXIE HUKARI, Inservice Director
Sonora Community Hospital
GARY JOHNSON, M.D.
LAWRENCE LONG, Administrator
Tuolomne General Hospital
DEE MINNEY, Registered Nurse
Sonora Community Hospital
JAMES MOSSON, M.D.
TERRIL SPITZL, M.D.
CHARLES WALDMAN, M.D.

COMMUNITY EDUCATION
GALEN ALBERTSON
CARROLL LANG
CONSEGUETO CLINTON
MARY LAYERONI
MARJORIE DURBAN
NANNIE GEBHARDT RASMUSSEN
LORRAINE KILLOUGH
DONALD SMILEY
HAL KYLE
LOIS ANN SMITH

PHYLIS KYLE

COMPUTER SCIENCE
BINKY DODD, Office Coordinator
Heron Manufacturing
PETER DOHMS, Vice President
Condor Mining Inc., Vice President
ROGER ELSWORTH, Programming Analyst
County of Tuolomne
DWAYNE MCDONALD, Assistant Superintendent
Tuolomne County Schools
SHERRI TUCKER, Data Processing Manager
The Paul Raupack Co.
SHARI WATERS, Data Entry Clerk
County of Tuolomne

DISABLED STUDENT SERVICES
BEVERLY BRITS, Teacher, Hearing Impaired
Sonora Elementary School
HALL DAVIS, Voc. Rehab. Counselor
Department of Rehabilitation
WAYNE FRANCIS, Student
JIM KINDLE, Director, Learning Skills Ctr.
Tuolomne Community College

SANDY KLUET, Director, Auxiliary Services
Tuolomne County Schools
DONNA LARSON, Social Security Representative
Social Security Administration
JANICE LUBECK, Case Manager
Valley-Mt. Reg. Learning Ctr.

CAROL MCBANE, Optometrist
General Practice
FRANK McNALLY, Registered Nurse
JEAN McNALLY, Physical Therapist

DRAFTING
NEIL BURCKART, President
Burckart Construction Company
DONALD GROVER, Architect
Donald Grover & Associates

GEORGE JACKSON, Engineer
Caliavers Atlantic Ltd.
MICHAEL PEREZ, Engineering Technician
U.S. Forest Service
JERRY SINKARD, Vice President
Raymond Vell & Associates

EXTENDED OPPORTUNITY PROGRAMS AND SERVICES
ELSIE BRUNO, Counselor
Columbia College
WALLACE DAY, Tuolomne/MiWuk Tribal Council Chairman
SUNNY HENDRICKS, Project Director
Tuolomne Rural Indian Health Project
JACKIE JACKMAN, Teacher
Vallecitos High School
EARLENE KELLER, Social Worker
Human Services Agency,
County of Tuolomne
NANCY BURGERS, Media Assistant
Columbia College
SHIRLEY PHILSON, Employment Services
Employment Development Dept.
GARY ROBLES, Businessman
VIOLA WESSEL, Community Representative

HOSPITALITY MANAGEMENT
DON CUNO, Owner
Black Bart Inn
JOHN HILLERMAN, Supt., Columbia District
California State Parks
DON MARTIN, General Manager
Kirkwood Caverns, Inc.
FRANK McNAMARA, General Manager
Weistock's Restaurant

FIREFIGHTING
WILLIAM COTR, Training Officer
Tuolomne Fire Dept.
MERRITT LOVEJOY, Dispatcher
U.S. Forest Service
GUY C. MILLS, Chief
Sonora Fire Department
DONALD NEWMAN, Battalion Chief
Calif. Dept. of Forestry
JAMES ROBROOK, Chief
Elberta Pass Fire Dept.

FORESTRY TECHNOLOGY/NATURAL RESOURCES TECHNOLOGY
MARK BEVAN, Forester Consultant
RANDY BURGESS, Forester
U.S. Forest Service
CHRIS CONRAD, Forester
Louisiana Pacific Corp.
ANNE DELANEY, Forester
American Forest Products
JOHN HILLERMAN, Superintendent
Columbia & Rail Queen State Historic Parks
LARRY LIPPERT, Forester
Calif. Dept. of Forestry

JIM MADDOX, Wildlife Biologist
Calif. Dept. of Fish & Game
JIM OWEN, Unit Ranger
Calif. Dept. of Fish & Game
RICHARD PLAND, Forester/Logging Supt.
Louisiana Pacific Corp.
BRIAN S. ROVELL, Fisheries Biologist
Calif. Dept. of Fish & Game
RICH SCHELL, Unit Forester
Calif. Dept. of Forestry
STEVE WATERMAN, Public Information Officer
U.S. Forest Service
CHARLES WENDT, Chief Ranger
Yosemite National Park

HEALTH OCCUPATIONS, L.V.N.
STAN BERRY, Administrator
Sonora Community Hospital
PAUL LAWTON, Director, Tuolomne Clinic
Tuolomne Co. Health Department
LAWRENCE LONG, Administrator
Tuolomne General Hospital
JOAN NELSON, Director of Nurses
Tuolomne County General Hospital
JOAN STOTHERS, Registered Nurse
Tuolomne County Nursing Association
RICHARD WING, Director of Nurses
Mark Twain Hospital

PRESIDENT'S ADVISORY COMMITTEE
ROBERT ALLEN, Instructor
Mark Twain Elementary School
JACK AMUNDSEN, Retired
State Forest Ranger
ROBERT BACH, Superintendent
Bret Harte High School District
MARGARET COFFILL, Community Leader
BLAINE CORNELLI, Supervisor
U.S. Forest Service
PAT DEAN, Director of Nursing
Sonora Community Hospital
CARLO DEFERRARI, Retired
Tuolomne Co. Clerk & Auditor
JACK EDDY, Businessman
OLIVER GARCIA, Retired Superintendent
Pacific Gas & Electric Co.
MARI莲EL HAMMOND, Manager
Security Pacific Bank
MAUREEN McCARTHY, Counselor
Sonora Union High School
JAMES McCLUSKEY, Pastor
Church of the 49'ers

HARVEY McGEE, Owner-Publisher
The Daily Union Democrat

ORVILLE MILLHOLLIN, Superintendent
Tuolumne County Schools

SHARY MORRIS, Owner
Penny Candy Shop

JOYCE PATTERSON, Community Leader

RICHARD ROGERS, Retired
Columbia College Instructor

MILTON SCHROEDER, Manager
Pacific Gas & Electric Co.

IRVING SYMONS, Owner
Hales & Symons

STEVE SZALEY, Administrative Officer
County of Tuolumne

ROGER WAHLMAN, Doctor of Dentistry

SEARCH AND RESCUE
MARK BENNETT, Nor Cal S.A.R. Coord.
Office of Emergency Services

FRANK HELM, JR., Owner
Dodge Ridge Resort

JIM HONE, Captain
Santa Monica Fire Dept.

HANK Gilliam, Training Officer/Asst. Chief
U.C. Davis Fire Department

MIKE McGROARTY, President
Orange County Training Officers
LaHabra City Fire Dept.

MANUEL NAVARRO, Training Officer/Asst. Chief
Oakland Fire Department

JIM MURPHY, Sheriff’s Assistant
County of Tuolumne

JERRY SURBER, Battalion Chief/Trng. Officer
City of Modesto Fire Dept.

TEACHER AIDE
SHARON BENINCASA, Teacher Aide
Sonora Elementary School

PATRICE HENSON, Special Ed. Substitute Aide
Tuolumne County Schools

MARY JOHNSON, Kindergarten Teacher
Sonora Elementary School

SANDY KLUTD, Director of Special Ed.
Tuolumne County Schools

JACKIE LATTUADA, Kindergarten Teacher
Sonora Elementary School

JACKIE MIEROP, Resource Teacher
Tuolumne County Schools

MADELINE SHARP, Principal
Twain Harte Elementary

WELDING TECHNOLOGY
BILL HOLMAN, Manager
Tuolumne Foundry

MIKE MAHR, Welding Instructor
Sonora Union High School

ROBERT TROTTER, Welder

BOB VARGAS, Maintenance Supervisor
Calaveras Asbestos Co.

RICHARD WING, Director of Nurses
Mark Twain Hospital

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 elector. The district is geographically one of the largest in the State and transects more than 100 miles of the fertile San Joaquin Valley in reaching 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. Starting on the quarter system, Columbia College changed to the semester system on July 1, 1984.

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 forested land and 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.


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, a useful and contributing member of society. This objective will be accomplished through a living, dynamic and continuing experience in which each individual confronts 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 experience 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 its 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 program.

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. More specifically, it 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 student and particular goals. None shall base its existence upon the sole fact that it is an unusual occurrence at a community college.

This College shall enable each student to acquire the traits 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 methodological 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. The 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 comprehensive 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. Remedial Education Function
Assist the student to acquire those basic competencies needed for effective participation in programs leading to his/her goal.

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

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

COLUMBIA COLLEGE

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 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 educational enrichment, 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
Community Services 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 programs.

NON-DISCRIMINATION
In compliance with Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975, Columbia College does not discriminate on the basis of race, color, national origin, sex, handicap or age in its educational programs or employment.
Inquiries concerning the application of the above Federal laws to programs or activities of the College may be directed to the following persons at Columbia College, P.O. Box 1849, Columbia, CA 95310:

Title IX: Candace Williamson
(209) 533-5216

Section 504: Mr. Paul Lockman, Director
Handicapped Students Program
(209) 533-5132

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.

OPEN CLASS POLICY

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

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 student whose legal residence is in another state and pays the out-of-state fee.
4. Is an international student who complies with special admission 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. A minor's residence is the same as that of his/her parents or legal guardian.

Admission of High School Students
High school students in their junior or senior year, upon written authorization of their principal and the College, the student can profit from credit units earned.

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.

Readmission
A student who plans to return to Columbia College after an absence of one academic 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 semester. 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 semester of the academic year. The Schedule of Classes contains information regarding registration dates and special instructions for registering in classes.

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.

Application for Admission
All entering students are required to submit the following information to the Admissions and Records Office.

1. Complete the COLUMBIA COLLEGE INTERNATIONAL STUDENT SUPPLEMENTAL APPLICATION FOR ADMISSION, available from Columbia College, high school counselors in the Yosemite Community College District or may be obtained by writing to the College.
2. Submit the original or certified copy of all transcripts of previous schools attended that are equivalent to high school or college level.
3. Submit official results of the Test of English as a Foreign Language (TOEFL) if your native language is other than English. (Citizens of Canada, Great Britain, Ireland, Australia and New Zealand whose native language is English are exempt from taking the TOEFL.)
4. Furnish evidence of satisfactory financial support by completing the Columbia College Financial Information Form and providing a written guarantee from the bank of a parent, relative or sponsor in the United States.
5. Furnish two letters of recommendation, one of which must be from a teacher with whom you have studied recently attesting to your ability to do college work.
6. Have a physician complete the PHYSICIAN’S CERTIFICATE OF HEALTH. The certificate must be completed and show immunization clearance examination.
7. Furnish evidence of a sickness and accident insurance policy (if proof is not provided, applicant if accepted must purchase Columbia College International Student Sickness and Accident Insurance prior to registration).
8. Applicants selected for admission are responsible for making arrangements for their own housing and notifying the College of their local address. However, the College may be of assistance in providing information for housing upon arrival in the area.

Upon completion of all application requirements listed above by the deadline date, each applicant for admission will be given equal consideration along with all other qualified applicants. If selected, the I-20 form and information requesting travel plans will be mailed. The I-20 form must be presented to the appropriate officials in order to obtain an F-1 (Student) Visa and enter the United States.

A college counselor serves as advisor to international students. This college is authorized under federal law to enroll non-immigrant alien students.
STUDENT SERVICES

SERVICES

Eligibility is based on financial need and aid is distributed availability of funds. Students who need assistance to defray college expenses on a first-come, first-serve basis, contingent upon may obtain applications from the Financial Aid Office. An introduction to the College is provided for new incom­
gram of classes with the assignment of an advisor takes place at this orientation. Counseling Services are available to all students during the day by appointment or drop-in basis. Counseling is available on selected evenings by appointment or drop-in basis. Profes­
tional counselors are available to assist students with academic planning, determining vocational goals and resolving personal and social problems. Counselors also serve as academic advisors. When appropriate, testing ser­
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Faculty Advisement Program

Advisement is an on-going service whereby students meet with faculty to discuss educational objectives, plan an academic/vocational program, gain assistance in registra­
tion procedures, evaluate academic progress or gain refer­

Financial Aid

The College Financial Aid Office administers the follow­
ing Federal and State assistance programs: Pell Grants, Supplemental Educational Opportunity Grants, College Work Study Programs, National Direct Student Loans, Cal Grants, Educational Opportunity Programs and Ser­
vices, California Board of Governors Grants, waivers and fee credit, and California Guaranteed Student Loans. Students who need assistance to defray college expenses may obtain applications from the Financial Aid Office. Eligibility is based on financial need and aid is distributed on a first-come, first-serve basis, contingent upon availability of funds. In compliance with Federal regulations, a detailed finan­cial aid publication is available in the College Financial Aid Office, Admissions and Records Office and College Library.

Student Records Regulations

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 $2 each. Transcripts will not be issued to 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.

Privacy Rights of Students

All student records of Columbia College are kept in accord­
dance 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.

Learning Skills Center

The Learning Skills Center offers individual learning pro­grams to enhance the background of any student wishing to improve vocabulary, reading, writing, spelling, or math skills. Flexible scheduling allows students to use the Center anytime their schedules permit. Peer tutoring is also available for students needing extra assistance.

Disabled Student Services

The Disabled Student Services Program is designed to pro­vide access to educational programs and activities for students with disabilities. The College has made changes in campus design to allow the disabled student access to the College campus. Services offered:

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student must be enrolled in at least 12 units of credit and maintain a minimum of 2.0 G.P.A.

Career Center
The Career Center, located adjacent to the Library, offers materials and services to assist students with career planning. The Center maintains a variety of resources including occupational publications, newsletters, college catalogs and Eureka, a computerized vocational/educational information system.

Student Employment
Students seeking employment should register with the Career Center and update their availability each semester. Employers are encouraged to list job openings, full or part-time, with the Center which maintains a referral service for off-campus employment.

College Bookstore
The Manzanita Bookstore, located in the Learning Resource 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 $100 to $125 each semester 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 300 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, slide-tape kits, and Polaroid cameras. A typing room with 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.

Student Housing
Student housing is planned on campus. When available, priority will be given to full-time students. Additional information is available in the Admissions and Records Office or the Career Center. Information regarding off-campus housing is available in the Career Center and is posted on College bulletin boards.

Security/Parking
Campus Security is available to assist students, staff and visitors in case of emergency. Assistance is available at the Dean of Student Services Office or the Campus Fire Department. The College maintains parking areas for students, staff, disabled persons and visitors. Parking regulations are strictly enforced by Campus Security. A fee is charged for parking.
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 semester. 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: semester unit, semester 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 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 - Not included in computing grade point average.
I - Not included in computing grade point average.
CR, NC, IP, RD - Not included in computing grade point average.

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

GPA = Total grade points earned
Total semester 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 = 40 grade points
16 units attempted

The result in this example is a GPA of 2.50.

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 semester. 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 Schedule of Classes for designation.
of those classes. Students who are not eligible for self-
programming must have completed (15) semester units with at least a 3.0 G.P.A., thirty (30) semester units with at least a 2.5 G.P.A., or forty-five (45) semester units with at least a 2.0 G.P.A., at any ac-
ccredited college or university.

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 at least one semester (12 units) in residence and have a Grade Point Average of 2.5 either cumulative or for the previous semester as a full-time student.
2. have written approval of the instructor directing the student’s Independent Study.
3. have a cumulative Grade Point Average of 2.0 or better.

Independent study courses are not subject to the above limitations, but other transfer institutions may reject academic renewal action.

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 semester or will automatically revert to the alternate grade assigned by the instructor on the Incomplete Grade Removal Contract. Any course in which a student does not complete 60% of the units or 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.

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3. have a cumulative Grade Point Average of 2.0 or better.

Independent study courses are not subject to the above limitations, but other transfer institutions may reject academic renewal action.

Incomplete Grades

An incomplete grade (“I”) may be given for an unforeseeable emergency and justifiable reason if a student does not complete all requirements.

Credit by Examination

A student may challenge a course by examination and ob-
tain credit. Grades and grade points are entered on the stu-
dent’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 ac-
celerated 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 ex-
amination. A maximum of 20 units may be earned by Credit by Examination. Credit granted by examination at accredited colleges will be accepted; such credit will be in-
cluded 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 12 units of work in residence.
3. have a cumulative Grade Point Average of 2.0 (C/C average).

PROCEDURE

The student must make arrangements for credit by exam-
ination with the individual instructor, who, on approval, will outline the challenge requirements and schedule the ex-
amination. Whatever grade the student earns will be entered on his/her record at the end of the term.

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 semester units will be

allowed for courses taken by correspondence from ac-
ccredited institutions.

Credit for Military Service

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

1. Two semester units and waive P.E. requirement for
   corresponding course.
2. Credit for military service schools in accordance with credit recommendations published by the American Council on Education.
3. Credit for training completed at U.S. Armed Forces 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 Col-
   umnia 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 20 ungraded 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. 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 semester, the following classifications have been established:

Full-time — registered for 12 or more units.
Freshman — 30 units completed.
Sophomore — 30 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 because of excessive absence.

Absence from the first class meeting may result in registra-
tion 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 chang-
ed 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 Honor.

Each semester a list of student names is published to recognize scholarship in at least 12 attempted units of work. Classes taken for Credit-No Credit are not included in attempted units. Students whose Grade Point Average is between 3.5 and 4.0 with no grade lower than C are acknowledged on the Deans' list.

Not more than three units of Learning Skills courses a semester may be counted to qualify for the Deans' List.

Grade Reports
Final grade reports are compiled after the end of each semester. Students may request a current progress report prior to the end of the term by completing a form which is available 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 25.

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 and Dismissal
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 will be placed on probation for the following semester when the cumulative grade point average falls below 2.0 on a minimum of 12 units attempted. Computation of the GPA (grade point average) is based on all units attempted excluding those taken on a Credit-No Credit basis.

A student is dismissed for one year from attending any class offered by Columbia College is in any term of attendance on academic probation after having attempted 12 units:

(1) The term grade point average is less than 1.5, or
(2) The cumulative grade point average is below 1.75.

Disqualified students admitted by special petition will be notified to make an appointment with a counselor for program review and possible adjustment.

Progress Probation and Dismissal
A student who has enrolled in a total of at least 12 semester units shall be placed on Progress Probation for the follow-

ing semester when the percentage of all units in which the student has enrolled and for which "W", "I", and "NC" are recorded reaches or exceeds fifty percent (50%).

Disqualification
A disqualified student may not be reinstated under the admissions provisions until one semester from the date of disqualification. If the Grade Point Average of a student readmitted after disqualification falls below 2.0 for the following semester, 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 in writing to the Dean of Student Services that the one semester period of disqualification be waived.

Conduct
A Code of Student Conduct has been adopted by the Yosemite Community College District Board of Trustees.

Withdrawal From College
If a student wishes to withdraw from the College, it is his/her responsibility to notify the Admissions and Records Office.

Educational Expenses
Students enrolling in six or more units must pay a $50 semester fee. Students enrolling in less than six units must pay a $5 per unit per semester fee. Students who verify they are receiving public assistance are exempt from paying the fee. Financial aid is available for low-income students who are unable to pay the fee. Qualified students may contact the Financial Aid Office.

Certain classes may require special clothing such as some of the physical education classes.

Parking permits may be purchased each semester from the Business Office. Students who do not wish to purchase a permit may pay on a per-entry basis. These fees are indicated in the class schedule for each semester.
CERTIFICATES

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, 1984, the following certificate requirements are valid through the 1987-88 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 60 units required for an Associate degree. Certificates of achievement are offered in the following disciplines:

- Automotive Technology
- General Auto Repair
- Engine Repair
- Front-end and Brake
- General Auto Repair
- Power Train
- Business Administration
- Management
- Retailing
- Computer Science
- Fire Technology
- Forestry Technology
- Hospitality Management
- Food Service Technology
- Hotel Management
- Human Services
- Disabled
- Gerontology
- Social Welfare
- Natural Resources Interpretation
- Natural Resources Technology
- Office Occupations
- Clerk Typist
- General Clerk
- Legal Secretarial
- Medical Receptionist
- Medical Transcription
- Secretarial
- Search and Rescue
- Teacher Aide

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.

COMPLETION OF CERTIFICATE

Students must complete a certificate application in the Admissions and Records Office during the semester in which they are fulfilling the certificate requirements.

AUTOMOTIVE TECHNOLOGY

GENERAL AUTO REPAIR

REQUIRED COURSES: UNITS

- Auto. Tech. 101 Intro. to Auto Technology .................................................. 1
- Auto. Tech. 119a Gasoline Engine Tune-up: Basic .................................. 1
- Auto. Tech. 119b Gasoline Engine Tune-up: Advanced .......................... 1
- Auto. Tech. 120 Computerized Engine Control ......................................... 1
- Auto. Tech. 130 Manual Transmission Rebuilding .................................. 1
- Auto. Tech. 134 Axles and Drive Lines ......................................................... 1
- Auto. Tech. 136 Automatic Transmission - GM ........................................ 1
- Auto. Tech. 138 Automatic Transmission - Ford ......................................... 1

TOTAL REQUIRED UNITS 31

ENGINE REPAIR

REQUIRED COURSES: UNITS

- Auto. Tech. 101 Intro. to Auto Technology .................................................. 1
- Auto. Tech. 112 Pulping and Installing Engines ........................................ 1
- Auto. Tech. 114 Machine Shop Procedures ................................................ 1
- Auto. Tech. 116 Engine Rebuilding .............................................................. 4
- Auto. Tech. 117a Fuel Systems ...................................................................... 1
- Auto. Tech. 117b Emission Control ............................................................... 1
- Auto. Tech. 119a Gasoline Engine Tune-up: Basic .................................. 1
- Auto. Tech. 119b Gasoline Engine Tune-up: Advanced .......................... 1
- Auto. Tech. 120 Computerized Engine Control ......................................... 1
- Auto. Tech. 130 Manual Transmission Rebuilding .................................. 1
- Auto. Tech. 134 Axles and Drive Lines ......................................................... 1
- Auto. Tech. 136 Automatic Transmission - GM ........................................ 1
- Auto. Tech. 138 Automatic Transmission - Ford ......................................... 1

TOTAL REQUIRED UNITS 14

FRONT-END AND BRAKE

REQUIRED COURSES: UNITS

- Auto. Tech. 101 Intro. to Auto Technology .................................................. 1
- Auto. Tech. 140a Brakes - Drum ................................................................. 1
- Auto. Tech. 140b Brakes - Disc ................................................................. 1
- Auto. Tech. 144a Front End and Suspension ............................................. 2
- Auto. Tech. 144b Front End and Suspension ............................................. 2

TOTAL REQUIRED UNITS 5
### AUTOMOTIVE TECHNOLOGY (POWER TRAIN)

**REQUIRED COURSES:**
- Auto. Tech. 101 Intro. to Auto Technology 
- Auto. Tech. 134 Axle and Drive Line 
- Auto. Tech. 136 Automatic Transmission - GM 
- Auto. Tech. 138 Automotive Transmission - Ford 
- Auto. Tech. 170a or 170b or 170c or 170d Practical Laboratory

**TOTAL REQUIRED UNITS:** 32

### BUSINESS ADMINISTRATION

**REQUIRED COURSES:**
- Bus. Ad. 101 Principles of Business 
- Bus. Ad. 115b Commercial Law 
- Bus. Ad. 120 Principles of Marketing 
- Bus. Ad. 130s Principles of Accounting and 
- Bus. Ad. 130b Principles of Accounting 
- Bus. Ad. 61 Small Business Accounting 

**RECOMMENDED OPTIONAL COURSES:**
- Bus. Ad. 140 Principles of Management 
- Bus. Ad. 150 Small Business Management 
- Econ. 101a Principles of Economics 
- Econ. 101b Principles of Economics 
- Off. Oc. 68 Business Correspondence

**TOTAL REQUIRED UNITS:** 33-35

### COMPUTER SCIENCE

**REQUIRED COURSES:**
- Comp. Sc. 101 Intro. to Microcomputers 
- Comp. Sc. 103 Computer Operating Systems 
- Comp. Sc. 121 Data File Programming with BASIC 
- Comp. Sc. 125 Pascal Programming 
- Computer Sc. 127 FORTRAN Programming 
- Computer Sc. 129 COBOL Programming 
- Computer Sc. 132 RPG II Programming 
- Comp. Sc. 140 Assembly Language Programming 
- Comp. Sc. 155 Data Base Management 
- English 101a Reading and Composition 
- Mathematics 104 Logic 
- Philosophy 104 Logic 
- Mathematics 110 Finite Mathematics

**TOTAL REQUIRED UNITS:** 27

### FIRE TECHNOLOGY

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

**TOTAL REQUIRED UNITS:** 27

### FORESTRY TECHNOLOGY

**REQUIRED COURSES:**
- Fire Tech. 117 Wildland Fire Control 
- Forest Tech. 50 Intro. to Technical Forestry 
- Forest Tech. 101 Introduction to Professional Forestry 
- Forest Tech. 55 Forest Surveying Techniques 
- Forest Tech. 56 Tree & Plant Identification 
- Forest Tech. 110 Dendrology 
- Forest Tech. 62 Applied Forest Inventory and Management 
- Nat. Res. Tech. 50 Natural History and Ecology 
- Nat. Res. Tech. 52 Applied Wildlands Management 
- Nat. Res. Tech. 60 Aerial Photo. & Map Interpretation 
- Nat. Res. Tech. 81 California Wildlife 
- Nat. Res. 100 Environmental Conservation 
- Nat. Res. 109 Parks & Forest Law Enforcement

**TOTAL REQUIRED UNITS:** 30-31

### HOSPITALITY MANAGEMENT

**REQUIRED COURSES:**
- Hotel Mgmt. 101 Introduction to Hospitality Industry 
- Hotel Mgmt. 103 Marketing of Hospitality Services 
- Hotel Mgmt. 114 Intro. to Maintenance and Housekeeping 
- Hotel Mgmt. 130 Food Service Management 
- Hotel Mgmt. 160 Intro. to Travel-Tourism Industry/Tours

**TOTAL REQUIRED UNITS:** 33

### HUMAN SERVICES (DISABLED)

**REQUIRED COURSES:**
- Physical Ed. 105 Personal Fitness Concepts/Evaluation 
- Physical Ed. 106 Theory & Practice of Adapted P.E. 
- Physical Ed. 107 Corrective Rehab. P.E. Assisting 
- Physical Ed. 172a Adult Fitness Program I 
- Psychology 101 General Psychology 
- Psychology 103 Social Psychology 
- Psychology 125 Biobehavioral and Social Management 
- Psychology 130 Personal and Social Adjustment 
- Sociology 101 Introduction to Sociology 
- Sociology 110 Deviance and Conflict 
- Sociology 179 Work Experience

**TOTAL REQUIRED UNITS:** 28-31.5

### HUMAN SERVICES (GEOLOGY)

**REQUIRED COURSES:**
- Health Ed. 50 CardioPulmonary Resuscitation 
- Health Ed. 105 Consumer Health 
- Physical Ed. 173a Adult Fitness Program I 
- Psychology 101 General Psychology 
- Psychology 130 Personal and Social Adjustment 
- Sociology 110 Introduction to Sociology 
- Sociology 112 Family, Marriage, and the Individual 
- Sociology 127 Aging 
- Sociology 128 Death and Dying 
- Sociology 179 Work Experience

**TOTAL REQUIRED UNITS:** 24.5-27
CERTIFICATES

HUMAN SERVICES
SOCIAL WELFARE
REQUIRED COURSES: UNITS
Physical Ed. 101 Physical Fitness Concepts and Evaluation 3-5
Physical Ed. 172 Adult Fitness I 1-3
Psychology 101 General Psychology 3
Psychology 130 Personal and Social Adjustment 3
Psychology 145a Developmental Psychology 3
Psychology 145b Developmental Psychology 3
Sociology 101 Introduction to Sociology 3
Sociology 110 Deviance and Conflict 3
Sociology 112 Family, Marriage and the Individual 3
Sociology 128 Death and Dying 3
Sociology 112 Family, Marriage and the Individual 3
Sociology 110 Deviance and Conflict 3
Sociology 112 Family, Marriage and the Individual 3
Sociology 128 Death and Dying 3
Sociology 179 Work Experience 3

NATURAL RESOURCES TECHNOLOGY
REQUIRED COURSES: UNITS
Earth Sci. 125 Geology of National Parks 3
Fore. Tech. 50 Intro. to Technical Forestry 3
Forestry 101 Introduction to Professional Forestry 3
Forestry 103 Forest Surveying Techniques 3
Forestry 106 Tree & Plant Identification 3
Forestry 110 Dendrology 3

TOTAL REQUIRED UNITS 33.5-36

NATURAL RESOURCES INTERPRETATION
REQUIRED COURSES: UNITS
Anthropology 145 Field Photography 3
Biology 58 Birds of the Mother Lode 1
Biology 59 Wildflowers of the Mother Lode 1-4.5
Earth Sci. 59 Geology of the Mother Lode 2
Earth Sci. 125 Geology of the National Parks 3
Fore. Tech. 56 Tree and Plant Identification 3
Forestry 110 Dendrology 3
Health Ed. 113 Adv. First Aid and Emergency Care 3
History 149 The Mother Lode 3
History 155 The American Frontier 3
Nat. Res. 100 Environmental Conservation 3
Nat. Res. 109 Parks & Forestry Law Enforcement 3
Nat. Res. 130 Wild Edible and Useful Plants 3
Nat. Res. 135 Interpretive Guided Tours 3
Nat. Res. 136 California Wildlife 4

TOTAL REQUIRED UNITS 37.5-39

OFFICE OCCUPATIONS
CLERK TYPST
REQUIRED COURSES: UNITS
Bus. Ad. 63 Business Mathematics 3
Bus. Ad. 65 Business English 3
Bus. Ad. 66 Business Correspondence 3
Bus. Ad. 67 Business Mathematics 3
Bus. Ad. 68 Business Correspondence 3
Bus. Ad. 69 Business English 3
Bus. Ad. 70 Business Correspondence 3

TOTAL REQUIRED UNITS 33

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

OFFICE OCCUPATIONS
LEGAL SECRETARIAL
REQUIRED COURSES: UNITS
Bus. Ad. 58 Payroll Payroll 3
Bus. Ad. 115a Commercial Law 3
Bus. Ad. 115b Commercial Law 3
Bus. Ad. 116 Business Correspondence 3
Bus. Ad. 117 Business English 3
Bus. Ad. 118 Business Correspondence 3
Bus. Ad. 119 Business English 3

TOTAL REQUIRED UNITS 20-24

OFFICE OCCUPATIONS
MEDICAL RECEPTIONIST
REQUIRED COURSES: UNITS
Bus. Ad. 58 Payroll Payroll 3
Bus. Ad. 63 Business English 3
Bus. Ad. 65 Business English 3
Bus. Ad. 66 Business Correspondence 3
Bus. Ad. 67 Business Mathematics 3
Bus. Ad. 68 Business Correspondence 3
Bus. Ad. 69 Business Mathematics 3
Bus. Ad. 70 Business Correspondence 3

TOTAL REQUIRED UNITS 26-31

OFFICE OCCUPATIONS
MEDICAL TRANSCRIPTION
REQUIRED COURSES: UNITS
Bus. Ad. 63 Business English 3
Bus. Ad. 65 Business English 3
Bus. Ad. 66 Business Correspondence 3
Bus. Ad. 67 Business Mathematics 3
Bus. Ad. 68 Business Correspondence 3
Bus. Ad. 69 Business Mathematics 3
Bus. Ad. 70 Business Correspondence 3

TOTAL REQUIRED UNITS 16

Plus 2 units from any other courses in the SEARCH AND RESCUE CURRICULUM.

TOTAL REQUIRED UNITS 31

Students are advised that a number of Search and Rescue courses that make up the Certificate of Achievement are offered by the College only at off campus locations in other parts of the state. A student wishing to complete the Certificate Program should plan to travel considerable distances in order to take these courses.

TOTAL REQUIRED UNITS 28-32

SEARCH AND RESCUE
FIRE SERVICE
REQUIRED COURSES: UNITS
Health Oc. 103 Emergency Med. Tech. Training 6
S.A.R. 136 Swift Water Rescue 3
S.A.R. 150 Rope Rescue 3
S.A.R. 151 Rappelling Safety/Tower Rescue 1
S.A.R. 153 Vehicle Extrication 3
S.A.R. 154 Fire Service Ladders as Rescue Tools 2
S.A.R. 156 Emergency Trench Shoring 1
S.A.R. 158 Heavy Rescue Training 3

TOTAL 14

PLUS 2 UNITS FROM ANY OTHER COURSES IN THE SEARCH AND RESCUE CURRICULUM.

TOTAL REQUIRED UNITS 16

Students are advised that a number of Search and Rescue courses that make up the Certificate of Achievement are offered by the College only at off campus locations in other parts of the state. A student wishing to complete the Certificate Program should plan to travel considerable distances in order to take these courses.

TOTAL REQUIRED UNITS 31
## CERTIFICATES

### TEACHER AIDE

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Aide 55a</td>
<td>3</td>
</tr>
<tr>
<td>Teacher Aide Training: Beg.</td>
<td></td>
</tr>
<tr>
<td>Teacher Aide 55b</td>
<td>3</td>
</tr>
<tr>
<td>Teacher Aide Training: Adv.</td>
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<tr>
<td>Teacher Aide 65</td>
<td></td>
</tr>
<tr>
<td>Reading Fundamentals for Teacher Aides</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL REQUIRED UNITS</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

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### NOTES

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## GRADUATION AND TRANSFER REQUIREMENTS
GRADUATION REQUIREMENTS AT COLUMBIA COLLEGE:
Columbia College will confer the Associate in Arts or the Associate in Science Degree upon completion of the following requirements. (The Associate in Science Degree is awarded for majors in physical or biological sciences or in occupational programs; the Associate in Arts Degree is awarded for all other majors.)

1. TOTAL UNITS: Satisfactory completion of 60 or more semester units, of which the last 12 required units must be taken in residence at Columbia College. No more than six units of Learning Skills courses each semester may be used to meet graduation requirements.

2. SCHOLARSHIP: A cumulative Grade Point Average of not less than 2.0 ("C" average).

3. MAJOR: Satisfactory completion of any AA/AS Major listed in the Columbia College Catalog. (Course listing for each major is available in the Admissions and Records Office.) More than one Associate Degree may be awarded to a student who completes all applicable requirements plus 12 extra units in residence (72 or more total semester units). No courses of the first major may be counted in the major for the second degree. Each additional degree must meet the requirements in effect at the time the new degree major is declared.

4. GENERAL EDUCATION BREADTH REQUIREMENTS: Satisfactory completion of each Area of General Education "A" through "E" below, by choosing suitable courses from those listed under each Area. Students wishing to transfer to California State Universities should follow the requirements listed in the right-hand column. Students who do not expect to transfer, but wish to graduate from Columbia College with the AA or AS Degree, should follow the requirements listed in the left-hand column. The list of courses suitable to satisfy BOTH patterns are listed in the center column. Transfer students are encouraged to satisfy both patterns at the same time by careful selection of courses, in order to graduate with the AA/AS Degree as well as transferring to a C.S.U. campus.

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<table>
<thead>
<tr>
<th>FOR AA/AS GRADUATION:</th>
<th>SUITABLE COURSES FOR EACH AREA OF GENERAL EDUCATION:</th>
<th>FOR TRANSFER:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two courses required: one from A.2, and one from either A.1 or A.3.</td>
<td>AREA A. ENGLISH LANGUAGE COMMUNICATION AND CRITICAL THINKING:</td>
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<tr>
<td></td>
<td>A.1 Oral Communication</td>
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<tr>
<td></td>
<td>Speech 101, Fundamentals of Speech (3).</td>
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<td></td>
<td>A.2 Written Communication</td>
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<td></td>
<td>English 101a, Reading and Composition: Beginning (3).</td>
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<td></td>
<td>English 101b, Reading and Composition: Advanced (3).</td>
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<td></td>
<td>A.3 Critical Thinking</td>
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<td></td>
<td>Mathematics 104, Introduction to Logic (3).</td>
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<td></td>
<td>or Philosophy 104, Introduction to Logic (3).</td>
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<td></td>
<td>Computer Science 120, BASIC Programming (3).</td>
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<td>AREA B. THE PHYSICAL UNIVERSE, ITS LIFE FORMS AND MATHEMATICAL CONCEPTS:</td>
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<td></td>
<td>B.1 Physical Sciences:</td>
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<td></td>
<td>Chemistry 100, Fundamentals of Chemistry (4), (lab course).</td>
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<td>Chemistry 101a, General Chemistry (5), (lab course).</td>
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<td>Earth Science 114, Physical Geology (4), (lab course).</td>
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<td></td>
<td>Earth Science 133, Global Tectonic Geology (3)</td>
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<td></td>
<td>Earth Science 142, Descriptive Astronomy (3).</td>
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<td>Earth Science 144, General Astronomy (4), (lab course).</td>
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<td></td>
<td>Earth Science 161, Fundamentals of Meteorology (3), (lab course).</td>
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<td></td>
<td>Physics 100, Modern Physics (2).</td>
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<td></td>
<td>Physics 120a, General Physics (5), (lab course).</td>
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<td></td>
<td>B.2 Biological Sciences:</td>
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<tr>
<td></td>
<td>Biology 108, Fundamentals of Biology (3).</td>
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<td></td>
<td>Biology 109, Fundamentals of Biology Laboratory (1).</td>
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<td></td>
<td>Biology 111, Principles of Biology (4), (lab course).</td>
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<td></td>
<td>Biology 120, Fundamentals of Plant Biology (2), (lab course).</td>
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<td>B.3 Quantitative Reasoning and Mathematics:</td>
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<td></td>
<td>Math. 102, Trigonometry (4).</td>
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<td></td>
<td>Math. 103, College Algebra (4).</td>
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<td></td>
<td>Math. 105, Elements of Statistics (4).</td>
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<td></td>
<td>Math. 110, Finite Mathematics (4).</td>
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<td></td>
<td>Math. 120a, Calculus with Analytic Geometry (4).</td>
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<tr>
<td></td>
<td></td>
<td>Three courses required, including one from A.2.</td>
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<tr>
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<td></td>
<td>Transfer requirements to a CALIFORNIA STATE UNIVERSITY:</td>
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<tr>
<td></td>
<td>Columbia College will send certification of General Education Breadth Requirements to the California State University campus to which the student transfers. Full certification consists of not less than 39 semester units from Areas &quot;A&quot; through &quot;E&quot; below. In addition, the following transfer requirements apply:</td>
<td></td>
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<tr>
<td></td>
<td>1. TOTAL UNITS: Satisfactory completion of 56 to 70 transferrable semester units. If you wish to transfer with less than 56 transferrable units, you must submit satisfactory test scores from either the Scholastic Aptitude Test (SAT) or American College Testing Program (ACT). For possible exemption from ACT and SAT tests, see catalog of college to which student plans to transfer. (At San Luis Obispo, test scores are required of all transfer students.)</td>
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<td>2. SCHOLARSHIP: A cumulative Grade Point Average of not less than 2.0 (&quot;C&quot; average).</td>
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<td></td>
<td>3. MAJOR: Satisfactory completion of lower division prerequisites for the BA/BS Major listed in the catalog of the California State University transfer campus.</td>
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</tr>
</tbody>
</table>

---
**FOR AA/AS GRADUATION:**

Two courses required: one from C.1 and C.2. Also acceptable in C.2: English 101b, Reading and Composition: Advanced (3).

**FOR TRANSFER:**

Three courses required, including one each from C.1 and C.2.

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**FOR AA/AS GRADUATION:**

Two courses required: one each from D.1 and D.2, and one from D.3. Also acceptable in D.2: Anthropology 115, Indians of North America (3).

**FOR TRANSFER:**

Four courses required: one each from D.1 and D.2, and two from D.3. Also acceptable in D.2: Anthropology 102, Introduction to Anthropology: Physical (3). Anthropology 115, Indians of North America (3).

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**FOR AA/AS GRADUATION:**

Required: Three units in E. Also acceptable in E: Any two Physical Education activity courses.

**FOR TRANSFER:**

Required: Three units in E. Also acceptable in E: Physical Education 173a, Adult Fitness Program (1-3).

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**NOTICE OF INTENT TO GRADUATE:**

The student must file a Notice of Intent to Graduate from Columbia College in the Admissions and Records Office no later than the seventh week of the semester in which completion of the graduation requirements is expected. Graduation requirements may be completed during any college term, but degrees are conferred only at graduation exercises at the close of the Spring Semester.

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**SUPPLEMENTARY NOTES:**

1. These requirements for graduation and General Education apply to Associate Degree and transfer students entering Columbia College for the first time in Fall semester 1985, and are valid through the 1988-89 academic year. Students previously enrolled may continue to follow their older catalog, but those taking more than four years to graduate must use graduation requirements not older than four years.

2. 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, but only three units will be credited toward the 39 certified General Education units. (Units above 39 will count instead for elective credit.) Some California State University campuses place the U.S. History and Government requirement outside the General Education requirement, while others include it within. Consult the catalog of the California State University campus to which you will transfer, or see your advisor for clarification.

3. Double-counting units: Courses used to satisfy General Education Breadth Requirements may also be used to satisfy major requirements in both patterns above, except for the Columbia College Liberal Studies major. For the A.A. Liberal Studies major, the same courses may not be used for both the Major and the General Education Breadth Requirements.

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**NOTES—**
Students are required to complete an academic major to fulfill the Associate Degree requirements of Columbia College. Following are the course requirements for each major currently offered.

**ART**

**REQUIRED COURSES:**
- Art 101: Freehand Drawing
- Art 102: Basic Color & Design
- Art 109a: Life Drawing: Beginning
- Art 111a: History of Art: Ancient and Medieval
- Art 123a: Painting: Beginning
- Art 123a: Watercolor: Beginning
- Art 131a: Ceramics: Introductory
- Art 141a: Photography: Beginning
- Art 141c: Photography: Advanced
- Art 142a: Color Photography: Slideshow
- Art 148: Special Topics in Photography

**REQUIRED COURSES: UNITS**
- Art 102 Basic Color & Design: 3
- Art 111a History of Art: Ancient and Medieval: 3
- Art 123a Painting: Beginning: 3
- Art 131a Ceramics: Introductory: 3
- Art 134b Auto Tech: Intro. to Auto. Tech.: 3
- Art 141a Photography: Beginning: 3
- Art 148 Special Topics in Photography: 3

**TOTAL REQUIRED UNITS 21**

**BIOLGY**

**REQUIRED COURSES:**
- Biology 111 Principles of Biology
- Biology 121 Principles of Plant Biology
- Biology 131 Principles of Animal Biology
- Biology 140 Introductory Human Anatomy
- Biology 140 Introductory Human Physiology
- Biology 165 Microbiology

**REQUIRED COURSES: UNITS**
- Biology 111 Principles of Biology: 4
- Biology 121 Principles of Plant Biology: 4
- Biology 131 Principles of Animal Biology: 5
- Biology 140 Introductory Human Anatomy: 4
- Biology 165 Microbiology: 4

**AND AT LEAST 8 UNITS FROM:**

- Any Biology course 100 or above not counted in the above list: 4-5
- Chemistry 100 or higher: 4-5
- Earth Science 129 Field Geology: 1-3
- Earth Science 139 Field Geology: 1-3
- Earth Science 142 Descriptive Astronomy: 3
- Earth Science 150 Fundamentals of Meteorology: 3
- Earth Science 154 Fundamentals of Oceanography: 3
- Physics 100 or higher: 2-4

**TOTAL REQUIRED UNITS 20**

**BUSINESS**

**BUSINESS ADMINISTRATION (PROFESSIONAL)**

**REQUIRED COURSES:**
- Bus. Ad. 115a Commercial Law
- Bus. Ad. 115b Commercial Law
- Bus. Ad. 130a Accounting
- Bus. Ad. 130b Accounting
- Bus. Ad. 130c Computer Operating Systems
- Bus. Ad. 130d Computer Operating Systems
- Bus. Ad. 130e Computer Operating Systems
- Bus. Ad. 130f Computer Operating Systems
- Econ 101a Principles of Economics
- Econ 101b Principles of Economics

**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 Computer Operating Systems: 4
- Bus. Ad. 130d Computer Operating Systems: 4
- Bus. Ad. 130e Computer Operating Systems: 4
- Bus. Ad. 130f Computer Operating Systems: 4
- Econ 101a Principles of Economics: 4
- Econ 101b Principles of Economics: 4

**TOTAL REQUIRED UNITS 23**

**BUSINESS ADMINISTRATION (OCCUPATIONAL)**

**REQUIRED COURSES:**
- Bus. Ad. 60a Bookkeeping and
- Bus. Ad. 60b Bookkeeping
- Bus. Ad. 60c Bookkeeping
- Bus. Ad. 130a Accounting
- Bus. Ad. 130b Accounting
- Bus. Ad. 130c Accounting
- Bus. Ad. 130d Accounting
- Bus. Ad. 130e Accounting
- Bus. Ad. 130f Accounting
- Bus. Ad. 61 Small Business Accounting: 4
- Computer Sci. 103 Computer Operating Systems
- Office Oc. 68 Business Correspondence: 3
- 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
- Bus. Ad. 123 Sales
- Bus. Ad. 125 Advertising
- Bus. Ad. 140 Principles of Management
- Bus. Ad. 145 Retail Business Management
- Bus. Ad. 150 Small Business Management

**REQUIRED COURSES: UNITS**
- Bus. Ad. 60a Bookkeeping and: 3
- Bus. Ad. 60b Bookkeeping: 3
- Bus. Ad. 60c Bookkeeping: 3
- Bus. Ad. 130a Accounting: 4
- Bus. Ad. 130b Accounting: 4
- Bus. Ad. 130c Accounting: 4
- Bus. Ad. 130d Accounting: 4
- Bus. Ad. 130e Accounting: 4
- Bus. Ad. 130f Accounting: 4
- Bus. Ad. 61 Small Business Accounting: 4
- Computer Sci. 103 Computer Operating Systems: 4
- Office Oc. 68 Business Correspondence: 3
- 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
- Bus. Ad. 123 Sales
- Bus. Ad. 125 Advertising
- Bus. Ad. 140 Principles of Management
- Bus. Ad. 145 Retail Business Management
- Bus. Ad. 150 Small Business Management

**TOTAL REQUIRED UNITS 20-22**

**CHEMISTRY**

**REQUIRED COURSES:**
- Chemistry 101a General Chemistry
- Chemistry 101b General Chemistry
- Chemistry 106 Organic Chemistry

**REQUIRED COURSES: UNITS**
- Chemistry 101a General Chemistry: 5
- Chemistry 101b General Chemistry: 5
- Chemistry 106 Organic Chemistry: 4

**TOTAL REQUIRED UNITS 22**

**COMPUTER SCIENCE**

**REQUIRED COURSES:**
- Computer Sci. 101 Intro. to Microcomputers
- Computer Sci. 103 Computer Operating Systems
- Computer Sci. 121 Data File Programming with BASIC
- Computer Sci. 125 PASCAL Programming
- Computer Sci. 127 FORTRAN Programming
- Computer Sci. 129 COBOL Programming
- Computer Sci. 132 RPG II Programming
- Computer Sci. 140 Assembly Language Programming
- Computer Sci. 155 Data Base Management
- Mathematics 110 Finite Mathematics

**REQUIRED COURSES: UNITS**
- Computer Sci. 101 Intro. to Microcomputers: 1
- Computer Sci. 103 Computer Operating Systems: 1
- Computer Sci. 121 Data File Programming with BASIC: 3
- Computer Sci. 125 PASCAL Programming: 3
- Computer Sci. 127 FORTRAN Programming: 3
- Computer Sci. 129 COBOL Programming: 3
- Computer Sci. 132 RPG II Programming: 3
- Computer Sci. 140 Assembly Language Programming: 3
- Computer Sci. 155 Data Base Management: 4
- Mathematics 110 Finite Mathematics: 4

**TOTAL REQUIRED UNITS 21**

**EARTH SCIENCE**

**REQUIRED COURSES:**
- Earth Science 114 Physical Geology
- Earth Science 133 Global Tectonic Geology
- Earth Science 139 Field Geology
- Earth Science 142 Descriptive Astronomy
- Earth Science 144 General Astronomy
- Earth Science 161 Fundamentals of Meteorology
- Earth Science 171 Fundamentals of Oceanography

**REQUIRED COURSES: UNITS**
- Earth Science 114 Physical Geology: 4
- Earth Science 133 Global Tectonic Geology: 3
- Earth Science 139 Field Geology: 1
- Earth Science 142 Descriptive Astronomy: 3
- Earth Science 144 General Astronomy: 4
- Earth Science 161 Fundamentals of Meteorology: 3
- Earth Science 171 Fundamentals of Oceanography: 3

**TOTAL REQUIRED UNITS 14-17**

**MINIMUM OF 5 UNITS FROM:**
- Earth Science 125 Geology of National Parks
- Chemistry 100 Fundamentals of Chemistry
- Computer Sci. 120 BASIC Programming
- Nat. Res. Tech. 60 Aerial Photography and Map Interpretation

**TOTAL REQUIRED UNITS 19-22**

**RECOMMENDED COURSES:**
- Chemistry 101a, Physics 120b, and Mathematics to include College Algebra and Calculus.
### Majors

**English**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 10a (Reading and Composition: Beginning)</td>
<td>3</td>
</tr>
<tr>
<td>English 10b (Reading and Composition: Advanced)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Units: 6**

And at least 15 units from:

- English 110 (Creative Writing) | 3 |
- English 117a (Literature of the U.S.) | 3 |
- English 117b (Literature of the U.S.) | 3 |
- English 146a (Survey of English Literature) | 3 |
- English 146b (Survey of English Literature) | 3 |
- English 149 (California Literature) | 3 |
- English 150 (Introduction to Shakespeare) | 3 |

**Total Required Units: 21**

### Forestry Technology

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Tech. 101 (Introduction to Fire Technology)</td>
<td>2</td>
</tr>
<tr>
<td>Fire Tech. 102 (Fund. of Personal Fire Safety and Emergency Actions)</td>
<td>2</td>
</tr>
<tr>
<td>Fire Tech. 103 (Fundamentals of Fire Protection)</td>
<td>2</td>
</tr>
<tr>
<td>Fire Tech. 104 (Fund. of Fire Behavior and Control)</td>
<td>2</td>
</tr>
<tr>
<td>Fire Tech. 105 (Fundamentals of Fire Protection)</td>
<td>2</td>
</tr>
<tr>
<td>Fire Tech. 106 (Firefighting Strategy &amp; Tactics)</td>
<td>2</td>
</tr>
<tr>
<td>Fire Tech. 114 (Fire Apparatus &amp; Equipment)</td>
<td>2</td>
</tr>
<tr>
<td>Fire Tech. 117 (Wildland Fire Control)</td>
<td>2</td>
</tr>
<tr>
<td>Fire Tech. 123 (Fire Hydraulics)</td>
<td>2</td>
</tr>
<tr>
<td>Fire Tech. 130 (Fire Protection, Equi. &amp; Sys.)</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Required Units: 22**

### Hospitality Management

**Food Service Technology**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hosp. Mgmt. 101 (Introduction to Hospitality Industry)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 103 (Marketing of Hospitality Services)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 111 (Dining Room Service)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 133a (Intro. to Commercial Food Preparation)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 133b (Intro. to Commercial Food Preparation)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 139 (Food Science and Nutrition)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 140 (Classical Cuisine: Beginning)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 140 (Classical Cuisine: Advanced)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Required Units: 25**

### Hospitality Management

**Hotel Management**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hosp. Mgmt. 101 (Introduction to Hospitality Industry)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 103 (Marketing of Hospitality Services)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 112 (Front Office Management/Hotel Catering)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 114 (Intro. to Maintenance and Housekeeping)</td>
<td>2</td>
</tr>
<tr>
<td>Hosp. Mgmt. 130 (Food Service Management and Controls)</td>
<td>3</td>
</tr>
<tr>
<td>Hosp. Mgmt. 160 (Intro. to Travel-Tourism Industry/Tours)</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ad. 63 (Business Mathematics)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Required Units: 19**

### Humanities

**Required Courses**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities 101 (Old World Culture)</td>
</tr>
<tr>
<td>Humanities 102 (Modern Culture)</td>
</tr>
<tr>
<td>Art 111a (History of Art: Ancient and Medieval)</td>
</tr>
<tr>
<td>Art 111b (History of Art: Baroque, Modern)</td>
</tr>
<tr>
<td>Music 101 (Introduction to Music)</td>
</tr>
<tr>
<td>Music 120b (Survey of Music History and Literature)</td>
</tr>
<tr>
<td>Music 110 (Survey of Music History and Literature)</td>
</tr>
<tr>
<td>History 104a (World Civilizations: to 1650)</td>
</tr>
<tr>
<td>History 104b (World Civilizations: 1650 to Present)</td>
</tr>
<tr>
<td>History 117a (United States: to 1865)</td>
</tr>
<tr>
<td>History 117b (United States: 1865 to Present)</td>
</tr>
<tr>
<td>History 118a (California History)</td>
</tr>
<tr>
<td>History 118b (California History)</td>
</tr>
<tr>
<td>History 117 (United States History)</td>
</tr>
<tr>
<td>History 117 (United States History)</td>
</tr>
<tr>
<td>Philosophy 101 (Introduction to Philosophy)</td>
</tr>
<tr>
<td>Philosophy 115 (World Religions)</td>
</tr>
</tbody>
</table>

**Total Required Units: 18**

### History

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>History 104a (World Civilizations: to 1650)</td>
</tr>
<tr>
<td>History 104b (World Civilizations: 1650 to Present)</td>
</tr>
<tr>
<td>History 117a (United States: to 1865)</td>
</tr>
<tr>
<td>History 117b (United States: 1865 to Present)</td>
</tr>
</tbody>
</table>

**Total Required Units: 12**

### LiberaL Studies

A minimum of six (6) semester units must be completed in each of the three areas. A minimum of eighteen (18) semester units total must be completed from the three areas combined. Courses used to fulfill the Liberal Studies Major requirements may not be used to fulfill the General Education requirements for the AA or AS Degree.

**Humanities (Minimum of 6 Units):**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 111a (History of Art: Ancient and Medieval)</td>
</tr>
<tr>
<td>Art 111b (History of Art: Baroque, Modern)</td>
</tr>
<tr>
<td>Drama 102 (Oral Expression and Interpretation)</td>
</tr>
<tr>
<td>English 117a (Literature of the United States)</td>
</tr>
<tr>
<td>English 117b (Literature of the United States)</td>
</tr>
<tr>
<td>English 146a (Survey of English Literature)</td>
</tr>
<tr>
<td>English 146b (Survey of English Literature)</td>
</tr>
<tr>
<td>Humanities 101 (Old World Culture)</td>
</tr>
<tr>
<td>Humanities 102 (Modern Culture)</td>
</tr>
<tr>
<td>Music 110a (Survey of Music History and Literature)</td>
</tr>
<tr>
<td>Music 110b (Survey of Music History and Literature)</td>
</tr>
<tr>
<td>Music 112 (Survey of Jazz and Popular Music)</td>
</tr>
<tr>
<td>Philosophy 101 (Introduction to Philosophy)</td>
</tr>
<tr>
<td>Philosophy 115 (World Religions)</td>
</tr>
</tbody>
</table>

**Total Required Units: 25**

### Natural Sciences and Mathematics

**Minimum of 6 Units:**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 108 (Fundamentals of Biology)</td>
</tr>
<tr>
<td>Biology 111 (Principles of Biology)</td>
</tr>
<tr>
<td>Chemistry 100 (Fundamentals of Chemistry)</td>
</tr>
<tr>
<td>Chemistry 101 (General Chemistry)</td>
</tr>
<tr>
<td>Comp. Sc. 101 (Introduction to Microcomputers)</td>
</tr>
<tr>
<td>Comp. Sc. 103 (Computer Operating Systems)</td>
</tr>
<tr>
<td>Comp. Sc. 120 (BASIC Programming)</td>
</tr>
<tr>
<td>Earth Sci. 114 (Physical Geology)</td>
</tr>
<tr>
<td>Earth Sci. 142 (Descriptive Astronomy)</td>
</tr>
<tr>
<td>Earth Sci. 161 (Fundamentals of Meteorology)</td>
</tr>
<tr>
<td>Earth Sci. 171 (Fundamentals of Oceanography)</td>
</tr>
<tr>
<td>Math 101 (Intermediate Algebra or higher)</td>
</tr>
<tr>
<td>Math 104 (Introduction to Logic)</td>
</tr>
<tr>
<td>Natural Res. 100 (Environmental Conservation)</td>
</tr>
<tr>
<td>Philosophy 104 (Introduction to Logic)</td>
</tr>
<tr>
<td>Physics 100 (Modern Physics)</td>
</tr>
<tr>
<td>Physics 120a (General Physics)</td>
</tr>
</tbody>
</table>

**Total Required Units: 18**

### Social Science

**Minimum of 6 Units:**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology 101 (Intro. to Anthropology: Physical)</td>
</tr>
<tr>
<td>Anthropology 102 (Intro. to Anthropology: Cultural)</td>
</tr>
<tr>
<td>Anthropology 115 (Indians of North America)</td>
</tr>
<tr>
<td>Bus. Ad. 201 (Principles of Business)</td>
</tr>
<tr>
<td>Economics 101 (Understanding American Economy)</td>
</tr>
<tr>
<td>Economics 101 (Principles of Economics)</td>
</tr>
<tr>
<td>Economics 101b (Principles of Economics)</td>
</tr>
<tr>
<td>Geography 102 (Intro. to Cultural Geography)</td>
</tr>
<tr>
<td>History 104a (World Civilization: to 1650)</td>
</tr>
<tr>
<td>History 104b (World Civilization: 1650 to Present)</td>
</tr>
<tr>
<td>History 117a (United States History)</td>
</tr>
<tr>
<td>History 117b (United States History)</td>
</tr>
<tr>
<td>Political Science 101 (Comparative Political Systems)</td>
</tr>
<tr>
<td>Psychology 101 (General Psychology)</td>
</tr>
<tr>
<td>Psychology 103 (Social Psychology)</td>
</tr>
<tr>
<td>Sociology 101 (Introduction to Sociology)</td>
</tr>
<tr>
<td>Sociology 102 (American Social Patterns)</td>
</tr>
<tr>
<td>Sociology 112 (Family, Marriage, Individual)</td>
</tr>
</tbody>
</table>

**Total Required Units: 18**
### Majors

#### Mathematics

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 103 College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>or Math 105 Elements of Statistics</td>
<td>4</td>
</tr>
<tr>
<td>Math 120 Calculus w/Analytic Geometry</td>
<td>4</td>
</tr>
<tr>
<td>Math 120b Calculus w/Analytic Geometry</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Required Units:** 22

**And 10 Units From:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comp. Sci. 120 Basic Programming</td>
<td>3</td>
</tr>
<tr>
<td>Comp. Sci. 121 Data File Programming with Basic</td>
<td>3</td>
</tr>
<tr>
<td>Math 101 College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>Math 110 Finite Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>Physics 120a General Physics</td>
<td>5</td>
</tr>
<tr>
<td>Physics 120b General Physics</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Required Units:** 55

**And Minimum of 4 Units From:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 120a Elementary Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>Music 121a Elementary Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>Music 141 Intermediate Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>Music 141a Intermediate Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>Piano majors may substitute additional units from courses in Music 150-179 series.</td>
<td></td>
</tr>
</tbody>
</table>

**Total Required Units:** 11

**And Minimum of 4 Units From:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 160 Choir</td>
<td>1</td>
</tr>
<tr>
<td>Music 164 Jazz Choir</td>
<td>1</td>
</tr>
<tr>
<td>Music 165 Theory Production: Music Emphasis</td>
<td>1</td>
</tr>
<tr>
<td>Music 166 Community Chorus</td>
<td>1</td>
</tr>
<tr>
<td>Music 149 Madrigal Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music 170 Wind Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music 172 Jazz Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music 176 Orchestra</td>
<td>1</td>
</tr>
<tr>
<td>Music 179 Ensemble: Instrumental Emphasis</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Required Units:** 19

**Recommended: 3 Units From:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 101 Introduction to Music</td>
<td>3</td>
</tr>
<tr>
<td>Music 110 Survey Of Music History and Literature</td>
<td>3</td>
</tr>
<tr>
<td>Music 110 Survey Of Music History and Literature</td>
<td>3</td>
</tr>
<tr>
<td>Music 112 Survey of Jazz and Popular Music</td>
<td>3</td>
</tr>
</tbody>
</table>

### Natural Resources Technology

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nat. Res. Tech. 50 Natural History and Ecology</td>
<td>2</td>
</tr>
<tr>
<td>Nat. Res. Tech. 52 Applied Wildlife Management</td>
<td>3</td>
</tr>
<tr>
<td>Nat. Res. Tech. 55 Interpreted Tours</td>
<td>2</td>
</tr>
<tr>
<td>Nat. Res. Tech. 60 Aerial Photo and Map Inter</td>
<td>2</td>
</tr>
<tr>
<td>Nat. Res. 101 Environmental Conservation</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Required Units:** 12

**And 8 Units From:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>For. Sci. 117 Wildland Fire Control</td>
<td>2</td>
</tr>
<tr>
<td>For. Tech. 50 Introduction to Technical Forestry</td>
<td>2</td>
</tr>
<tr>
<td>Forestry 101 Introduction to Professional Forestry</td>
<td>3</td>
</tr>
<tr>
<td>For. Tech. 53 Forest Surveying Techniques</td>
<td>3</td>
</tr>
<tr>
<td>For. Tech. 56 Tree and Plant Identification</td>
<td>3</td>
</tr>
<tr>
<td>Forestry 110 dendrology</td>
<td>3</td>
</tr>
<tr>
<td>For. Tech. 62 Applied Forest Inventory and Management</td>
<td>4</td>
</tr>
<tr>
<td>Nat. Res. Tech. 81 California Wildlife</td>
<td>3</td>
</tr>
<tr>
<td>Nat. Res. 109 Parks and Forests Law Enforcement</td>
<td>2</td>
</tr>
<tr>
<td>Nat. Res. 130 Wild Edible and Useful Plants</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Required Units:** 20

### Music

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 120 Music Theory</td>
<td>5</td>
</tr>
<tr>
<td>Music 120b Music Theory</td>
<td>5</td>
</tr>
<tr>
<td>Music 150 Applied Music (Major Instrument)</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Required Units:** 11

**And Minimum of 4 Units From:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 131a Elementary Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>Music 131b Elementary Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>Music 141 Intermediate Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>Music 141a Intermediate Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>Piano majors may substitute additional units from courses in Music 150-179 series.</td>
<td></td>
</tr>
</tbody>
</table>

**Total Required Units:** 13

**And Minimum of 4 Units From:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 160 Choir</td>
<td>1</td>
</tr>
<tr>
<td>Music 164 Jazz Choir</td>
<td>1</td>
</tr>
<tr>
<td>Music 165 Theory Production: Music Emphasis</td>
<td>1</td>
</tr>
<tr>
<td>Music 166 Community Chorus</td>
<td>1</td>
</tr>
<tr>
<td>Music 149 Madrigal Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music 170 Wind Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music 172 Jazz Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music 176 Orchestra</td>
<td>1</td>
</tr>
<tr>
<td>Music 179 Ensemble: Instrumental Emphasis</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Required Units:** 19

**Recommended: 3 Units From:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 101 Introduction to Music</td>
<td>3</td>
</tr>
<tr>
<td>Music 110 Survey Of Music History and Literature</td>
<td>3</td>
</tr>
<tr>
<td>Music 110 Survey Of Music History and Literature</td>
<td>3</td>
</tr>
<tr>
<td>Music 112 Survey of Jazz and Popular Music</td>
<td>3</td>
</tr>
</tbody>
</table>

### Philosophy

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy 101 Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 104 Introduction to Logic</td>
<td>3</td>
</tr>
<tr>
<td>Math 104 Introduction to Logic</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 115 World Religions</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 125 Twentieth Century Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>History 104a World Civilizations: to 1650</td>
<td>3</td>
</tr>
<tr>
<td>History 104b World Civilizations: 1650 to Present</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 130 Personal and Social Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 160 Personality Theory</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 112 Family, Marriage, and the Individual</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Required Units:** 19

**Note:** Students should be sure they have satisfied mathematics requirements for enrollment in these courses.
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 possible required lower division general education courses and prerequisites for the major are included in their Columbia College program of study.

Columbia College 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 SYSTEM (C.S.U.) TRANSFER INFORMATION

The California State University system (C.S.U.) 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

C.S.U. ADMISSION AS AN UNDERGRADUATE TRANSFER

Transfer Requirements — You will qualify for admission as a transfer student if you have a grade point average of 2.0 (C) or better in all transferable units attempted, are in good standing at the last college or university attended, and meet one of the following standards:

1. You graduated from high school before spring 1984 and either
   a. were eligible as a freshman*, or
   b. have completed at least 56 transferable semester units (84 quarter) units. (Nonresidents must have a 2.4 grade point average or better.)

2. You graduated from high school in spring 1984 or later and either
   a. were eligible as a freshman,
   b. were eligible as a freshman except for the college preparatory subjects in English and mathematics and have satisfied the subject deficiencies**, or
   c. have completed at least 56 transferable semester units (84 quarter) units and have satisfied any deficiencies in college preparatory English and mathematics. (Nonresidents must have a 2.4 grade point average or better.)

For these requirements, transferable courses are those designated for that purpose by the college or university offering the courses. Consult your advisor for information on transferability of courses.

Transfer applicants must meet standard 2 beginning fall 1986, irrespective of when they graduated from high school.

* Consult the catalog of the institution to which you plan to transfer and your advisor for freshman admission requirements. Beginning Fall 1984, the C.S.U. system added a subject matter requirement to its standard admission criteria for all new freshmen and undergraduate transfers who graduate from high school beginning Spring 1984. Students are required to have completed eight high school semesters of college preparatory English and four high school semesters of college preparatory mathematics. New undergraduate transfers who do not meet the high school subject matter requirement must satisfy any deficiency by equivalent course work. Although a portion of the requirement may be waived during the 1984-86 transition period, all new students will be expected to meet the new requirements beginning Fall 1986.

** Consult your advisor for requirements related to makeup of English and mathematics deficiencies with Columbia College coursework.

California residents who are military service personnel or veterans may be considered under special admission requirements.

A maximum of 70 semester units of community college credit will be accepted by a state university. Units in excess of 70 may be applied toward fulfillment of requirements in General Education Breadth Requirements, the major, or the minor as deemed appropriate by the university.

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.

A student who was not eligible for direct admission to the University from high school may become eligible after making up subject and/or grade deficiencies at Columbia College.

Requirements for students who have attended a community college and who wish to be admitted to the University in advanced standing differ according to high school record and year of high school graduation.

The University will not grant credit toward graduation for work completed in excess of 70 lower division semester units.

Graduation requirements may vary between the different campuses of the University. Prospective transfer students should obtain a catalog from the campus to which they plan to transfer, and in consultation with their advisor, determine courses needed to fulfill requirements. The Career Center maintains University catalogs for student reference.
ANTHROPOLOGY

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 interests of the populations served by the College, Credit Free Courses are usually offered each semester. 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.

3. 85/185 Courses: Interdisciplinary Studies – Special Topics
Lecture and/or laboratory hours and units of credit may vary.

4. 59/199 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 26 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 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. Courses listed in this catalog are described in semister units. One semester unit equals one and one-half quarter units.

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

101 INTRODUCTION TO ANTHROPOLOGY: Physical
Lecture: 3 hours
Man and his evolutionary history with emphasis on recent developments: primatology; the fossil sequence beginning with pre-human through Paleolithic era to the domestication of plants and animals and the dawn of civilization. Race; man’s cultural adaptations resulting from his biological and genetic background.

102 INTRODUCTION TO ANTHROPOLOGY: Cultural
Lecture: 3 hours
Primitive man 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.

103 CURRENT ISSUES IN ANTHROPOLOGY
Lecture: 3 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
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.

112 ARCHAEOLOGICAL SURVEY AND SITE IDENTIFICATION
Lecture: 3 hours
Prerequisite: Anthropology 101 or concurrent enrollment Laboratory: 3 hours
Field techniques in identifying, evaluating, and recording archaeological sites. Emphasis on California and Sierra prehistoric and historic period sites.

114 ARCHAEOLOGICAL EXCAVATION AND LABORATORY TECHNIQUES
Lecture: 3 hours
Archaeological field and laboratory techniques through participation in an excavation and the processing of recovered artifacts.

115 INDIANS OF NORTH AMERICA
Lecture: 3 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.

ART

101 BASIC FREEHAND DRAWING
Studio: 3-6 hours
Introduction to basic drawing techniques, rendering techniques, linear perspective, composition and various drawing media.

102 BASIC COLOR AND DESIGN
Studio: 3-6 hours
Introduction to elements and principles of visual design and color theory as applied in a studio setting.

109a LIFE DRAWING: Beginning
Studio: 3-6 hours
Problems in figure drawing working from the un-drapped model. May be repeated one time.

109b LIFE DRAWING: Intermediate
Studio: 3-6 hours
An extension of Art 109a emphasizing various media and compositional problems. May be repeated one time.

111a HISTORY OF ART: Ancient and Medieval
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, Baroque, and Modern
Lecture: 3 hours
Survey of art history from the 15th through the 20th centuries. Field trips may be required.

121a PAINTING: Beginning
Studio: 3-6 hours
Basic principles, techniques, and materials of easel painting in a variety of media. May be repeated one time.

121b PAINTING: Intermediate
Studio: 3-6 hours
Continuation of Art 121a with emphasis on personal expression. May be repeated one time.

123a WATERCOLOR: Beginning
Studio: 3-6 hours
Introduction to the basic techniques and problems of transparent watercolors. May be repeated one time.

123b WATERCOLOR: Intermediate
Studio: 3-6 hours
Continuation of Art 123a introducing opaque watercolors and various experimental techniques. May be repeated one time.

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

128 MURAL PAINTING
Studio: 4 hours
Group participation in planning, designing, and executing large-scale wall paintings.

131a CERAMICS: Introductory
Studio: 3-6 hours
Introduction to basic ceramic methods including hand-building and wheel-thrown forms, and introduction to glazes and decoration.

131b CERAMICS: Advanced
Studio: 3-6 hours
Continuation of Art 131a with emphasis on glazes, formulation and application with increased opportunity for personal expression and experimentation.

133c CERAMICS: Special Problems
Studio: 3-6 hours
An extension of Art 131a and Art 131b. May be repeated one time.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>133</td>
<td>ART/PHOTOGRAPHY</td>
<td>1-3 Units</td>
<td>Discovery and refinement of local native clay deposits; construction and use of primitive kilns and ceramics tools; survey of the styles, techniques, and materials common to primitive pottery; study of primitive firing and glazing. Field trips may be required.</td>
</tr>
<tr>
<td>135</td>
<td>INTRODUCTION TO RAKU</td>
<td>1.5-3 Units</td>
<td>Prerequisite: Art 131a recommended. Introduction to raku process, historic origins and contemporary uses. Practical experience in clay bodies, glazes, and raku firing.</td>
</tr>
<tr>
<td>137</td>
<td>INTRODUCTION TO PRINTMAKING</td>
<td>1.5-3 Units</td>
<td>Introduction to basic intaglio and relief printmaking procedures including etching, engraving, collagraph, linocut, and woodcut.</td>
</tr>
<tr>
<td>150a</td>
<td>COMMERCIAL FREEHAND LETTERING: Beginning</td>
<td>2 Units</td>
<td>Lecture: 2 hours. Studio: 3-6 hours. Introduction to freehand lettering and calligraphy; practice in the three major calligraphic styles of sign writing and commercial lettering; Roman, Gothic, and script technique emphasis.</td>
</tr>
<tr>
<td>150b</td>
<td>COMMERCIAL FREEHAND LETTERING: Intermediate</td>
<td>2 Units</td>
<td>Prerequisite: Art 150a. Lecture: 2 hours. Studio: 3-6 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 will be explored.</td>
</tr>
<tr>
<td>153a</td>
<td>SILKSCREEN PRINTMAKING: Beginning</td>
<td>1.5-3 Units</td>
<td>Lecture: 3 hours. Studio: 2 hours. Introduction to basic silkscreen printmaking using various stencil techniques.</td>
</tr>
<tr>
<td>153b</td>
<td>SILKSCREEN PRINTMAKING: Advanced</td>
<td>1.5-3 Units</td>
<td>Prerequisite: Art 153a or consent of instructor. Studio: 2-6 hours. An extension of Art 153a with emphasis on experimentation and serigraphy. Advanced techniques with stencils, color, inks, photographic materials and special problems.</td>
</tr>
<tr>
<td>167a</td>
<td>TEXTILE DESIGN: Introductory</td>
<td>1.5 Units</td>
<td>Studio: 3 hours. Introduction to basic textile design. Problems and techniques of the fiber arts. May be repeated one time.</td>
</tr>
<tr>
<td>167b</td>
<td>TEXTILE DESIGN: Advanced</td>
<td>1.5 Units</td>
<td>Prerequisite: Art 167a or consent of instructor. Studio: 3 hours. Continuation of Art 167a with emphasis on creative design. Introduction to fabric loom.</td>
</tr>
<tr>
<td>171a</td>
<td>SCULPTURE: Introductory</td>
<td>1.5-3 Units</td>
<td>Studio: 3-6 hours. Lecture: 1 hour. Basic principles, techniques, and problems of sculpture.</td>
</tr>
<tr>
<td>171b</td>
<td>SCULPTURE: Advanced</td>
<td>1.5-3 Units</td>
<td>Studio: 3-6 hours. Lecture: 2 hours. Continuation of Art 171a emphasizing advanced problems and techniques in sculpture.</td>
</tr>
<tr>
<td>171c</td>
<td>SCULPTURE: Special Problems</td>
<td>1.5-3 Units</td>
<td>Studio: 3-6 hours. Lecture: 2 hours. Continuation of Art 171b with emphasis on experimentation and development of personal expression. May be repeated one time.</td>
</tr>
<tr>
<td>141a</td>
<td>PHOTOGRAPHY: Beginning</td>
<td>3 Units</td>
<td>Lecture: 1 hour. 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.</td>
</tr>
<tr>
<td>141b</td>
<td>PHOTOGRAPHY: Intermediate</td>
<td>3 Units</td>
<td>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.</td>
</tr>
<tr>
<td>141c</td>
<td>PHOTOGRAPHY: Advanced</td>
<td>3 Units</td>
<td>Prerequisite: Art 141b, Art 150 or equivalent. Lecture: 2 hours. Laboratory: 3 hours. Continuation of Art 141b with further attention to practical and aesthetic zone system techniques 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 semiotics. Field trips may be required.</td>
</tr>
<tr>
<td>142a</td>
<td>COLOR PHOTOGRAPHY: Slide Making and Positive Printing</td>
<td>3 Units</td>
<td>Prerequisite: Art 141a. Lecture: 3 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. May be repeated one time.</td>
</tr>
<tr>
<td>142b</td>
<td>COLOR PHOTOGRAPHY: The Color Negative</td>
<td>3 Units</td>
<td>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.</td>
</tr>
<tr>
<td>144</td>
<td>ADVANCED PHOTOGRAPHY LABORATORY</td>
<td>1 Unit</td>
<td>Prerequisite: Art 141b or Art 142b or equivalent. Laboratory: 3 hours. Continued exercise of darkroom skills in the production of negatives, slides, and prints. May be repeated one time.</td>
</tr>
<tr>
<td>145</td>
<td>FIELD PHOTOGRAPHY</td>
<td>1-2 Units</td>
<td>Lecture: 3-5 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.</td>
</tr>
<tr>
<td>148</td>
<td>SPECIAL TOPICS IN PHOTOGRAPHY</td>
<td>1-4 Units</td>
<td>Prerequisite: Will vary according to topic scheduled. Lecture: 2-3 hours and/or Laboratory: 1.5-6 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. May be repeated with different topics only for a maximum of three times.</td>
</tr>
<tr>
<td>149</td>
<td>PORTFOLIO AND EXHIBITION PREPARATION</td>
<td>2 Units</td>
<td>Prerequisite: Art 142, Art 144, and Art 142b. Lecture: 1 hour. Laboratory: 3 hours. Intended for photography majors, this course involves primarily the craft and techniques involved in assembling and installing a large photographic portfolio for exhibition.</td>
</tr>
</tbody>
</table>
119b ADVANCED GASOLINE ENGINE TUNING
Prerequisite: Auto Technology 119a
Lecture: 1 hour
Laboratory: 1.5 hours
Principles and diagnosis of spark ignition systems using exhaust gas analyzer, fuel analyzer, and other specialized equipment.

120 COMPUTERIZED ENGINE CONTROLS
Prerequisite: Auto Tech. 119b
Lecture: 1 hour
Laboratory: 1.5 hours
Operation and diagnosis of domestic computerized engine control systems.

130 MANUAL TRANSMISSION REBUILDING
Prerequisite: Auto Tech. 119b
Lecture: 1 hour
Laboratory: 1.5 hours
Principles and operation of automotive power trains including diagnosis and overhaul of clutches, manual transmissions, overdrives, and transfer cases.

134 AXLES AND DRIVE LINES
Prerequisite: Auto Tech. 130
Lecture: 1 hour
Laboratory: 1.5 hours
Service, diagnosis, and repair of drivelines, rear axles and third members, front wheel drive hubs, and 4 x 4 front axles and hubs.

136 AUTOMATIC TRANSMISSION (G.M.)
Prerequisite: Auto Tech. 134
Lecture: 1 hour
Laboratory: 1.5 hours
Practical experience in disassembly and assembly, failure and analysis, trouble-shooting, pressure testing, and automatic transmission rebuilding.

138 AUTOMATIC TRANSMISSION (Ford)
Prerequisite: Auto Tech. 136
Lecture: 1 hour
Laboratory: 1.5 hours
Practical experience in disassembly and assembly, failure and analysis, trouble-shooting, pressure testing, and automatic transmission rebuilding.

140b BRAKES: Drum
Prerequisite: Auto Tech. 140a
Lecture: 1 hour
Laboratory: 1.5 hours
Principles of operation of automotive drum brakes, including diagnosis and overhaul techniques.

140b BRAKES: Disc
Prerequisite: Auto Tech. 140a
Lecture: 1 hour
Laboratory: 1.5 hours
Service procedures, including overhaul techniques of disc brakes.

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

150a VEHICLE ELECTRICITY: Electrical Theory
Prerequisite: Auto Tech. 150a
Lecture: 1 hour
Laboratory: 3 hours
Principles of electricity that apply to all electrical systems.

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

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

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

162 AIR CONDITIONING
Prerequisite: Auto Tech. 162
Lecture: 1 hour
Laboratory: 1.5 hours
Understanding the principles and operation of air conditioning, as well as the techniques of recharging diagnosis and service.

170a PRACTICAL LABORATORY
Prerequisite: Auto Tech. 170a
Lecture: 1 hour
Laboratory: 3 hours
Study of bird species inhabiting alpine meadows and forests of the Sierra Nevada through field observations. Stresses recognition by plumage, song, and behavior patterns. Discusses ecological relationships, nesting habits, and economic importance.

170b PRACTICAL LABORATORY
Prerequisite: Auto Tech. 170b
Lecture: 1 hour
Laboratory: 3 hours
Continuation of Automotive Technology 170a.

170c PRACTICAL LABORATORY
Prerequisite: Auto Tech. 170c
Lecture: 1 hour
Laboratory: 3 hours
Continuation of Automotive Technology 170b.

170d PRACTICAL LABORATORY
Prerequisite: Auto Tech. 170d
Lecture: 1 hour
Laboratory: 3 hours
Continuation of Automotive Technology 170c.

179 WORK EXPERIENCE IN AUTOMOTIVE TECHNOLOGY
Prerequisite: Concurrent enrollment in Biology 179 Laboratory: 3-6 hours
An optional laboratory to be taken concurrently with Biology 108; designed to complement and amplify Biology 108 which is the lecture portion of the course.

111 PRINCIPLES OF BIOLOGY
Prerequisite: One year of high school chemistry with a "B" average or Chemistry 101 recommended.
Lecture: 3 hours
Laboratory: 3 hours
A principles course emphasizing certain molecular and cellular activities common to most forms of life. Special reference given to the chemical composition of life, cellular structure, photosynthesis, respiration, heredity, and interaction of life with the physical environment. Designed for Life Science and related majors.

120 FUNDAMENTALS OF PLANT BIOLOGY
Prerequisite: Concurrent enrollment in Biology 120
Laboratory: 3 hours
A course in botany. Topics discussed include anatomy, physiology, ecology, horticulture, and relationships of plants to human history.

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

125 PLANT TAXONOMY OF THE SIERRA NEVADA
Prerequisite: Concurrent enrollment in Biology 125
Laboratory: 3 hours
A study of the flora of the Sierra Nevada with emphasis on the classification of local species of fungi, mosses, ferns, conifers, and flowering plants. Standard taxonomic references are used with an emphasis on scientific nomenclature.

FUNDAMENTALS OF BIOLOGY
Prerequisite: Concurrent enrollment in Biology 108
Laboratory: 3 hours
An introductory course for non-Science majors emphasizing the fundamental principles common to all forms of life. These include cell structure and function, reproduction, genetics, ecology, and evolution. (Biology 108 with Biology 109 fulfills the laboratory requirements for transfer and Associate Degree students.)
131 PRINCIPLES OF ANIMAL BIOLOGY 5 Units
Prerequisite: Biology 111
Lecture: 3 hours
Laboratory: 2 hours
Field trips are required.

139 FIELD BIOLOGY
Prerequisite: A previous course in Biology recommended
Lecture: 1-2 hours.
A lecture field course in biology to be held in natural surroundings. The site will vary with the season. Natural history, ecology, and biology of the locale will be studied. May be repeated one time.

140 INTRODUCTORY HUMAN ANATOMY 4 Units
Prerequisite: Previous or concurrent enrollment in Biology 108 or Biology 111 or College Chemistry course with a grade of "C" or better.
Lecture: 3 hours
Laboratory: 3 hours
A survey course in human anatomy with special emphasis on skeletal, muscular, circulatory, respiratory, and nervous systems.

151 THE TERRESTRIAL ENVIRONMENT 1 Unit
Prerequisite: Enrollment in Biology major program recommended.
Laboratory: 3 hours
Field studies of terrestrial ecosystems with emphasis on techniques for gathering and analysis of physical and biological data. Designed for the advanced student who has demonstrated the knowledge and maturity for group and independent research. Field trips are required.

155 THE AQUATIC ENVIRONMENT 1 Unit
Prerequisite: Biology 108, Biology 111, or Earth Science 114 or consent of instructor.
Laboratory: 3 hours
Field studies of aquatic ecosystems with emphasis on techniques for gathering and analysis of physical and biological data. Designed for the advanced student who has demonstrated the knowledge and maturity for group and independent research. Field trips are required.

160 INTRODUCTION TO HUMAN PHYSIOLOGY 4 Units
Prerequisite: Biology 140
Lecture: 4 hours
Laboratory: 3 hours
A survey course in human physiology with special emphasis upon digestive, reproductive, muscular, nervous and endocrine systems.

165 MICROBIOLOGY 4 Units
Prerequisite: High School Chemistry, Chemistry 100, Biology 108 or Biology 111
Lecture: 3 hours
Laboratory: 3 hours
General characteristics of microbial life, conditions influencing bacterial growth, bacteria in disease and aseptic procedures. Field trips may be required.

BUSINESS

110 PRINCIPLES OF BANK OPERATION 3 Units
Lecture: 3 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.

120 INSTALLMENT CREDIT 3 Units
Lecture: 3 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 3 Units
Lecture: 3 hours
An introduction to and evaluation of banks and banking systems, price movements, international transactions, voucher system, payroll records, property and real estate, partnership law, trade creditors, and income tax considerations. Field trips are required.

130 PRINCIPLES OF BANK OPERATION 3 Units
Lecture: 3 hours
An entertaining presentation of the new language of the modernized metric system in areas of common everyday application: volume, weight, linear, and cubic measures, temperature, and electricity.

135 THE METRIC SYSTEM 1 Unit
Lecture: 1 hour
An introduction to and evaluation of the modernized metric system in areas of common everyday application: volume, weight, linear, and cubic measures, temperature, and electricity.

139 SMALL BUSINESS ACCOUNTING 4 Units
Lecture: 4 hours
Accounting procedures and analysis for small businesses. Emphasis is placed on the accounting cycle, the effects of changes in the accounting cycle, and the practical aspects of effective sales techniques for both retail and direct applications.

140 PRINCIPLES OF MANAGEMENT 3 Units
Lecture: 3 hours
The functions of management, techniques of decision-making and problem solving, and methods used by the managers to achieve organizational goals, various theories of management, lines of authority, functions of departments, and the importance of policies, procedures, and controls.

143 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, controlling, and marketing.

144 RETAIL BUSINESS MANAGEMENT 3 Units
Lecture: 3 hours
The retailing world and its functions including organization, buying, merchandising, store management and operations, customer relations, financial control, and systematic problem solving techniques.

145 SALES 3 Units
Lecture: 3 hours
Description of the fundamental principles and practices of sales. Critical look at the selling process and the practical aspects of effective sales techniques for both retail and direct applications.

146 ADVERTISING 3 Units
Lecture: 3 hours
Analysis of the social and economic impact of advertising on a local, state and national scope. Study of media, budgets, research, copy, layout and institutions.

150 ACCOUNTING 4 Units
Lecture: 4 hours
Accounting principles and procedures, owner's equity, closing books, revenue and expense adjustments, merchandising operations, statement and ledger organization, forms of organization, cash and investments, receivables and inventories.

155 ACCOUNTING 4 Units
Lecture: 4 hours
Cost data and management needs, analysis of data, supplementary statement, use of capital flow statements, department and branch operation, consolidation, profit and loss, and income tax considerations, fixed assets, liabilities, manufacturing operations.

158 COMMERCIAL LAW 4 Units
Lecture: 4 hours
Prerequisite: Business Administration 10a
Study of media, budgets, research, copy, layout and institutions.
56 TIYING SPEED AND ACCURACY BUILDING 1 Unit
Prerequisite: Beginning typing skill
Laboratory: 3 hours (Self-paced)
Speed building and accuracy on straight copy, rough draft and statistical writing, intensified drills, timed writings and remedial work.
May be repeated 3 times.

60 REVIEW SHORTHAND 4 Units
Prerequisite: Typing rate 30 words per minute
Lecture: 4 hours
Review of shorthand 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, referrals, credit and collection.

70 REPORT WRITING 2 Units
Lecture: 2 hours
Study and practice of the skills necessary to write well-organized reports.

101A KEYBOARDING 1 Unit
Laboratory: 3 hours (Self-paced)
Designed to prepare students to use the electric typewriter by touch. Emphasizes keyboard instruction and speed development.

103 BASIC TYPING APPLICATIONS 2 Units
Prerequisite: Office Occupations 103 or previous typing course
Laboratory: 1.5 hours (Self-paced)
Lecture: 1.5 hours
Emphasizing typing accuracy, speed building, and preparation of business letters, tables and reports.

103 INTERMEDIATE TYPING 3 Units
Prerequisite: Office Occupations 103 or typing rate of 40 words per minute.
Laboratory: 2 hours
Laboratory: 3 hours (Self-paced)
Development of speed and accuracy; preparation of advanced correspondence, tabulation, manuscripts, outlines, and business forms.

104 ADVANCED TYPING 3 Units
Prerequisite: Office Occupations 103 or typing rate of 40 words per minute.
Laboratory: 2 hours
Laboratory: 3 hours (Self-paced)
Further development of speed and accuracy; study of business forms, advanced tabulated material, legal forms, typing for reproduction, and special problems in letter placement.

106 MICROCOMPUTER WORD PROCESSING 1 Unit
Prerequisite: Office Occupations 103 or typing rate of 40 words per minute
Lecture: 3 hours
Laboratory: 1.5 hours
Using a microcomputer, students will receive hands-on instruction for operating word processing programs. Instruction will include keyboarding, storing, retrieving, editing and printing information.

108 WORD PROCESSING: ELECTRONIC TYPewriter 1 Unit
Prerequisite: Office Oc. 103 or consent of instructor
Laboratory: 3 hours (Self-paced)
Instruction on the electronic typewriter including document and phrase storage, revisions, storage procedures, tabulation, and repetitive documents.

109 WORD/INFORMATION PROCESSING: ADVANCED APPLICATIONS 2 Units
Prerequisite: Office Oc. 106 and Office Oc. 132
Laboratory: 1 hour
Laboratory: 3 hours
Use of stand-alone word processor and microcomputer in advanced document production techniques including local and global search, merging, document assembly, and records processing.

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

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

130 FILING SYSTEMS AND RECORDS MANAGEMENT 2 Units
Lecture: 2 hours
Study of alphabetic, numeric, geographic, and subject filing systems; management and control of business records including card and visible records, correspondence and non-correspondence records and micrographics.

132 MACHINE TRANSCRIPTION 2 Units
Prerequisite: Office Occupations 103 or equivalent experience
Lecture: 1 hour
Laboratory: 3 hours (Self-paced)
Study and use of various transcribing machines, emphasizing preparation of business documents.

136 ELECTRONIC PRINTING CALCULATORS 1 Unit
Prerequisite: Office Occupations 103 or equivalent experience
Laboratory: 3 hours (Self-paced)
Practical instruction in the operation of the electronic printing calculator, emphasizing business applications.

138 OFFICE PROCEDURES 3 Units
Prerequisite: Bus. Ad. 60a, Off. Oc. 103, or consent of instructor
Lecture: 2 hours
Laboratory: 3 hours
Designed to train the student for employment as a secretary in a law office. Specialized training in knowledge and skills required of legal secretaries including preparation of legal papers and court documents, assistance in legal research, bookkeeping and filing in a law office.

140 MEDICAL TERMINOLOGY 4 Units
Lecture: 4 hours
An introduction to basic medical word structure including word roots, prefixes and suffixes used in medical vocabulary by allied health field members.

142a MEDICAL TRANSCRIPTION 2 Units
Prerequisite: Office Oc. 103 or equivalent; Office Oc. 132
Lecture: 1 hour
Laboratory: 6 hours (Self-paced)
Development of skills for medical transcription in physicians' offices, clinics, hospitals and related affiliated health field positions. Students will type history, physical, and surgery reports, using medical terminology and transcription skills.

142b MEDICAL TRANSCRIPTION 2 Units
Prerequisite: Office Oc. 142a
Lecture: 2 hours
Laboratory: 6 hours (Self-paced)
Continuation of Office Occupations 142a; surgery reports and discharge summaries.

144 MEDICAL INSURANCE 2 Units
Prerequisite: Office Occupations 103, Office Occupations 140 at consent of instructor
Lecture: 1 hour
A fundamental course in medical insurance and insurance billing including instruction in coding, Blue Cross and Blue Shield forms, Medicaid and Medicare, Medicare, Champus and Workers' Compensation.

154 LEGAL TRANScription/ TERMINOLOGY 2 Units
Prerequisite: Off. Oc. 103, Off. Oc. 132
Laboratory: 6 hours (Self-paced)
Training for the specialized area of the legal office. Development of legal terminology; transcription of legal documents and correspondence; use of legal reference materials.

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

179 WORK EXPERIENCE IN OFFICE OCCUPATIONS 1-4 Units
Prerequisite: Employment must be approved by Work Experience Coordinator. Concurrent attendance at Work Experience orientation sessions during the first three weeks of the term is required. Must be enrolled in at least seven units including Work Experience. During Summer Session must be enrolled in at least one other course.
75 hours paid employment equals 1 unit of credit
60 hours unpaid employment equals 1 unit of credit
Provides students an opportunity to experience supervised employment in Office Occupations. The student's employment must be related to educational or occupational goals.
Offered for Credit/No Credit only.
May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.
REAL ESTATE/SUPERVISORY TRAINING/CHEMISTRY

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

CHEMISTRY
60 CONSUMER CHEMISTRY: Food
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
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 101ab.

100 FUNDAMENTALS OF CHEMISTRY
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
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: 4 hours
Laboratory: 3 hours
Survey of atoms, nuclear chemistry, molecules, ions, chemical bonding, gases, liquids, solids, solutions, kinetics, and equilibria.

101b GENERAL CHEMISTRY
Prerequisite: Chem. 101a or equivalent or consent of instructor
Lecture: 4 hours
Laboratory: 3 hours
Survey of thermodynamics, electrochemistry, nonmetals, qualitative analysis and organic compounds.

108 ORGANIC CHEMISTRY
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 characterization reactions of organic compounds with emphasis on chemicals of interest to students in the biological sciences.

COMPUTER SCIENCE
See Page 32 for Certificate Requirements
75 COMPUTER SPREADSHEET APPLICATIONS
Prerequisite: Computer Science 120 plus 2 years of high school algebra or Math. 101 or consent of instructor
Lecture: 1 hour
Instruction on the use of the Electronic Spreadsheet as a financial accounting tool. Students will acquire hands-on experience in using the computer to manage and project cash flow, maintain financial statements, payrolls, and other accounting sheets.

101 INTRODUCTION TO MICRO COMPUTERS
Prerequisite: One year of high school algebra or Mathematics 55
Lecture: 3 hours
Laboratory: 1.5 hours
An introduction to microcomputers: using the computer to define, create, and access data files on a personal computer; basic language syntax is used to study programming logic; includes concepts of hierarchy, flowcharting, interactive input, analytic approaches to processing data and creating reports, valid and invalid logic structures, logical operators, selectors, relational operators, loops, structures, array, and basic language syntax.

120 BASIC PROGRAMMING
Prerequisite: Computer Science 101 and Computer Science 103 or consent of instructor
Lecture: 2 hours
Laboratory: 3 hours
Programming in the business-oriented computer language, COBOL. Programming assignments emphasize business applications. Topics include language structure, data representation, file manipulation, report generation, input/output, and arithmetic.
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, and natural gas plumbing; applicable local code ordinances.

110b BASIC DRAFTING 3 Units
Lecture: 2 hours
Laboratory: 3 hours
An introductory course for beginners or a refresher course for those with a limited drafting background. Basic instruction on the use of tools, lettering form and balance stressed, geometric figures, orthographic projections, dimensioning.

115a ADVANCED DRAFTING 3 Units
Prerequisite: Drafting 110b
Lecture: 2 hours
Laboratory: 3 hours
Specialized areas of mechanical drafting, technical illustrations, map making, sheet metal layouts, welding, cams and gears, template linking.

115b ADVANCED DRAFTING 1 Unit
Prerequisite: Drafting 115a
Laboratory: 3 hours
Practical laboratory in area of interest such as map drafting, electrical and electronic, aerospace, and technical illustration. Projects must involve current industrial practices.

130 ARCHITECTURAL DRAFTING 3 Units
Prerequisite: Drafting 115b or Drafting 110b
Lecture: 2 hours
Laboratory: 3 hours
Study and preparation of residential design. Creative as well as technical aspects of design will be covered. Problems relating to finance and codes will be discussed.

102 ORAL EXPRESSION & INTERPRETATION 3 Units
Lecture: 2 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 3 Units
Lecture: 2 hours
Activity: 2 hours
Theory and practice of Readers' Theatre as an art form. Directed experiences in selecting, cutting, arranging, and performing the Readers' Theatre script.

136 PLAYWRITING 3 Units
Lecture: 3 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 3 Units
Lecture: 2 hours
Activity: 2 hours
Investigation of techniques and theories prerequisite to theatrical performance; psychological, philosophical, and practical preparation for the actor's art.

143b ACTING: Acting-Directing 3 Units
Prerequisite: Drama 110b or consent of instructor
Lecture: 1 hour, Laboratory: 3 hours equals 2 units of credit
A workshop in techniques of both acting and directing with specific focus upon the production of short scenes from a variety of theatrical genre.

145 IMPROVISATION 3 Units
Lecture: 2 hours
Activity: 2 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.

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 for theatre, film, and television.
**EARTH SCIENCE/ECONOMICS/ENGLISH**

**139 FIELD GEOLOGY**
Prerequisite: A previous course in Earth Science is desirable
Lecture: 3.5 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 two times.

**140 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. Field trips may be required.

**141 GENERAL ASTRONOMY**
4 Units
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; development of observational skills; learning constellations, setting up and using telescopes, determining rising and setting times of the sun, moon, planets, and stars. Approximately one-half of the required labs will meet at night at the observatory. Field trips may be required.

**161 FUNDAMENTALS OF METEOROLOGY**
3 Units
Lecture: 3 hours
Laboratory: 3 hours
Origin of the world's atmosphere, its structure, composition, and circulation; the weather elements, weather instruments and their use, gas laws, air masses, frontal movements, cloud types, and laboratory techniques; meteorological effects on modern society. Field trips may be required.

**171 FUNDAMENTALS OF OCEANOGRAPHY**
3 Units
Lecture: 2 hours
Laboratory: 3 hours
The origins of the world's oceans, its structure, composition, and circulation; tides, currents, salinity, density, oceanographic instruments and their use, life in the sea, the interaction of the ocean and the atmosphere, the ocean and modern society.

**ECONOMICS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>55</td>
<td>UNDERSTANDING THE AMERICAN ECONOMY</td>
<td>3</td>
<td>Introduction to macro-economic principles with 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.</td>
</tr>
<tr>
<td>101a</td>
<td>PRINCIPLES OF ECONOMICS</td>
<td>4</td>
<td>Macro-economics. Introduction to the U.S. economy and capitalism; national income and employment analysis, economic fluctuations, monetary and fiscal policies, economic stability-instability, public finance, and special economic problems.</td>
</tr>
<tr>
<td>101b</td>
<td>PRINCIPLES OF ECONOMICS</td>
<td>4</td>
<td>Micro-economics. The corporation, analysis of costs, theory of production, pricing factor inputs including wages, rent, and interest; the social implications of various market structures; special economic problems.</td>
</tr>
<tr>
<td>51</td>
<td>COLLEGE COMPOSITION</td>
<td>3</td>
<td>Training in basic composition skills, reading, interpretation, and discussion of college-level materials; basic mechanics, sentence structure, paragraph development, essay and report organization.</td>
</tr>
<tr>
<td>79</td>
<td>WRITING FUNDAMENTALS</td>
<td>1</td>
<td>Individual instruction in the fundamentals of writing. May be repeated one time.</td>
</tr>
<tr>
<td>101a</td>
<td>READING AND COMPOSITION: BEGINNING</td>
<td>3</td>
<td>Development of reading and composition skills with emphasis on applying techniques of logic in interpreting and writing the expository essay and reading and interpretation of the short story.</td>
</tr>
<tr>
<td>101b</td>
<td>READING AND COMPOSITION: ADVANCED</td>
<td>3</td>
<td>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 at least one longer, documented paper.</td>
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**ENGLISH**

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<td>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 at least one longer, documented paper.</td>
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<td>110</td>
<td>CREATIVE WRITING</td>
<td>3</td>
<td>Prequisite: English 101a or consent of instructor. Lecture: 3 hours. Instruction and practice in writing poetry, fiction, and drama. Analysis of contemporary works with respect to literary techniques. May be repeated one time.</td>
</tr>
<tr>
<td>111</td>
<td>FILM APPRECIATION</td>
<td>3</td>
<td>Lecture: 2.5 hours; Laboratory: 1.5 hours. Development of technical awareness and critical judgment in individual response to cinema.</td>
</tr>
<tr>
<td>117a</td>
<td>LITERATURE OF THE UNITED STATES</td>
<td>3</td>
<td>Prequisite: English 101a or consent of instructor. Lecture: 3 hours. A study of the literature of the United States from the beginning of the English colonization through the turbulent 20th Century. Reading, analysis, and discussion of the major literary trends and authors of the time.</td>
</tr>
<tr>
<td>117b</td>
<td>LITERATURE OF THE UNITED STATES</td>
<td>3</td>
<td>Prequisite: English 101a or consent of instructor. Lecture: 3 hours. A study of the literature of the United States from realism to the present.</td>
</tr>
</tbody>
</table>

**FIRE TECHNOLOGY**

**100 CREATIVE WRITING**
Prequisite: English 101a or consent of instructor. Lecture: 3 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**
Lecture: 2.5 hours; Laboratory: 1.5 hours. Development of technical awareness and critical judgment in individual response to cinema.

**117a LITERATURE OF THE UNITED STATES**
Prequisite: English 101a or consent of instructor. Lecture: 3 hours. A study of the literature of the United States from the beginning of the English colonization through the turbulent 20th Century. Reading, analysis, and discussion of the major literary trends and authors of the time.

**117b LITERATURE OF THE UNITED STATES**
Prequisite: English 101a or consent of instructor. Lecture: 3 hours. A study of the literature of the United States from realism to the present.

**146a SURVEY OF ENGLISH LITERATURE**
Prequisite: English 101a or consent of instructor. Lecture: 3 hours. English literature from the Anglo-Saxons through the 18th Century.

**146b SURVEY OF ENGLISH LITERATURE**
Prequisite: English 101a or consent of instructor. Lecture: 3 hours. English literature of the 19th and 20th Centuries.

**149 CALIFORNIA LITERATURE**
Prequisite: English 101a or consent of instructor. Lecture: 3 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**
Prequisite: English 101a. Lecture: 3 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 the 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.
Lecture: 3 hours
Laboratory: 3 hours
Review of basic mathematics, hydraulic laws and formulas as applied to the fire service, including formulas and mental calculation to hydraulic problems, water supply problems; underwriters' requirements for pumps.

125 FIRE EQUIPMENT REPAIR AND MAINTENANCE 2 Units
Prerequisite: Fire Technology 61 through 67 or equivalent
Lecture: 1 hour
Laboratory: 3 hours
Repair of commonly used fire service equipment including hand tools, small and auxiliary gas or electric powered tools, hydraulic mechanisms and personal safety devices. Includes preventive maintenance, inspection procedures and measuring tolerances of calibrated equipment and devices.

127 FIRE INVESTIGATION 2 Units
Lecture: 2 hours
Determining causes and types of fires; possible evidence at the scene; interviewing witnesses and suspects; arrest, detention, and court procedures; giving court testimony. (Students may not receive credit for both Fire Science 127 and Law Enforcement 140ab.)

130 FIRE PROTECTION EQUIPMENT AND SYSTEMS 2 Units
Prerequisite: Fire Technology 101 or equivalent
Portable fire extinguishing equipment, sprinkler systems, protection systems for special hazards, fire alarm and detection systems.

179 WORK EXPERIENCE IN FIRE SERVICE 1-4 Units
Prerequisite: Employment must be approved by the Work Experience Coordinator. Concurrent attendance at Work Experience orientation sessions during the first three weeks of the term is required. Must be enrolled in at least seven units including Work Experience. During Summer Session must be enrolled in at least one other course.

75 hours paid employment equals 1 unit of credit
60 hours unpaid employment equals 1/2 unit of credit
Provides students an opportunity to experience supervised employment in Fire Technology. The student's employment must be related to educational or occupational goal.

Offered for credit/no credit only. May be repeated for no more than a total of 16 units of credit unless any units earned in any other Work Experience course.

FOREIGN LANGUAGE
Spanish

100a CONVERSATIONAL SPANISH: Beginning 3-4 Units
Prerequisite: None
Lecture: 3 hours
Laboratory: 3 hours
Practice in vocabulary, idioms, and grammatical usage with emphasis in conversational use of the language as spoken in Mexico. May be repeated for no more than a total of 16 units of credit unless any units earned in any other Work Experience course.

100b CONVERSATIONAL SPANISH: Intermediate 3-4 Units
Prerequisite: Spanish 100a
Lecture: 3 hours
Laboratory: 3 hours
A continuation of Spanish 100a with emphasis on idioms, culture and use of the total language.

101a SPANISH: BEGINNING 4 Units
Lecture: 4 hours
Audio-lingual approach to comprehension of
FOREIGN LANGUAGE/FORESTRY/FORESTRY TECHNOLOGY/GEOGRAPHY/GUIDANCE

101a (continued)  
spoken and written Spanish. Vocabulary, idioms and patterns based on the language as spoken in Hispanic America.  

101b SPANISH: BEGINNING  
Prerequisite: Spanish 101a or two years of high school Spanish  
Lecture: 4 hours  
Continuation of Spanish 101a.  

FORESTRY  

101 INTRODUCTION TO PROFESSIONAL FORESTRY  
3 Units  
Lecture: 3 hours  
Survey of the major U.S. forest regions and significant forest history events. Forestry practices, wood utilization and applied techniques of private tree farm/woodlot management for long-term production of timber, fuelwood, Christmas trees and other resources. Forestry education, career opportunities, licensing and ethics.  
Field trips will be required.  

110 DENDROLOGY  
Prerequisite: Biology 120, Biology 121, or Biology 125 recommended  
Lecture: 2 hours  
Laboratory: 3 hours  
Silvicultural and botanical characteristics, identification, classification, range, and uses of native forest species of the United States; emphasis on plants of economic importance to forest practices in California and the western United States.  
Field trips will be required.  

WORK EXPERIENCE  
See NATURAL RESOURCES 179  

FORESTRY TECHNOLOGY  
See Page 33 for Certificate Requirements  

50 INTRODUCTION TO TECHNICAL FORESTRY  
2 Units  
Lecture: 3 hours  
Nature and scope of the forest technician's work, knowledge and skills for employment, employment opportunities. Survey of major U.S. forest regions, forest insects, diseases, and fire relationships. Technical forestry skills needed for private tree farm/woodlot management for long-term production of timber, fuelwood, Christmas trees and other resources.  
Field trips will be required.  

53 FOREST SURVEYING TECHNIQUES  
3 Units  
Lecture: 2 hours  
Laboratory: 2 hours  
Use of basic forest surveying instruments. Application of hand and staff compass, topographic and engineer's chain, abney and dumpy level, plane table and slide, engineer's transit and redy mapper. Field recording techniques, laboratory computations and map drafting.  
Field trips will be required.  

56 TREE AND PLANT IDENTIFICATION  
3 Units  
Lecture: 2 hours  
Laboratory: 3 hours  
Classification and identification of major United States timber species with emphasis on western and California plant cover. Description of botanical, economic and silvicultural characteristics of trees and other plants as related to forest management and utilization.  
Field trips will be required.  

62 APPLIED FOREST INVENTORY AND MANAGEMENT  
4 Units  
Prerequisite: Forestry Technology 110, Forestry Technology 115 and Natural Resources Technology 10 recommended  
Lecture: 2 hours  
Laboratory: 6 hours  
Techniques of forest inventory including cruising, scaling and evaluation; field tabulation and computation methods; location and inventory of a given forest property in the field; development of property boundaries and inventory of timber and other natural resources; topographic map and road system design for property.  
Field trips will be required.  

WORK EXPERIENCE  
See NATURAL RESOURCES 179  

GEOGRAPHY  

102 INTRODUCTION TO CULTURAL GEOGRAPHY  
3 Units  
Lecture: 3 hours  
The study of humankind's relationships with the environment. The interdisciplinarity of cultural and political geography, anthropology, environmental science, history, and sociology will be featured.  

GUIDANCE  

101 CAREER PLANNING  
2 Units  
Lecture: 2 hours  
Designed to clarify thinking regarding the selection and preparation for a career. Personal assessment of interests, aptitudes and values (May include use of selected interest and aptitude inventories,); relationships between education and occupations; occupational trends; resources useful in career planning; and development of skills in resume writing and interviewing.  
Offered for Credit/No Credit only.  

105 JOB HUNTING STRATEGIES  
.5 Units  
Lecture: 3 hours  
Development of job hunting strategies. Effective use of tools necessary in the job search including: the application, resume, letter of application and interview. Primarily for the student nearing graduation or currently looking for employment.  
Offered for Credit/No Credit only.  

110 ADVANCED FIRST AID AND EMERGENCY CARE REFRESHER  
1 Unit  
Prerequisite: A valid certificate in Advanced First Aid  
Lecture: 1 hour  
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 3 times.  

120 NUTRITION  
Prerequisite: One year of high school or college chemistry or consent of instructor  
Lecture: 3 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  

103 EMERGENCY MEDICAL TECHNICIAN TRAINING  
6 Units  
Prerequisite: Completion of advanced first aid course within the last two years or consent of instructor  
Lecture: 6 hours  
An intensive course to assist the student in developing skill in recognition of illness and injuries and proper procedures in administering emergency care.  

107 EMERGENCY MEDICAL TECHNICIAN  
1.5 Units  
Prerequisite: E.M. T. Certificate  
Lecture: 1.5 hours  
Update of the existing E.M.T. certificates which are expiring.  
May be repeated three times.  

108a EMERGENCY MEDICAL TECHNICIAN II  
9 Units  
Prerequisite: E.M.T. 1 certification, one year E.M.T. practice, CPR certification  
Lecture: 8 hours  
Laboratory: 4 hours  
Designed to provide students with the knowledge and skills necessary to be certified as an Emergency Medical Technician II in California. Laboratory assignments will be conducted in hospitals.  

108b EMERGENCY MEDICAL TECHNICIAN II  
9 Units  
Prerequisite: Health Occupations 108a  
Lecture: 8 hours  
Laboratory: 4 hours  
A continuation of Health Occupations 108a. Emphasis will be on the musculoskeletal system, obstetrics, pediatrics, multiple injury and casualty situations and psychiatric emergencies.
### HEALTH OCCUPATIONS

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<tbody>
<tr>
<td>WORK EXPERIENCE IN HEALTH OCCUPATIONS</td>
<td>1-4</td>
<td>Prerequisite: Employment must be approved by Work Experience Coordinator. Concurrent attendance at Work Experience orientation sessions during the first three weeks of the term is required. Must be enrolled in at least seven units including Work Experience. During Summer Session must be enrolled in at least one other course. 75 hours paid employment equals 1 unit of credit. 60 hours unpaid employment equals 2 units of credit. Provides students an opportunity to experience supervised employment in Health Occupations. The student's performance must be related to educational or occupational goal. Offered for Credit/No Credit only. May be repeated for no more than a total of 16 units of credits any units earned in any other Work Experience course.</td>
</tr>
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### HEAVY EQUIPMENT AND TRUCK REPAIR

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<tr>
<td>BUS DRIVER TRAINING</td>
<td>1.5</td>
<td>Prerequisite: Possession of a valid California driver's license. Lecture: 1.5 hours. Instruction in the driver's responsibility for pupils, care and operation of a school bus, and laws relating to pupil transportation.</td>
</tr>
</tbody>
</table>

### HISTORY

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<tbody>
<tr>
<td>104a WORLD CIVILIZATIONS: to 1650</td>
<td>3</td>
<td>Lecture: 3 hours. Survey of civilizations to 1650: origins in Near East and Asia, development in Greece, Rome, medieval Europe, Africa, and the Americas to colonial empires.</td>
</tr>
<tr>
<td>104b WORLD CIVILIZATIONS: 1650 to Present</td>
<td>3</td>
<td>Lecture: 3 hours. Survey of civilizations since 1650: emergence of strong national states, their struggle for world power, and their impact on the non-western world.</td>
</tr>
<tr>
<td>111 ASIAN CIVILIZATIONS</td>
<td>3</td>
<td>Lecture: 3 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.</td>
</tr>
<tr>
<td>117a UNITED STATES: to 1865</td>
<td>3</td>
<td>Lecture: 3 hours. Survey of United States history from Colonization to Reconstruction. Analysis of English Imperialism, Revolution, Nationalism, Political Democracy, Sectionalism, and Civil War.</td>
</tr>
<tr>
<td>117b UNITED STATES: 1865 to Present</td>
<td>3</td>
<td>Lecture: 3 hours. Survey of United States history from Reconstruction to the present. Analysis of Industrialism, Progressivism, New Deal, Internationalism, and Contemporary America.</td>
</tr>
</tbody>
</table>

### HOSPITALITY MANAGEMENT

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>101 INTRODUCTION TO THE HOSPITALITY INDUSTRY</td>
<td>3</td>
<td>Lecture: 3 hours. Survey of the hotel-motel, food services, travel-tourism, club and recreation business. Analysis of 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.</td>
</tr>
<tr>
<td>103 MARKETING OF HOSPITALITY SERVICES</td>
<td>3</td>
<td>Lecture: 3 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.</td>
</tr>
</tbody>
</table>

### BUS DRIVER TRAINING

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>112 FRONT OFFICE MANAGEMENT / HOUSEKEEPING</td>
<td>3</td>
<td>Lecture: 1 hour. Laboratory: 6 hours. Essential equipment, routines, and duties of the front desk clerk and relationship to other hotel departments; planning and preparation for private parties, dinners, meetings, and other special events that a hotel or restaurant may cater.</td>
</tr>
<tr>
<td>114 INTRODUCTION TO MAINTENANCE AND HOUSEKEEPING</td>
<td>2</td>
<td>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.</td>
</tr>
<tr>
<td>115 THE MOTHER LODE</td>
<td>3</td>
<td>Lecture: 3 hours. History and lore of the Gold Rush country with emphasis on the Central Sierras communities. Field trips may be required.</td>
</tr>
<tr>
<td>116 LAWS OF INKEEPING</td>
<td>2</td>
<td>Lecture: 2 hours. Legal relationships between California innkeepers and others; rights, duties, and liabilities of innkeepers and their personnel. Field trips may be required.</td>
</tr>
<tr>
<td>130 FOOD SERVICE MANAGEMENT</td>
<td>2</td>
<td>Lecture: 2 hours. Introduction to culinary nomenclature, cost controls, kitchen equipment, planning, management reports, menu planning, food purchasing, nutrition and sanitation. Field trips may be required.</td>
</tr>
<tr>
<td>131 DINING ROOM SERVICE</td>
<td>2</td>
<td>Lecture: 1 hour. Laboratory: 3 hours. Service techniques, table settings, and etiquette used in all aspects of dining room service. Emphasis on developing the finer points in skills and showmanship. Field trips may be required.</td>
</tr>
<tr>
<td>132 DINING ROOM MANAGEMENT</td>
<td>1.5</td>
<td>Laboratory: 4.5 hours. Management of service in the dining room; coordinating the dining room staff to ensure proper service techniques and procedures are being followed, acting as host to ensure customer satisfaction.</td>
</tr>
<tr>
<td>133a INTRODUCTION TO COMMERCIAL FOOD PREPARATION</td>
<td>3</td>
<td>Lecture: 1 hour. Laboratory: 6 hours. General instruction to safety, sanitation, culinary nomenclature, cook's tools, recipe conversion and food costs. Preparation of beverages, breakfasts and salads; commissary control and ordering of supplies.</td>
</tr>
<tr>
<td>133b INTRODUCTION TO COMMERCIAL FOOD PREPARATION</td>
<td>3</td>
<td>Prerequisite: Hospitality Management 113a</td>
</tr>
</tbody>
</table>
HOSPITALITY MANAGEMENT/HUMANITIES/JOURNALISM/LAW ENFORCEMENT/LIBRARY

147 BEVERAGE MANAGEMENT  3 Units
Prerequisite: At least 21 years of age
Lecture: 2 hours
Laboratory: 3 hours
Study of all aspects of beverage management including federal, state and local regulations, mixology, background, and future of the beverage industry.
Field trips may be required.

148 HISTORY AND PRODUCTION OF CALIFORNIA WINES  2 Units
Lecture: 2 hours
Introduction to the history, development, production and types of wines.
Field trips are required.

101a INTRODUCTION TO JOURNALISM  3 Units
Lecture: 3 hours
Introduction to basic newsgathering, writing techniques, production methods, photography, commercial art, advertising, libel and slander laws, journalism careers.
Continuation of Journalism 101a.

148b INTRODUCTION TO JOURNALISM  3 Units
Prerequisite: Journalism 101a
Lecture: 3 hours
Continuation of Journalism 101a.

107 NEWSPAPER PRODUCTION  1-3 Units
Prerequisite: Previous or concurrent enrollment in Journalism 101a
Laboratory: 3-9 hours
Labotary using campus newspaper publications and other programs for application of newsgathering, writing skills and production methods.
Field trips may be required.
May be repeated two times.

151 INTRODUCTION TO PARKS AND RECREATION  3 Units
Lecture: 2 hours
An introductory course for individuals interested in parks and recreation, with exposure to park management, design, maintenance and construction; recreational aspects, job opportunities and duties.

160 INTRODUCTION TO TRAVEL-TOURISM INDUSTRY/TOURS  3 Units
Lecture: 3 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; the principles and procedures of group tour management and planning.
Field trips may be required.

WORK EXPERIENCE
See BUSINESS ADMINISTRATION 179

JOURNALISM

101a INTRODUCTION TO JOURNALISM  3 Units
Lecture: 3 hours
Introduction to basic newsgathering, writing techniques, production methods, photography, commercial art, advertising, libel and slander laws, journalism careers.

148b INTRODUCTION TO JOURNALISM  3 Units
Prerequisite: Journalism 101a
Lecture: 3 hours
Continuation of Journalism 101a.

107 NEWSPAPER PRODUCTION  1-3 Units
Prerequisite: Previous or concurrent enrollment in Journalism 101a
Laboratory: 3-9 hours
Labotary using campus newspaper publications and other programs for application of newsgathering, writing skills and production methods.
Field trips may be required.
May be repeated two times.

LAW ENFORCEMENT

140a ARSON INVESTIGATION  2 Units
Beginning
Lecture: 2 hours
Designed to prepare fire suppression officers and police patrol officers to carry out the responsibility of arson detection and establish the foundation for an in-depth arson investigation. (Students may not receive credit for both Fire Science 127 and Law Enforcement 140a.)

140b ARSON INVESTIGATION: Advanced  2 Units
Prerequisite: Law Enforcement 140a or consent of instructor
Lecture: 2 hours
A continuation of the introductory course emphasizing preservation of evidence, explosive devices, testimony as an expert, insurance laws, and advanced fire problems.

160 ADVANCED OFFICERS’ TRAINING  3-5 Units
Prerequisite: 24 Units in Law Enforcement or completion of recognized academy or consent of instructor
Laboratory: 3-5 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.
May be repeated three times.

LIBRARY

101 INTRODUCTION TO LIBRARY RESOURCES  1 Unit
Lecture: 2 hours
Laboratory: 1.5 hours
Instruction in the effective use of a library, its resources and services. Provides training in using the card catalog, periodical indexes, major reference tools, and in developing an effective search strategy.

MATHEMATICS

50 BASIC MATHEMATICS  2 Units
Lecture: 2 hours
or
Lecture: 1 hour
Laboratory: 3 hours
A basic course in arithmetic.

55 BEGINNING ALGEBRA  4 Units
Lecture: 4 hours
Laboratory: 3 hours
Laboratory: 3 hours
Algebraic structures of real numbers, development of algebraic techniques, rational operations, radicals, polynomials, factoring, linear equations, inequalities, and quadratic equations.

GEOMETRY  4 Units
Prerequisite: Mathematics 55 or one year high school algebra recommended
Lecture: 4 hours
Laboratory: 3 hours
Laboratory: 3 hours
Rectilinear figures, circles, parabolas, perpendicular, areas, similarity, constructions, logic, and proofs.

101 INTERMEDIATE ALGEBRA  4 Units
Prerequisite: Mathematics 55 or one year high school algebra
Lecture: 4 hours
Laboratory: 3 hours
Laboratory: 3 hours
Extension of elementary algebra; includes complex numbers.

102 TRIGONOMETRY  4 Units
Prerequisite: Mathematics 60 or Mathematics 101 or second year high school algebra and one year geometry
Lecture: 4 hours
Laboratory: 3 hours
Mathematics of angles, triangles, periodic functions, identities, graphs, and logarithms for advanced mathematics and technical and engineering courses.

103 COLLEGE ALGEBRA  4 Units
Prerequisite: Mathematics 101 or equivalent high school course
Lecture: 4 hours
Laboratory: 3 hours
Laboratory: 3 hours
Extension of algebraic concepts; includes quadratic equations, inequalities, systems of equations, complex numbers, matrices, determinants, and polynomial, exponential, and logarithmic functions.

104 INTRODUCTION TO LOGIC (See also Philosophy 104)  3 Units
Lecture: 3 hours
Fundamentals of logic: (1) deduction, including syllogisms, truth functions, symbolic quantification, and fallacies; (2) induction, including probability, analogy, hypothesis, and the scientific method; (3) philosophy of logic.
(Credit for this course will be awarded for either Mathematics 104 or Philosophy 104, but not both.)

105 ELEMENTS OF STATISTICS  4 Units
Prerequisite: Mathematics 101 or second year high school algebra
Lecture: 4 hours
Lecture: 3 hours
Laboratory: 3 hours
Statistical concepts of probability, analysis and significance of measurements, measures of central tendency, correlation, variation, distribution, and reliability and validity of tests.

110 FINITE MATHEMATICS  4 Units
Prerequisite: Mathematics 101 or two years of high school algebra
Lecture: 4 hours
Laboratory: 3 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: 1 hour
Matrix properties and operations, matrix identity and inverse, matrix translations and rotation, systems of equations, and applications.

20a CALCULUS WITH ANALYTIC GEOMETRY  4 Units
Prerequisite: Two years of high school algebra, one year of plane geometry, and one-half year of trigonometry or Mathematics 102. Mathematics 103 recommended
Lecture: 4 hours
Lecture: 3 hours
Laboratory: 1 hour
Inequalities, relations, functions, graphs, limits, the derivative, continuity, limits, circles, and conics with geometric and physical interpretations of the derivative.

HUMANITIES

101 OLD WORLD CULTURE  3 Units
Lecture: 3 hours
An introductory survey of humanistic culture, historically structured from classical Greece to the Renaissance, presenting enduring works of art, drama, literature, music, and philosophy.

102 MODERN CULTURE  3 Units
Lecture: 3 hours
An introductory survey of humanistic culture, historically structured from the Enlightenment to the present scene, presenting enduring works of art, drama, literature, music, and philosophy.

LIBRARY/MATHEMATICS

101 (continued)

103 (continued)
120b MUSIC THEORY
Prerequisite: Music 120a
Lecture: 4 hours
Activity: 2 hours
Continuing study in harmony and analysis. Includes theory of music, music analysis, and topics in music history.

120b MUSIC THEORY
Prerequisite: Music 120a
Lecture: 4 hours
Activity: 2 hours
Continuing study in harmony and analysis. Includes theory of music, music analysis, and topics in music history.

121 COMPOSITION
Prerequisite: Music 120b
Lecture: 4 hours
Activity: 2 hours
Laboratory: 3 hours
Composing in various musical styles as well as analysis of music. Includes composition techniques, musical analysis, and music history.

131a ELEMENTARY CLASS PIANO
Prerequisite: Concurrent enrollment in Music 109 recommended.
Lecture: 1 hour
Activity: 2 hours
Study of basic techniques of piano playing, fundamentals of music theory, sight-reading, improvisation, and harmonization.

131b ELEMENTARY CLASS PIANO
Prerequisite: Music 131a or consent of instructor.
Lecture: 1 hour
Activity: 2 hours
Continuation of Music 131a.

136a ELEMENTARY CLASS VOICE
Prerequisite: Concurrent enrollment in Music 109 recommended.
Lecture: 1 hour
Activity: 1 hour
Group instruction in basic singing techniques, including breathing, voice production, diction, and stage presentation.

136b ELEMENTARY CLASS VOICE
Prerequisite: Music 136a or consent of instructor.
Lecture: 1 hour
Activity: 2 hours
Continuation of Music 136a.

138 BEGINNING JAZZ IMPROVISATION
Prerequisite: Audition. Concurrent enrollment in Music 109 recommended.
Lecture: 1 hour
Activity: 2 hours
Study of jazz improvisation techniques, including basic chord scales, style, selected ear training, and analysis of transcribed solos. Field trips may be required.

139 INTERMEDIATE CLASS PIANO
Prerequisite: Music 131b or consent of instructor.
Lecture: 1 hour
Activity: 2 hours
Study of playing techniques requiring the full range of the piano and covering piano literature from 1700 to the present, emphasizing style and interpretation.

146 INTERMEDIATE CLASS VOICE
Prerequisite: Music 136b or consent of instructor.
Lecture: 1 hour
Activity: 2 hours
Continuation of Music 136a.

148 INTERMEDIATE JAZZ IMPROVISATION
Prerequisite: Music 138 or consent of instructor.
Lecture: 1 hour
Activity: 2 hours
Study of performance techniques, interpretation, and repertoire related to private music instruction. Designated for music majors and minors. May be repeated three times.

150 SERIES — APPLIED MUSIC
Prerequisite: Audition. Concurrent enrollment in Music 109 recommended.
Lecture: 1 hour
Activity: 2 hours
Study of performance techniques, interpretation, and repertoire related to private music instruction. Designated for music majors and minors. May be repeated three times.

151 APPLIED MUSIC: Guitar
1 Unit
152 APPLIED MUSIC: Keyboard
1 Unit
153 APPLIED MUSIC: Woodwinds
1 Unit
154 APPLIED MUSIC: Strings
1 Unit
155 APPLIED MUSIC: Percussion
1 Unit

160 CHOIR
Prerequisite: Concurrent enrollment in Music 109 recommended.
Activity: 2-6 hours
Study and performance of mixed choral works of various periods and styles. May be repeated three times.

164 JAZZ CHOIR
Prerequisite: Audition.
Activity: 2-6 hours
Study and performance of vocal jazz and improvisation in an ensemble of limited size. May be repeated three times.

165 THEATRE PRODUCTION: Music Emphasis
Prerequisite: Audition.
Activity: 2-6 hours
Directed activities in theatre production for public performance with a concentration in vocal or instrumental music. May be repeated three times.

169 MADRIGAL ENSEMBLE
Prerequisite: Audition. Concurrent enrollment in Music 109 recommended.
Activity: 2-6 hours
Study and performance of vocal chamber music with emphasis on the Renaissance and Contemporary periods.

170 WIND ENSEMBLE
Prerequisite: Audition. Concurrent enrollment in Music 109 recommended.
Activity: 2-6 hours
Study and performance of advanced wind ensemble literature. Attention to all scheduled performances is required. May be repeated three times.

172 JAZZ ENSEMBLE
Prerequisite: Audition.
Activity: 2-6 hours
Study and performance of instrumental jazz and improvisation techniques of improvisation will be explored. May be repeated three times.
MUSIC/NATURAL RESOURCES/NATURAL RESOURCES TECHNOLOGY

176 COMMUNITY ORCHESTRA 1 Unit
Prerequisite: Concurrent enrollment in Music 109 recommended.
Activity: 2-6 hours
Study and performance of orchestral literature of various styles and media.
May be repeated three times.

179 ENSEMBLE: Instrumental Emphasis 1 Unit
Prerequisite: Audition; Concurrent enrollment in Music 109 recommended.
Activity: 2-6 hours
Study and performance of music for small ensembles, duets, and chamber groups.
May be repeated three times.

NATURAL RESOURCES
See Page 34 for Certificate Requirements

100 ENVIRONMENTAL CONSERVATION 3 Units
Lecture: 3 hours
Conservation of the biological and physical environment. History of the conservation movement. A case-study approach to land use practices of environmental conservation with current topics on endangered species, environmental pollution, wilderness management, population and the uniqueness of California and Alaska natural resources.
Field trips may be required.

105 ALTERNATIVE ENERGY SOURCES 3 Units
Lecture: 2 hours Laboratory: 3 hours
Home energy conservation and energy-efficient construction methods. Practical applications of solar, wind, and hydro-energy systems for heating, cooking, food drying, water pumping and electrical production.
Field trips will be required.

109 PARKS AND FORESTS LAW ENFORCEMENT 2 Units
Lecture: 2 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.

130 WILD EDIBLE AND USEFUL PLANTS 3 Units
Lecture: 2 hours Laboratory: 1 hour
Survey of wild edible and useful plants with particular emphasis on the Sierra Nevada. Methods of collection, preserving and preparing wild plants with an emphasis on acorn preparation. Use of plant identification keys. Exposure to the nutritional content of plants, poisonous plants, basketry, dyeing, wild herbs and maple sugaring.
Field trips may be required.

NATURAL RESOURCES TECHNOLOGY
See Page 34 for Certificate Requirements

50 NATURAL HISTORY AND ECOLOGY 2 Units
Lecture: 2 hours
Natural history and ecology with emphasis on the interrelationships among plants, animals, soils, geology and climate of California. Selected topics on plant succession, terrestrial and aquatic ecosystems, organization, adaptation, diversity, evolution, California's physical/biological environment, California biomes, and Sierra Nevada Life Zones.
Field trips will be required.

52 APPLIED WILDLANDS MANAGEMENT 3 Units
Prerequisite: Natural Resources Technology 60 recommended
Lecture: 2 hours Laboratory: 1 hour
Techniques of managing wildlands for maximum forage, soil, water, wildlife and recreation quality. Field observations and applications for restoration and protection of watershed, range, wildlife and recreation values.
Field trips will be required.

55 INTERPRETIVE GUIDED TOURS 2 Units
Lecture: 2 hours Laboratory: 3 hours
Methods of meeting and serving diverse public groups in their social, cultural and recreational use of wildlife recreation sites.
Field trips will be required.

60 AERIAL PHOTOGRAPHY AND MAP INTERPRETATION 2 Units
Lecture: 1 hour Laboratory: 3 hours
Use of basic photogrammetric instruments and equipment. Techniques of delineating soil vegetation and timber types and distinguishing physical features on aerial photographs. Techniques of interpretation of planimetric, topographic, orthophoto topographic and geologic maps. Principles of remote sensing.
Field trips may be required.

63 WATER FOR CONSUMPTION 3 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 4 Units
Lecture: 4 hours
Study of the field identification characteristics, habitat requirements, life history, management and population dynamics of selected California mammals, birds and fish. Methods and problems of appraising and manipulating game mammals, furbearers, upland game and fisheries to improve populations. Techniques of habitat appraisal and manipulation to improve wildlife populations.
Field trips may be required.

179 WORK EXPERIENCE IN FORESTRY AND NATURAL RESOURCES 1-4 Units
Prerequisite: Employment must be approved by Work Experience Coordinator. Concurrent attendance in Work Experience orientation sessions during the first three weeks of the term is required. Must be enrolled in at least seven units including Work Experience. During Summer Session must be enrolled in at least one other course.
Field trips may be required.

73 hours paid employment equals 1 unit of credit.
60 hours unpaid employment equals 1 unit of credit.
Provides students an opportunity to experience supervised employment in Forestry and Natural Resources. The student's employment must be related to educational or occupational goal.
Offered for Credit/No Credit only.
May be repeated for no more than a total of 16 units of credit unless any units earned in any other Work Experience course.

PHILOSOPHY

101 INTRODUCTION TO PHILOSOPHY 3 Units
Lecture: 3 hours
Survey of the field of philosophy, including (1) human nature, meaning in life, values in ethics, in social justice, and in art; (2) knowledge, truth, logic, and the scientific method; (3) ultimate reality and philosophy of religion.

104 INTRODUCTION TO LOGIC 3 Units
See also Mathematics 104
Lecture: 3 hours
Fundamentals of logic: (1) deduction, including syllogisms, truth functions, symbolic quantification, and fallacies; (2) induction, including probability, sampling, hypothesis, and the scientific method; (3) philosophy of logic.
(Credit for this course will be awarded in either Philosophy 104 or Mathematics 104, but not both.)

115 WORLD RELIGIONS 3 Units
Lecture: 3 hours
Development of religious consciousness from primitive beliefs in ancient times to the living religions of the world: tribal religions of Native Americans and Africans, Hinduism, Buddhism, Taoism, Shinto, Judaism, Christianity, Islam, and new religions and cults in America.

125 TWENTIETH CENTURY PHILOSOPHY 3 Units
Lecture: 3 hours
A brief survey of twentieth century philosophy emphasizing the leading exponents of each school of thought and their contributions to our understanding of man, nature, society, history, science, technology, human values and the meaning of life.

PHYSICAL EDUCATION

101 INTRODUCTION TO PHYSICAL EDUCATION 2 Units
Lecture: 2 hours
The background and principles of physical education and sports. Study of the aims and objectives of modern physical education with a view toward development of basic philosophy and background for professional education.

103 BASKETBALL: ADVANCED THEORY AND PRACTICE 2 Units
Activity: 3 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 EVALUATIONS 2.5 Units
Lecture: 1.5 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 decisions about their own personal exercise program and their personal physical fitness directions for a lifetime.

106 THEORY AND PRACTICE OF ADAPTIVE PHYSICAL EDUCATION 2.5 Units
Lecture: 1.5 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 1-2 Units
Prerequisite: Physical Education 106 Laboratory: 3-6 hours
Designed to allow P.E. 106 students who have gone through the training program to assist in P.E. 158 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
Prerequisite: Concurrent enrollment in P.E. 149 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.
PHYSICAL EDUCATION

112 THEATRE PRODUCTION: DANCE EMphasis
Prerequisite: Audition Laboratory: 3-6 hours Activity: 1-2 units
Directed activities in theatre production for public performance with a concentration in dance.
May be repeated three times.

116 DANCE PRODUCTION
Prerequisite: Audition Activity: 6 hours Dance production for public performance; theory and practice in choreography, performance style, and dance rehearsal combined with theatrical structure, non-verbal dramatic techniques, and technical staging designed for concert presentation.
May be repeated three times.

117 CHOREOGRAPHY AND COMPOSITION
Prerequisite: Previous or concurrent enrollment in P.E. 118 or P.E. 120 or P.E. 129 or consent of Instructor Lecture: 2 hours Activity: 2 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.

Activity Courses

120 AEROBIC EXERCISE I
Activity: 1-4 hours Designed to promote cardiovascular fitness, flexibility, muscle tone, and general overall conditioning.

121 AEROBIC EXERCISE II
Prerequisite: P.E. 120 Activity: 1-4 hours A rigorous exercise class designed to increase cardiovascular fitness. Each workout will include exercise to build strength, flexibility, and endurance. May be repeated two times.

123 BALLET I
Activity: 1-4 hours 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.

124 BALLET II
Prerequisite: P.E. 123 or consent of instructor Activity: 1-4 hours Continuing study of techniques and principles of classical ballet including phrasing, combinations, and stylistic elements. May be repeated two times.

127 DANCE, JAZZ I
Activity: 1-4 hours Introduction to the fundamentals of jazz dance with emphasis on basic technique, rhythmical analysis, and various cultural and historical styles.

128 DANCE, JAZZ II
Prerequisite: P.E. 127 Activity: 1-4 hours Continuing work in dance jazz with emphasis on developing stylistic elements and performance techniques. Specific attention given to learning extended movement combinations and compositional forms indigenous to American jazz.

129 DANCE, MODERN I
Prerequisite: Consent of Instructor Activity: 1-4 hours 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.

130 DANCE, MODERN II
Prerequisite: P.E. 129 or consent of Instructor Activity: 1-4 hours Continuing 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 two times.

132 FENCING
Activity: 1-4 hours Introduction to swordsmanship for men and women. Fencing with the French foil, with instruction in the basic skills, rules and officiating of the sport. Intra-class contests will be played. May be repeated three times.

134 GOLF I
Activity: 1-4 hours Instruction and practice in fundamentals.

135 GOLF II
Prerequisite: P.E. 134 or consent of instructor Activity: 1-4 hours Instruction and practice in skills, rules and strategy. May be repeated two times.

137 DISTANCE RUNNING
Activity: 1-4 hours Instruction and practice in the sport of distance running with emphasis on training techniques to enable students to safely negotiate distances of 2 or more miles. May be repeated three times.

138 SKIING CONDITIONING
Activity: 1-4 hours Instruction in progressive exercises and conditioning for snow skiing.

139 SKIING: ALPINE
Activity: 1-4 hours Preparation and practice in fundamental basics of snow skiing on the slopes. Care and selection of equipment, terminology, and safety included.

140 SKIING: CROSS COUNTRY
Activity: 1-4 hours 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.

142 RACQUET SPORTS
Activity: 1-4 hours 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 in both singles and doubles tennis.

143 TENNIS I
Activity: 1-4 hours 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 in both singles and doubles tennis.

144 TENNIS II
Prerequisite: P.E. 143 or consent of instructor Activity: 1-4 hours Preparation and practice in the advanced aspects of Eastern-grip tennis. Emphasis on game play and development with individualized coaching and analysis for more experienced player. Includes tactics and court coverage to encourage a more powerful and game court in both singles and doubles tennis. May be repeated two times.

146 VOLLEYBALL I
Activity: 1-4 hours Basic techniques with emphasis on offensive and defensive tactics of team play. Rules and intra-class competition included.

147 VOLLEYBALL II
Prerequisite: P.E. 146 or consent of instructor Activity: 1-4 hours An intermediate level of skills and strategies for the experienced player; and introduction to power volleyball play. May be repeated three times.

149 WEIGHT TRAINING I
Activity: 1-4 hours Instruction in use of weights and body building equipment with emphasis upon individual program development. May be repeated two times.

150 WEIGHT TRAINING II
Prerequisite: P.E. 140 or consent of instructor Activity: 1-4 hours Designed to help individuals accomplish a fine state of physical fitness through the use of "overload" equipment and progressive resistance exercises. Each person shall, with the counseling of the instructor, analyze his/her particular needs and establish a program that will help accomplish these goals. May be repeated two times.

155 SOCCER
Activity: 1-4 hours Instruction, practice, and participation in game play. Emphasis on rules, individual skills, and strategy in the field. May be repeated three times.

158 ADAPTIVE PHYSICAL EDUCATION
Activity: 1-4 hours Designed to offer individuals prescribed fitness direction to those physically limited with emphasis on the improvements of cardiovascular flexibility and strength components. May be repeated three times.

Intercollegiate Athletics

162 VARSITY BASKETBALL
Prerequisite: Must be enrolled as full-time student Activity: 10 hours Preparation and training for intercollegiate varsity basketball competition. Participation in contests with other colleges will be scheduled. Field trips will be required. May be repeated three times.

164 VARSITY TENNIS
Prerequisite: Must be enrolled as full-time student Activity: 10 hours Preparation and training for intercollegiate varsity tennis competition. Participation in contests with other colleges will be scheduled. Field trips will be required. May be repeated three times.

166 VARSITY VOLLEYBALL
Prerequisite: Must be enrolled as full-time student Activity: 10 hours Preparation and training for intercollegiate varsity volleyball competition. Participation in contests with other colleges will be scheduled. Field trips will be required. May be repeated three times.

PHYSICAL EDUCATION
PHYSICAL EDUCATION/PHYSICS/POLITICAL SCIENCE

170a CARDIAC THERAPY: PHASE IV
Prerequisite: Primary Physician Referral
Lecture: 3-5 hours
Activity: 2-6 hours
A secondary prevention program designed for patients with angina pectoris, healed myocardial infarctions, or post-cardiac surgery referrals whose functional capacity is relatively uncompromised.

170b CARDIAC THERAPY: PHASE IV
Prerequisite: Physical Education 170a
Lecture: 3-5 hours
Activity: 2-4 hours
Continuation of Physical Education 170a.
May be repeated two times.

173a ADULT FITNESS PROGRAM I
1-3.5 Units
Activity: 1.5-3 hours
An overview of the essential principles of physical fitness for adults. Individual evaluation of aerobic, flexibility, strength, and body composition components with the ensuing development of a personalized exercise prescription.

173b ADULT FITNESS PROGRAM II
1-3 Units
Prerequisite: Physical Education 173a
Activity: 2-6 hours
Individual evaluation of cardiovascular function and development of a personalized prescription program for aerobic fitness improvement; monitoring and supervision of exercise regimen and related fitness activities for continuing health and fitness. May be repeated three times.

175 HEALTH AND PHYSICAL FITNESS WORKSHOP
1 Unit
Lecture: 3 hour
Activity: 1 hour
Instruction in the relationship between the human body, health and physical fitness. Testing to establish individual fitness status involves exercise electrocardiogram, body composition analysis, flexibility 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 three times.

177 INTRODUCTION TO EXERCISE STRESS TESTING
2.5 Units
Lecture: 1.5 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
2 Units
Prerequisite: Mathematics 101
Lecture: 2 hours
An algebra level investment of the special and general theories of relativity as well as the theories that gave rise to the concepts of anti-matter and black holes.

120a GENERAL PHYSICS
5 Units
Prerequisite: Mathematics 120ab or Mathematics 102 and concurrent enrollment in Mathematics 120a
Lecture: 4 hours
Activity: 2-4 hours
Continuation of Physics 120a.

120b GENERAL PHYSICS
5 Units
Prerequisite: Physics 120a
Lecture: 4 hour
Activity: 1.5-5 hours
Continuation of Physics 120a.

101 CONSTITUTIONAL GOVERNMENT
3 Units
Prerequisite: Philosophy 101
Lecture: 3 hours
Basic principles of United States and California constitutional governments and political systems; and influence of political traditions on American politics; emphasis will be on political issues.

110 AMERICAN POLITICAL THOUGHT
3 Units
Lecture: 3 hour
Activity: 1 hour
Historical survey of American political doctrines and issues; influence of political traditions on American politics; emphasis will be on political issues.

115 INTERNATIONAL RELATIONS
3 Units
Prerequisite: International Relations 115
Lecture: 3 hour
Dynamics of interstate power relations; diplomacy and international law; international, regional and supranational organizations; war and peace; foreign policy.

125 COMPARATIVE POLITICAL SYSTEMS
3 Units
Prerequisite: Poliical Science 125
Lecture: 3 hours
Comparative analysis of major political cultures and systems in the Western and non-Western world.

POLITICAL SCIENCE

101 GENERAL PSYCHOLOGY
3 Units
Prerequisite: Psychology 101
Lecture: 3 hours
An introductory survey course of the general field of psychology. Topics to be covered include conditioning, personality development, aggression, emotions, stress, anxiety, therapy, sexuality, motivation, consciousness, biology and behavior, and abnormal psychology.

102 CURRENT ISSUES IN PSYCHOLOGY
3 Units
Prerequisite: Psychology 101
Lecture: 3 hours
A look at the more advanced areas of study in psychology, concentrating on current theoretical approaches and research findings regarding areas of controversy.

103 SOCIAL PSYCHOLOGY
3 Units
Prerequisite: Psychology 101
Lecture: 3 hours
Interrelationship between the individual and his social environment. Social influence upon motivation, perception, group pressure, conformity, attraction, prejudice, behavior. Development of changes of attitudes and opinions. Psychological analysis of small groups, social stratification and mass phenomena.

125 BIOFEEDBACK AND STRESS MANAGEMENT
3 Units
Lecture: 3 hours
Techniques, psychological coping strategies, communication techniques, and the philosophical context which underlie and promote self-control, optimal well-being, and potential of the student; use of biofeedback equipment to enhance self-awareness and to learn the "relaxation response."

130 PERSONAL AND SOCIAL ADJUSTMENT
3 Units
Lecture: 3 hours
Group process experience in which students have the opportunity to learn more about themselves in relationship to others. Field trips may be required. May be repeated one time.

145a DEVELOPMENTAL PSYCHOLOGY
3 Units
Prerequisite: Psychology 101
Lecture: 1 hour
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
3 Units
Prerequisite: Psychology 101a, Psychology 145a
Lecture: 3 hours
An intensive seminar in short-term survival and wilderness survival with emphasis on preventing survival emergencies by psychological and skills preparation. The human energy and water balance will be stressed, proper clothing and emergency responses to survival in arid and cold climates will be taught along with a simple, inexpensive survival kit.

149c COLD WEATHER SURVIVAL
1 Unit
Lecture: 1 hour
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.

PSYCHOLOGY/SEARCH AND RESCUE

101 GENERAL PSYCHOLOGY
3 Units
Lecture: 3 hours
An introductory survey course of the general field of psychology. Topics to be covered include conditioning, personality development, aggression, emotions, stress, anxiety, therapy, sexuality, motivation, consciousness, biology and behavior, and abnormal psychology.

102 CURRENT ISSUES IN PSYCHOLOGY
3 Units
Prerequisite: Psychology 101
Lecture: 3 hours
A look at the more advanced areas of study in psychology, concentrating on current theoretical approaches and research findings regarding areas of controversy.

103 SOCIAL PSYCHOLOGY
3 Units
Prerequisite: Psychology 101
Lecture: 3 hours
Interrelationship between the individual and his social environment. Social influence upon motivation, perception, group pressure, conformity, attraction, prejudice, behavior. Development of changes of attitudes and opinions. Psychological analysis of small groups, social stratification and mass phenomena.

125 BIOFEEDBACK AND STRESS MANAGEMENT
3 Units
Lecture: 3 hours
Techniques, psychological coping strategies, communication techniques, and the philosophical context which underlie and promote self-control, optimal well-being, and potential of the student; use of biofeedback equipment to enhance self-awareness and to learn the "relaxation response."

130 PERSONAL AND SOCIAL ADJUSTMENT
3 Units
Lecture: 3 hours
Group process experience in which students have the opportunity to learn more about themselves in relationship to others. Field trips may be required. May be repeated one time.

145a DEVELOPMENTAL PSYCHOLOGY
3 Units
Prerequisite: Psychology 101
Lecture: 1 hour
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.
110 INTRODUCTION TO SEARCH THEORY 2 Units
Lecture: 2 hours
An overview of current search theories as developed by the National Park Service and the National Association for Search and Rescue.

112 ORGANIZATION AND DIRECTION OF A SEARCH 2 Units
Lecture: 2 hours
Comprehensive review of Search and Rescue 110 expanding 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 the course.

114 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 SEARCH AND RESCUE DOGS 1 Unit
Lecture: 1 hour
Designed to familiarize search and rescue personnel with the uses and limitations of Search and Rescue dogs; availability of dog units, call-out procedures, OES transportation availability, weather, terrain factors, avalanche dogs and night searching. Field trips may be required.

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 communication of location.

126 GRID SEARCH 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 2 Units
Lecture: 2 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 1 Unit
Prerequisite: Search and Rescue 130 or consent of instructor
Lecture: 3 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 ladder reviewed. Field trips may be required.

134 HELICOPTER OPERATIONS 1 Unit
Lecture: 1 hour
The role of the helicopter in rescue situations with emphasis on the role of ground rescue personnel. Helicopter safety rules, interagency helicopter request information and procedures, selecting a landing zone, evaluations, inserts, crash procedures, and communications.

135 AVALANCHE RESCUE 1 Unit
Laboratory: 1.5 hours
This course will introduce the rescue student to the basic concepts dealing with avalanche, mountain snowpack, avalanche phenomena, meteorology, stability evaluation, avalanche safety, search and rescue.

136 SWIFTWATER RESCUE 1 Unit
Prerequisite: Search and Rescue 150 or consent of instructor
Lecture: 3 hours
Laboratory: 1.5 hours
Designed to develop a sense of confidence in rescue personnel dealing with swiftwater rescue situations. Topics include: swiftwater physiology, equipment, swimming, line tending, search techniques, and use of helicopters.

150 ROPE RESCUE 1.5 Units
Lecture: 1.5 hours
Instruction in techniques used to evacuate injured parties in various 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.

151 RAPPING SAFETY/TOWER RESCUE FOR THE FIRE SERVICE 1 Unit
Prerequisite: Search and Rescue 150 or consent of instructor
Lecture: 1 hour
Designed to update rescue personnel in equipment and technical developments in rapping. Emphasis on individual safety, rescue of the injured or trapped rappeller and safe management of the training tower and/or incident scene, review and discussion of documented rapping accidents.

153 VEHICLE EXTRACTION 1 Unit
Prerequisite: Use of the Hurst Tool and Black Hawk Extrication kit; hands-on instruction on various extraction techniques with special emphasis given to patient management and handling at the accident scene.
Field trips may be required.

154 FIRE SERVICE LADDER AS RESCUE TOOLS 1 Unit
Prerequisite: Search and Rescue 150 or Search and Rescue 150 or consent of instructor
Lecture: 1 hour
Safe and effective use of fire service ladders in rescue applications, review of the uses and limitations of the ladder as a bridge, shore, derrick, slide, A-frame and jib.

155 EMERGENCY SHORING TECHNIQUES .5 Unit
Lecture: 1 hour
Field trips may be required.

156 EMERGENCY TRENCH SHORING 1 Unit
Lecture: 1 hour
Pre-planning, size-up and management of the trench rescue. Hands-on experience in emergency shoring techniques. (The course meets or exceeds current CAL-OHSA and California State Fire Training requirements in trench rescue procedures).

158 HEAVY RESCUE TRAINING FOR THE FIRE SERVICE 1.5 Units
Prerequisite: Search and Rescue 150 recommended
Laboratory: 1.5 hours
Designed to teach those skills and techniques to others. May be repeated three times.

165 FIRE SERVICE RESCUE INSTRUCTOR TRAINING 3 Units
Prerequisite: Search and Rescue 150
Laboratory: 3 hours
Review and update of heavy duty rescue skills and techniques designed to prepare qualified personnel to teach those skills and techniques to others.

170 SPECIAL TOPICS IN RESCUE FOR THE FIRE SERVICE .5-3 Units
Prerequisite: Will vary with topic
Lecture: .5-3 hours and/or Laboratory: 1-3
Various topics in rescue will be covered to meet the individual firefighter or fire department needs. Emphasis on specialized development of skills and knowledge, area planning for rescue, development and implementation of training and rescue evolutions. May be repeated three times.

SKILLS DEVELOPMENT

50a WRITTEN LANGUAGE DEVELOPMENT 3 Units
Prerequisite: Verified Learning Disability
Lecture 3 hours
Designed for students with learning disabilities who have difficulty succeeding in a traditional classroom. Presents a precise, systematic approach to learning basic communication skills including instruction in phonics, vocabulary building, English speech patterns, reading and writing. The emphasis will be on the development of compensatory strategies for particular skills deficits.

50b WRITTEN LANGUAGE DEVELOPMENT 3 Units
Prerequisite: Verified learning disability and satisfactory com­pletion of Skills Development 50a
Lecture: 3 hours
Continuation of Skills Development 50a with particular emphasis on reading comprehension and paragraph writing.

51 DIAGNOSTIC LEARNING LABORATORY 1 Unit
Prerequisite: Verified Learning Disability Laboratory: 3 hours
Individualized assistance in analyzing study problems and selecting and applying suitable learning strategies necessary for academic success in college courses. Offered for Credit/No Credit only.

53 DIAGNOSTIC SPEECH LABORATORY 1 Unit
Prerequisite: Speech and language evaluation by Speech Pathologist
Laboratory: 3 hours
Provides speech remediation for students with speech, language, and hearing disorders. Assistance is provided on an individual and small group basis in the following areas: articulation, voice, language and fluency (stuttering). Emphasis is on addressing student’s needs for effectiveness in academic or vocational settings. Offered for Credit/No Credit only.
SKILLS DEVELOPMENT/SOCIAL SCIENCE

55 G.E.D. PREPARATION
1-2 Units
Lecture: 3-1.5 hours
Laboratory: 1.5 hours
Designed to teach the general skills needed to pass the General Educational Development Test. May be repeated two times.

61 BASIC ARITHMETIC
1-2 Units
Laboratory: 3-6 hours
Individualized instruction in fundamental operations. Students may start anywhere from whole numbers to formulas. May be repeated three times.

62 REVIEW ALGEBRA
1 Unit
Prerequisite: High school algebra
Laboratory: 3 hours
Individualized instruction in review of high school algebra.

75 COLLEGE SPELLING
1-2 Units
Laboratory: 3-6 hours
Designed to help students improve their spelling skills. May be repeated one time.

78 READING DEVELOPMENT
1-2 Units
Laboratory: 3-6 hours
Individualized instruction and self-instructional materials in specific reading skills units. May be repeated three times.

87 VOCABULARY DEVELOPMENT
1 Unit
Laboratory: 3 hours
Designed to help readers improve their vocabulary skills. May be repeated one time.

88 SPEED READING
1-2 Units
Laboratory: 3-6 hours
Designed to help competent readers improve their reading rate. May be repeated one time.

90 STUDY SKILLS
1-2 Units
Laboratory: 3-6 hours
Improvement of the basic study skills. May be repeated two times.

95 TEST TAKING SKILLS
0.5-2 Units
Lecture: 3 hours
Laboratory: 1.5-6 hours
A course designed to help students develop skills in taking tests and examinations. May be repeated two times.

96 APPLIED TEST-TAKING SKILLS
0.5-1 Unit
Lecture: 1.5-4 hours
Bases of successful test-taking, with emphasis on the skills necessary to improve performance on a specific exam such as SAT, CBEST, or Civil Service. May be repeated two times.

98 PEER TUTORING
0.5-2 Units
Lecture: 3 units
Laboratory: 1.5-4 hours
Provides students with an opportunity to give academic assistance to other students. Required for any student interested in tutoring for the college. Offered For Credit/No Credit only.

SOCIAL SCIENCE

140 HUMAN SEXUAL BEHAVIOR
3 Units
Lecture: 3 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.

197 INTRODUCTION TO SOCIOLOGY
3 Units
Lecture: 3 hours
Introduction to the principal concepts, methods of sociology; survey of the interactions, interrelationships and processes of society; culture, socialization, stratification, minorities, primary and secondary groups, social change.

202 AMERICAN SOCIAL PATTERNS
3 Units
Lecture: 3 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.

203 DEVIANCE AND CONFLICT
3 Units
Lecture: 3 hours
The analysis of deviant behavior and social disorganization theories and trends in selected topics such as stigma, sexual deviance, aging, death, suicide, mental illness, drugs, medical care, population problems, crime, war, family disorganization. Field trips may be required.

204 CRIME AND DELINQUENCY
3 Units
Lecture: 3 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 enforcement and other community agencies in crime and delinquency control.

205 FAMILY, MARRIAGE AND THE INDIVIDUAL
3 Units
Lecture: 3 hours
The family as a social unit of interacting personalities; historical and structural development of the family life in different cultures; functions, duties, and marital interaction of family life; influence of contemporary society on family and family disorganization.

113 INTERPERSONAL COMMUNICATION
3 Units
Lecture: 3 hours
Understanding and utilizing techniques of communication in an effective manner for better interaction between people in one-to-one and small group situations.

115 SIGN LANGUAGE
2 Units
Lecture: 2 hours
Developing receptive and expressive skills in sign language, including skills in finger spelling. Receptive skills emphasized. The sign language system emphasized is American Sign Language.

117 TEACHER AIDE TRAINING
See Page 36 for Certificate Requirements

119 SOCIAL SCIENCE

129 FUNDAMENTALS OF SPEECH
3 Units
Lecture: 1 hour
Principles of oral communication; speech composition and techniques of presenting informal and formal speeches. Emphasis given to organization, ideas, critical thinking, and evaluative listening.

119 GROUP DISCUSSION
2 Units
Lecture: 2 hours
Communication processes applied to informal group discussions. Individual and group participation in problem solving discussions, parliamentary procedures, and various speaking activities.

119 TEACHER AIDE TRAINING
See Page 36 for Certificate Requirements

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Lecture: 3 hours
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Developing receptive and expressive skills in sign language, including skills in finger spelling. Receptive skills emphasized. The sign language system emphasized is American Sign Language.
### WORK EXPERIENCE AS A TEACHER AIDE

<table>
<thead>
<tr>
<th>179</th>
<th>1-4 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prerequisite:</strong> Employment must be approved by Work Experience Coordinator. Concurrent attendance at Work Experience orientation sessions during the first three weeks of the term is required. Must be enrolled in at least seven units including Work Experience. During Summer Session must be enrolled in at least one other course. 75 hours paid employment equals 1 unit of credit. 60 hours unpaid employment equals 1 unit of credit. Provides students an opportunity to experience supervised employment in Teacher Aide Training. The student's employment must be related to educational or occupational goal. Offered for Credit/No Credit only. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course.</td>
<td></td>
</tr>
</tbody>
</table>

### WELDING TECHNOLOGY

#### 101 INTRODUCTION TO WELDING

<table>
<thead>
<tr>
<th>3 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture: 1 hour</td>
</tr>
<tr>
<td>Laboratory: 6 hours</td>
</tr>
<tr>
<td>Basic arc and oxygen-acylene welding as it applies to shop and field techniques.</td>
</tr>
</tbody>
</table>

#### 103 ADVANCED ARC WELDING TECHNIQUES

<table>
<thead>
<tr>
<th>3 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite: Welding Technology 101 or consent of instructor</td>
</tr>
<tr>
<td>Lecture: 1 hour</td>
</tr>
<tr>
<td>Laboratory: 6 hours</td>
</tr>
<tr>
<td>Arc welding in all positions (flat, horizontal and overhead). Special emphasis on control of heat and distortion.</td>
</tr>
</tbody>
</table>

#### 160 PRACTICAL LABORATORY

<table>
<thead>
<tr>
<th>1 Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite: Welding Technology 103</td>
</tr>
<tr>
<td>Laboratory: 3 hours</td>
</tr>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

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**NOTES**

Columbia College offers Work Experience courses to provide students an opportunity to experience supervised employment in a variety of occupational settings. The student's employment must be related to previous or concurrent course work and must be approved by the Work Experience Coordinator. Concurrent attendance at Work Experience orientation sessions during the first three weeks of the term is required, and the student must be enrolled in at least seven units including Work Experience. During Summer Session the student must be enrolled in at least one other course. Work Experience is offered for Credit/No Credit only. Seventy-five hours of paid employment equals one unit of credit and 60 hours of unpaid employment equals one unit of credit.

Work Experience is offered in the following areas:
- Natural Resources Technology 179
- Office Occupations 179
- Automotive Technology 179
- Health Occupations 179
- Teacher Aide 179
- Fire Technology 179
- Sociology 179
- Business Administration 179

Forestry, Natural Resources  
Office Occupations  
Automotive Technology  
Health Occupations  
Teacher Aide  
Fire Technology  
Human Services  
Business and Commerce (Includes Business Administration, Hospitality Management, Computer Science and Disciplines not otherwise listed.)
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