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HAYWARD HIGH SCHOOL
&
SUNSET HIGH SCHOOL

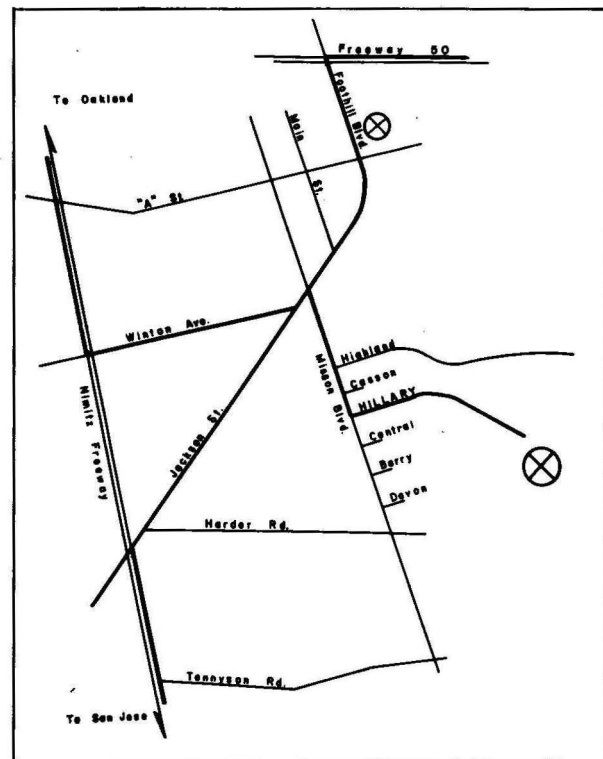
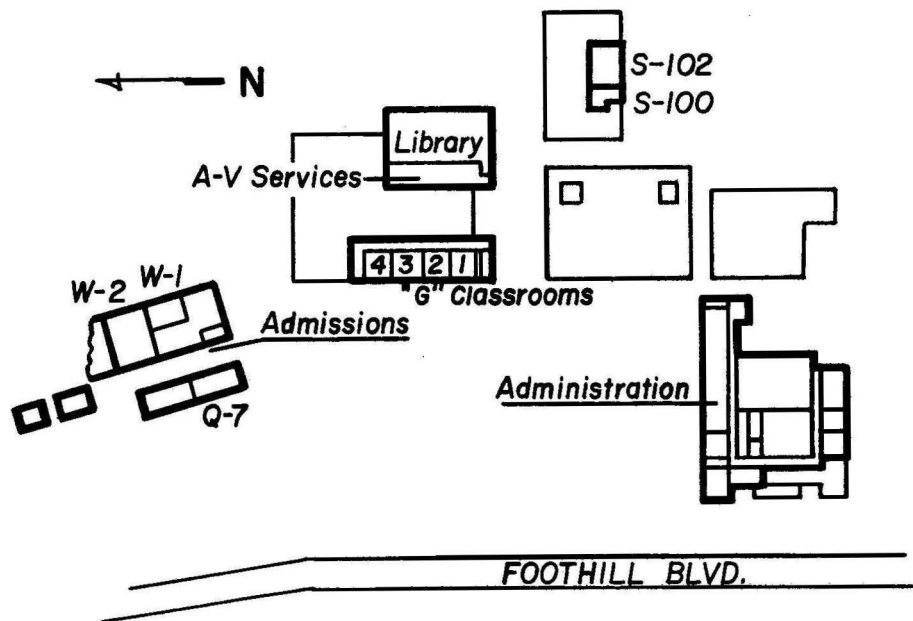
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ALAMEDA COUNTY STATE COLLEGE

bulletin

1961-62

CAMPUS PLAN of Temporary Facilities at Hayward High School 22300 Foothill Blvd.



ALAMEDA COUNTY STATE COLLEGE BULLETIN

1961-62
General Catalog

22300 Foothill Boulevard
Hayward, California
JE 8-8000

VOLUME III

JULY, 1961

NO. 2

Published quarterly by the Alameda County State College at Hayward, California

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THE COLLEGE LIBRARY

CALIFORNIA STATE DEPARTMENT OF EDUCATION

Roy E. Simpson.....Superintendent of Public Instruction
State Director of Education

Don R. Youngreen.....Acting Chief, Division of State Colleges
and Teacher Education

STATE BOARD OF EDUCATION

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Raymond J. Daba.....	Atherton
Donald M. Hart.....	Bakersfield
Dr. Mabel E. Kinney.....	Los Angeles
Mrs. Seymour Mathiesen.....	Fresno
Thomas L. Pitts.....	San Francisco

Roy E. Simpson, Secretary and Executive Officer

On July 1, 1961, the administration and control of the California State Colleges will be transferred from the State Board of Education to the Trustees of the State College System as provided by Chapter 49, Statutes of 1960, First Extraordinary Session.

GENERAL COLLEGE ADMINISTRATION

Fred F. Harclerod.....	President
Dale P. Wren.....	Executive Dean
C. Richard Purdy.....	Dean of the Faculty
Harry A. Grace.....	Dean of Students
William W. Force.....	Dean, Financial Affairs

1961																												
JULY							AUGUST							SEPTEMBER														
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TRUSTEES OF THE CALIFORNIA STATE COLLEGES

ADMINISTRATIVE OFFICE

Don B. Leiffer.....Administrative Officer

TRUSTEES

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 Donald M. Hart.....Bakersfield
 Louis H. Heilbron.....San Francisco
 Dr. Mabel E. Kinney.....Los Angeles
 Charles Luckman.....Los Angeles
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 Herman H. Ridder.....Long Beach
 Paul Spencer.....San Dimas
 Allen J. Sutherland.....San Diego

LEGISLATIVE INTERIM COMMITTEE

Ralph M. Brown.....Sacramento

CALENDAR FOR 1961-62

FALL QUARTER, 1961

Sept. 14-18	Testing, orientation, and academic advisement
Sept. 19	Registration and payment of fees
Sept. 20	Registration and payment of fees
Sept. 21	Classes begin
Sept. 29	Last day for enrolled students to add classes
Oct. 5	Last day to drop classes without grade mark
Nov. 1	Last day to file applications for student teaching for winter quarter
Nov. 11	Veterans Day (academic holiday)
Nov. 23-24	Thanksgiving recess
Nov. 29-Dec. 1	Early registration for continuing students
Dec. 7-13	Final examinations to be given during scheduled class periods
Dec. 13	Last day of classes
Dec. 15	End of quarter. Grades due in Registrar's Office

WINTER QUARTER, 1962

Jan. 2	Registration and payment of fees
Jan. 3	Registration and payment of fees
Jan. 3	Classes begin
Jan. 10	Last day to add classes
Jan. 17	Last day to drop classes without grade mark
Feb. 1	Last day to file application for student teaching for spring quarter
Feb. 28-March 2	Early registration for continuing students
March 9-15	Final examinations to be given during scheduled class periods
March 16	End of quarter. Grades due in Registrar's Office

SPRING QUARTER, 1962

March 26	Registration and payment of fees
March 27	Registration and payment of fees
March 27	Classes begin
April 3	Last day to add classes
April 10	Last day to drop classes without grade mark
April 19-20	Easter recess
May 23-25	Early registration for students continuing in the Fall
May 30	Memorial Day (academic holiday)
May 31-June 6	Final examinations to be given during scheduled class periods
June 6	Last day of classes
June 8	Grades due in Registrar's Office
June 9	Commencement
June 9	End of quarter

SIX-WEEK SUMMER SESSION, 1962

June 18	Registration
June 19	Classes begin
July 4	Independence Day (academic holiday)
July 27	End of session. Grades due in Registrar's Office

FOUR-WEEK SUMMER SESSION, 1962

July 27	Registration
July 30	Classes begin
Aug. 15	Last day for filing application for fall quarter
Aug. 24	End of session. Grades due in Registrar's Office

ACADEMIC AFFAIRS

C. RICHARD PURDY, Dean of the Faculty

Divisional Administration

Division of Business and Economics	Virgil Salera, Head
Division of Creative Arts	Karl D. Ernst, Head
Division of Education	Albert R. Lepore, Head
Division of Humanities	Arnold P. Biella, Head
Division of Science and Mathematics	P. Victor Peterson, Jr., Head
Division of Social and Behavioral Sciences	Charles W. Merrifield, Head

Instructional Services

Director of Libraries	Floyd R. Erickson
Director of Summer Session and Extension	Hilary G. Fry
Director of Audio-Visual Services	Robert O. Hall
Associate Dean of Faculty	Forrest L. Mayer

ADMINISTRATIVE AFFAIRS

DALE P. WREN, Executive Dean

Coordinator of Building Program	Dale A. Fleming
Coordinator of Publications	John A. Gothberg

FINANCIAL AFFAIRS

WILLIAM W. FORCE, Dean, Financial Affairs

John Green	Accounting Officer
William Wallace	Purchasing Coordinator
Richard Quey	Personnel Coordinator, Financial Office

STUDENT AFFAIRS

HARRY A. GRACE, Dean of Students

Associate Dean of Students (Admissions)	Lyle D. Edmison
Associate Dean of Students (Counseling)	Paul A. Lawrence
Associate Dean of Students (Activities)	Howard Slatoff
Registrar	James R. Loonie

HISTORY OF THE COLLEGE

Alameda County State College is one of the 15 California state colleges supported by public funds. These colleges are administered by the Trustees of the State College System of California, a board created by Chapter 49, Statutes of 1960. This new governing board was created as the result of studies conducted over several years concerning the future of higher education in California.

A separate governing board for the colleges was recommended in the Master Plan for Higher Education in California which was presented to the Legislature in February, 1960. The year 1961-62 is a year of transition as it is the first year of operations under this new governing board.

Alameda County State College was established under Chapter 1681, Statutes of 1957. Legislation passed in 1958 provided funds for personnel to plan for the opening of the college in the fall of 1959.

During its first year of operation the college instructional facilities were housed in one wing of Sunset High School in Hayward. Since July 1, 1960, the college has been located on the campus of Hayward High School. These facilities have been obtained on a lease basis through the Board of Education, Hayward Union High School District.

Groundbreaking ceremonies on the permanent campus site on Hillary Road, east of Mission Boulevard, in Hayward were held on February 22, 1961. Construction of the Fine Arts and Science Buildings will begin in September, 1961.

Until 1963, when the college will occupy quarters on the permanent site, the program will be limited to upper-division and graduate work.

LOCATION OF THE COLLEGE

The college is located on the campus of Hayward High School, 22300 Foothill Boulevard, Hayward, California. Classes are scheduled to open in September, 1963, on the permanent campus site in the foothills of southeast Hayward.

ACCREDITATION

The college is fully accredited by the Western College Association, the group authorized to accredit all universities and colleges in this area.

FACULTY OF THE COLLEGE

- HARCLEROAD, Fred F. President. B.A., 1939; M.A., 1942, Colorado State College; Ph.D., Stanford University, 1948.
- BIELLA, Arnold P. Head, Division of Humanities; Professor of English. B.A., University of Colorado, 1939; M.A., State University of Iowa, 1940; Ph.D., Stanford University, 1954.
- BLAWIE, Marilyn-June (Mrs.) Assistant Professor of Political Science. B.A., University of Connecticut, 1952; J.D., University of Chicago Law School, 1955.
- BUTTIMER, Harry R. Associate Professor of Business Administration. B.S. and M.B.A., University of California, 1945; Ph.D., Stanford University, 1959.
- CARLSON, Ruth K. (Mrs.) Assistant Professor of Education. A.B., 1932, M.A., 1944; Ed.D., 1959, University of California.
- CARROLL, John S. Professor of Education. B.A., San Diego State College, 1930; M.A., University of Southern California, 1932; Ph.D., Yale University, 1940.
- COBURN, Maude Florence. Assistant Professor of Mathematics. A.B., Chico State College, 1937; M.A., Teachers College, Columbia University, 1938.*
- COLBURN, Ivan P. Assistant Professor of Physical Science. B.A., Pomona, 1951; M.A., Claremont College, 1953.
- DAVIES, Gordon F. Assistant Professor of Education. B.E., University of Alberta, 1948; M.E., University of Oregon, 1949.
- EDMISON, Lyle D. Associate Dean of Students (Admissions); Professor of Psychology. B.A., 1950; M.A., 1951; Ph.D., 1955, University of Nebraska.
- ERICKSON, Floyd R. Director of Libraries and College Archivist. B.E., State Teachers College, Superior, Wisconsin, 1940; B.S.L.S., University of Minnesota, 1946; M.A., Long Beach State College, 1958.
- ERNST, Karl D. Head, Division of Creative Arts; Professor of Music. B.M., 1932, M.M., 1936, University of Washington; Ed.D., University of Oregon, 1955.
- FINK, Martin B. Assistant Professor of Education. B.A., Northwestern University, 1946; M.A., University of California, 1960.*
- FLEMING, Dale A. Coordinator of Building Program; Assistant Professor of Mathematics. B.S., Michigan State University, 1955; M.S., Stanford University, 1959.
- FORBES, Robert L. Assistant Professor of Social Science. B.S., New York University, 1949; M.A., Harvard University, 1950.*
- FORCE, William W. Dean, Financial Affairs, Professor of Business Administration. A.B., Colorado State College, 1938; M.B.A., 1942, and Ed.D., 1950, Stanford University.
- FREITAG, Otto F. Professor of Political Science. B.A., 1939, M.A., 1940, University of Denver; Ph.D., State University of Iowa, 1942.
- FRY, Hilary Glen. Director of Summer Session and Extension; Professor of Education. B.S., University of Illinois, 1948; M.A., 1951; Ph.D., University of Chicago, 1957.
- GILBERT, Luther C. Professor of Education. B.S., Mississippi College, 1919; M.S., University of Virginia, 1924; Ph.D., University of Chicago, 1929.*
- GOTHEBERG, John A. Coordinator of Publications; Assistant Professor of Journalism. B.A., San Jose State College, 1949; M.A., Stanford University, 1950.
- GRACE, Harry A. Dean of Students; Professor of Psychology. A.B., Ohio State University, 1946; M.A., 1948; Ph.D., Columbia University, 1950.
- GROODY, Tom C. Professor of Biological Science. B.S., Kansas State University, 1936; M.S., 1937; Ph.D., University of California, 1952.
- GUERRA, Manuel H. Assistant Professor of Foreign Languages. B.A., University of Wisconsin, 1947; M.A., 1950; Ph.D., 1954, University of Michigan.*
- GUTHRIE, Andrew. Professor of Physics. B.A., University of British Columbia, 1934; M.S., 1939; Ph.D., 1941, Purdue University.
- HAGEN, H. Stanley. Librarian. B.S., University of Oklahoma, 1934; M.S., Washington University, 1938; M.L.S., University of California, 1960.*
- HALL, Jeanne L. (Mrs.) Assistant Professor of Speech and Drama. B.S., Northwestern University, 1936; M.A., University of Southern California, 1938.*

* Indicates part-time faculty members.

- HALL, Robert O. Coordinator of Audio-Visual Services; Professor of Education. B.S., 1939; M.S., 1941; Ed.D., 1954, University of Southern California.
- HANCOCK, John D. Assistant Professor of Mathematics. B.A., University of Southern California, 1948; M.A., Stanford University, 1949.*
- HEATH, Harrison Duane. Associate Professor of Biological Science. A.B., 1944; A.M., 1946; Ph.D., 1951, Stanford University.
- HENDRICKSON, Dale. Assistant Professor of Education. B.S., 1950; M.S., 1954; University of Southern California; Ed.D., University of California, 1960.
- JACKSON, William D. Audio-Visual Services; Assistant Professor of Education. B.S., Auburn University, 1952; M.S., 1958; Ed.S., 1960, Indiana University.
- JAEGER, Daniel J. Librarian. B.A., University of Denver, 1950; M.A., University of Minnesota, 1956.
- KJELSON, Lee R. Associate Professor of Music. B.M.E., 1948; M.M., 1951; Ph.D., 1957, State University of Iowa.
- LANE, Mary Beauchamp (Mrs.) Professor of Education. B.S., Northeastern Missouri State, 1930; M.A., Northwestern University, 1945; Ed.D., New York University, 1951.
- LAWRENCE, Paul F. Associate Dean of Students (Counseling); Professor of Education. B.S., State Teachers College of New Jersey, 1935; M.A., 1946; Ed.D., 1947, Stanford University.
- LEPORE, Albert R. Head, Division of Education; Professor of Education. B.A., San Diego State College, 1942; M.A., 1951; Ph.D., Teachers College, Columbia University, 1960.
- LOONIE, James R. Registrar; Assistant Professor of Education. B.A., 1952; M.S., 1953, University of Oregon.
- LUND, Jens. Assistant Professor of Mathematics. A.B., 1943; M.A., 1959, University of California.*
- LUTT, Carl J. College Physician; Professor of Biological Science. B.S.M., Creighton University, 1942; M.D., 1945, Creighton University School of Medicine.*
- MARTIN, Ruth L. (Mrs.) Assistant Professor of Education. A.B., 1926; M.A., 1955, University of California.*
- MARTINCICH, Robert H. Assistant Professor of English. A.B., University of California, 1952; M.A., San Francisco State College, 1957.*
- MAYER, Forrest L. Associate Dean of Faculty; Professor of Business. A.B., Colorado State College, 1937; M.S., University of Denver, 1938; Ph.D., University of Pittsburgh, 1949.
- McHUGH, Walter J. Assistant Professor of Education. B.S., Lowell Teachers College, 1953; Ed.M., Boston University, 1957; Ed.D., Boston University, 1960.
- MERRIFIELD, Charles Warren. Head, Division of Social and Behavioral Science; Professor of Social Science. A.B., 1935; A.M., 1935, University of Chicago; Ph.D., Claremont Graduate School, 1952.
- MOREHOUSE, Wade A. Assistant Professor of Business. B.M.E., Rensselaer Polytechnic Institute, 1948; M.B.A., University of California, 1959.
- MUIR, Donald Belden. Assistant Professor of Speech and Drama. B.A., George Washington University, 1951; M.A., Stanford University, 1955.
- NELSON, Arthur Edward. Librarian. B.A., College of St. Thomas, 1950; M.A., University of Minnesota, 1951; M.A., University of Minnesota, 1954.
- NIEPOTH, Edward W. Assistant Professor of Recreation. A.B., 1949; M.A., 1950, Chico State College.
- OZAKI, Robert Shigeo. Assistant Professor of Economics. B.A., Ohio Wesleyan, 1956; M.A., 1958; Ph.D., Harvard University, 1960.
- PEARSON, Joan (Mrs.) Assistant Professor of Art Education. B.F.A., Syracuse University, 1945; M.F.A., New York State College of Ceramics, 1949.*
- PEDERSON, Claire N. Associate Professor of Education. A.B., University of California, 1945; M.A., Columbia University, 1946; Ed.D., Stanford University, 1952.*
- PETERSON, Douglas L. Assistant Professor of English. B.A., 1949; M.A., 1950; Ph.D., 1956, Stanford University.
- PETERSON, P. Victor, Jr. Head, Division of Science and Mathematics; Professor of Chemistry and Conservation. B.A., San Jose State College, 1947; M.S., Stanford University, 1950; Ph.D., Cornell University, 1952.
- PURDY, C. Richard. Dean of the Faculty; Professor of Mathematics. A.B., Iowa State Teachers College, 1932; M.S., University of Chicago, 1939; Ed.D., Stanford University, 1949.
- PURVIS, Colbert T. Professor of Mathematics. B.S., Georgia Teachers College, 1940; M.S., East Texas State Teachers College, 1948; Ph.D., George Peabody College, 1957.

* Indicates part-time faculty members.

- RANDALL, Arne William. Chairman, Department of Art; Professor of Art. B.A., University of Washington, 1938; M.A., Teachers College, Columbia University, 1940.
- RICE, Richard B. Administrative Assistant to the President; Assistant Professor of History. B.A., 1945; M.A., 1947; Ph.D., 1957, University of California.
- ROOSSINCK, Esther P. Assistant Professor of Education. B.S., Western Michigan University, 1951; M.S., University of Michigan, 1955; Ed.D., University of Illinois, 1960.
- ROSENBAUM, Morton. Associate Professor of English. B.A., 1943; M.A., 1947, Wayne State University; Ph.D., University of Wisconsin, 1952.
- SABATH, Mildred R. Assistant Professor of Education. B.S., University of Illinois, 1945; M.E., 1951; Ed.D., Wayne State University, 1960.
- SALERA, Virgil. Head, Division of Business and Economics; Professor of Business and Economics. B.S., University of California, 1935; Ph.D., Columbia University, 1941.
- SAWREY, William L. Professor of Psychology and Statistics. A.B., Indiana University, 1949; Ph.D., University of Nebraska, 1952.
- SHRINER, William C. Coordinator of Field Experiences; Professor of Education. B.A., 1936; M.A., 1941, University of California; Ed.D., Columbia University, 1951.
- SLATOFF, Howard A. Associate Dean of Students (Activities); Associate Professor of Art. A.B., San Jose State College, 1948; M.A., Stanford University, 1949.
- SMITH, Arthur C. Professor of Biological Science. A.B., San Jose State College, 1939; Ph.D., Cornell University, 1951.
- SOUTHARD, Thomas H. Chairman, Department of Mathematics; Professor of Mathematics. B.A., 1932; M.A., 1933; Ph.D., 1936, Ohio State University.
- VAN AKEN, Mark J. Assistant Professor of History. A.B., University of Michigan, 1944; M.A., 1950; Ph.D., 1955, University of California.
- VANDENBURGH, William G. Professor of Physical Education; Chairman, Department of Health and Physical Education. B.S., University of Washington, 1949; M.S., 1950; Ed.D., 1953, Teachers College, Columbia University.
- WILSON, Donald G. Librarian. B.A., University of Redlands, 1952; M.A., University of California, Los Angeles, 1953; M.S.L.S., University of Southern California, 1960.
- WINSLOW, John H. Instructor in Social Science. A.B., University of Michigan, 1954.
- WOODS, Marion C. Professor of Chemistry. B.S., Colorado State University, 1947; M.S., California Institute of Technology, 1948; Ph.D., Cornell University, 1950.*
- WORLAND, Charles W. Assistant Professor of Education. A.B., Indiana University, 1948; M.A., University of Michigan, 1950; Ed.D., Teachers College, Columbia University, 1960.
- WREN, Dale P. Executive Dean; Professor of Business. A.B., San Jose State College, 1946; M.A., 1950; Ed.D., 1952, Stanford University.
- YEAGER, Herman B. Associate Coordinator of Field Experiences; Assistant Professor of Education. A.B., San Jose State College, 1950; M.A., 1951; Ph.D., 1959, Stanford University.
- ZEITLIN, Harry. Assistant Professor of Education. B.S.S., College of the City of New York, 1948; M.A., Teachers College, Columbia University, 1949; Ph.D., Columbia University, 1958.

* Indicates part-time faculty members.

CURRICULA AND DEGREES

Baccalaureate Degrees with Major in:

Art (BA)	History (BA)
Biological Science (BS)	Language Arts (BA)
Business Administration (BS)	Mathematics (BS)
Business Education (BS)	Music (BA)
Economics (BA)	Physical Science (BS)
Elementary Education (BS)	Recreation (BS)
English (BA)	Social Science (BA)

School Service Credentials

Courses are offered that may be applied toward satisfaction of the following state credential requirements:

*General Elementary Credential
General Secondary Credential
Elementary Administration Credential
Supervision Credential
General Pupil Personnel Services Credential*

ADMISSION AND CLASSIFICATION OF STUDENTS

The new policy pertaining to admission to state colleges is effective as of September, 1961. All students seeking admission to this college are required to have satisfied lower-division general education requirements. Students must be in good standing at the last college or university attended.

In addition, students will be admitted in accordance with either (a) or (b) below:

- (a) Students who were eligible to attend a California state college upon graduation from high school must present at least 81-quarter (54-semester) units of previous college credit from an accredited college or university with an average grade of C or better.
- (b) Students who were ineligible for admission to a California state college upon graduation from high school must present 90-quarter (60-semester) units of previous college credit from an accredited college or university with an average grade of C or better.

Eligibility to attend a California state college upon graduation from high school is established by one of the following:

- (a) Completion of the equivalent of 70-semester periods (7 Carnegie units) of course work in subjects other than physical education and military science, with grades of A or B on a five-point scale, during the last three years in high school.
- (b) Completion of the equivalent of 50-semester periods (5 Carnegie units) of course work in subjects other than physical education and military science, with grades of A or B on a five-point scale, during the last three years in high school and attainment of the twentieth percentile or better on the national norm of a standard college aptitude test.

Matriculation

All students seeking to enroll for any course work at the college must:

- (a) Submit an application for admission,
- (b) File transcripts of all previous college credit,
- (c) Complete a Residence Statement,
- (d) Complete a Health History and Health Statement,
- (e) Students with fewer than 60 units of college credit must submit a transcript of all credit earned during the last three years of high school.

Students who pursue a degree or credential program must, in addition to the steps described above, submit a declaration of objective and complete personnel tests before or during the first quarter of residence.

The application for admission and all transcripts should be submitted to the Associate Dean of Students, Admissions and Records, 22300 Foothill Boulevard, Hayward, California. A notice of acceptance, health history and health statement blanks will then be mailed to the student.

Classification of Students

Students at the college are classified in accordance with the following plan:

Upper Division:

Juniors	81 to 134-quarter units
Seniors	135 or more units
Graduate	Possession of baccalaureate degree
Regular	Registered for more than six units
Limited	Six or fewer units

Application for Admission

Students seeking admission to Alameda County State College should write to the Office of Admissions and request an outline of admission procedures and admission forms. The final date for filing applications for admission for each quarter is as follows:

September 1	Fall Quarter, 1961
December 1	Winter Quarter, 1962
March 1	Spring Quarter, 1962

Students whose applications for admission are completed and filed before the final date will be considered for admission. Those who file after the final date may be considered for provisional admission subject to disenrollment because of failure to meet admission standards.

Evaluation of Transcripts

Upon acceptance by Alameda County State College, evaluations of previous college credit are made for all undergraduate students. When completed, copies of evaluations are sent to students. All transcripts submitted to the college become the property of the college and cannot be returned to the students.

Readmission

A former student of the college who was not enrolled in the academic quarter immediately preceding the quarter in which the student seeks to re-enroll must make application for readmission to the college. If the applicant has attended any institution since he left the college, official transcripts from each institution must be filed in the Office of Admissions.

Cancellation of Admission

Students who are admitted to the college for a given quarter but do not register will have this admission cancelled. Subsequent application

for admission must be in accordance with current admission requirements. Transcripts, test scores and evaluations on file may be used with the new application for admission.

Admission to Teacher Education

Admission to the college does not guarantee that the student will be admitted to teacher education. See Division of Education section for criteria which will be used in admitting students to teacher education programs.

EVALUATION FOR ADVANCED STANDING

From Junior Colleges

Credits earned in accredited junior colleges will be evaluated by the Office of Admissions in accordance with the following provisions:

1. Not more than 64-semester hours of credit may be allowed for junior college work. Junior college credit earned after the student has attained upper-division standing may be used to satisfy subject requirements, but may not be applied toward the total units required for the bachelor's degree.
2. Introduction to Education credit of 2-semester units may be transferred from the junior college. No other credit is allowed for professional courses in education.

From Other Colleges

Credits earned in accredited colleges and universities will be evaluated by the Office of Admissions and advanced standing allowed on the basis of the evidence submitted. Credit toward the fulfillment of graduation requirements will be allowed only insofar as the courses satisfactorily completed meet the standards and the requirements of the basic course pattern of the college.

Credits earned in nonaccredited colleges may be accepted as a basis for advanced standing. However, they may not be counted toward graduation requirements until completion at this college of 36 quarter units with at least a C average.

Extension and Correspondence Credit

A maximum of 36-quarter units (24-semester units) of extension and correspondence work may be counted toward graduation. Not more than 18 of the 36 units may be transferred from other institutions.

Credit for Experience

A maximum of 12-quarter units (8-semester units) in student teaching may be allowed toward the bachelor of education degree, upon verification of sufficient and satisfactory teaching experience, and providing the student has not received that amount of credit for student teaching in an accredited college.

No unit credit is allowed toward other bachelor degrees or the master's degree for teaching or other practical experience. An exemption allowed for experience will not carry units of advanced standing nor diminish the number of units required for graduation.

Credit for Military Training

Credit is granted for military training in accordance with the American Council on Education Guide to the Evaluation of Educational experiences in the Armed Services.

Credit by Examination

Any regular student who offers convincing evidence of having achieved the objectives for a course listed in this catalog through having taken a similar course in a nonaccredited college, or through individual study or experiences, may apply for a special examination in that course. A student can receive no more than 45-quarter units of college credit through credit by special examination. Credit by examination is not available at the graduate level.

REGISTRATION

Definition of Student Classification

A *regular student* is one who is enrolled in regular sessions for more than six units. Summer sessions are not considered regular sessions.

A *limited student* is one who is enrolled in regular sessions for six or fewer units.

A *full-time student* is one who is enrolled for 12 or more units.

Registration Regulations

Registration by proxy is not permitted.

Students are responsible for completing all courses entered on their official application for registration forms except those courses which are officially dropped by filing an ADD/DROP request form in the registrar's office.

Registration is considered complete upon payment of fees. A late registration period is available to students who were unable to be present during regular registration. Persons completing registration during this extension period will be assessed the late registration fee. Requests for registration after the last day of the late registration period will not be considered.

Students may not register as auditors after the third week of instruction in a class in which they are regularly enrolled. Students registered as auditors in classes may not apply for credit in these classes after the last day to add classes.

Academic Load

The normal academic load for full-time undergraduate students is assumed to be 15 units. Generally two hours of preparation for each hour of regular class work may be expected. Any student desiring to enroll for more than 18 units of credit per quarter must have the written approval of his academic adviser and the Dean of the Faculty.

Simultaneous matriculation in two academic institutions is not recommended. In this case, the total academic program should be planned in conjunction with the student's adviser.

Changes in Registration

During the first five days of instruction a student may add courses to a program. Courses may not be dropped without a grade mark after the second week of instruction. Add/drop-Request blanks are available in the registrar's office. A grade of F will be recorded for students who withdraw from a course without filing an add/drop request form.

STUDENT FEES AND OTHER COSTS

I. Schedule of Fees

A. Regular Session

Material and service fee, per quarter:

Limited students—6 or fewer units.....	\$13.00
Regular students—more than 6 units	24.00

Student body fee, per quarter:

Limited students—6 or fewer units.....	2.00
Regular students—more than 6 units	4.00

Non-resident tuition, per quarter:

1 to 14 units	5.75 per unit
15 or more units	86.25

B. Extension Division

6.50 per unit

C. Summer Session

First 6-week session

7.33 per unit

Post session

7.33 per unit

Student Body Fee

2.00

There is no non-resident tuition for Summer Session.

II. Other Costs

A. State fee for each credential

4.00

B. Late registration

5.00

C. Failure to meet administratively-required appointment

within time limit

2.00

D. Change of program after final filing date

1.00

E. Check returned for any cause

2.00

F. Items lost or broken

Cost

G. Complete transcript of record (no charge for first copy).....

1.00

III. Refunds

A. Upon withdrawal from college, a portion of the material and service fee will be refunded, provided an application is filed in the cashier's office not later than two weeks after the instructional session begins.

B. Upon withdrawal from college, non-resident tuition will be refunded according to the following schedule:

Before or during the first week of the quarter

100%

During the second week of the quarter

75%

During the third week of the quarter

50%

During the fourth week of the quarter

25%

ACADEMIC INFORMATION AND REGULATIONS *

Course Numbers

The course numbering system at the college is as follows:

3000-3999 Junior level

4000-4999 Senior level

5000-5999 Senior level but may be taken for graduate credit by graduate students

6000-6999 Graduate level. Open only to graduate students

At least 60 of the 186 units required for graduation with the bachelor's degree must be in courses numbered 3000 and above and must be earned in the junior and senior years.

Courses numbered 3000 or higher, when appropriate to the student's objective, may be taken for graduate credit. These courses may be applied to a graduate program upon approval of the major adviser.

Units

A unit of credit represents three or more hours of classwork and outside study per week for one quarter.

Marking

The marking system employed at the college is as follows:

Regular marks

Symbol	Quality	Grade Points
A	Excellent	4
B	Above average	3
C	Average	2
D	Below average	1
F	Failure	0

Incompletes

A student may receive a grade of "Incomplete" only for reasons beyond his control. Normally, such reasons are:

(1) Extended absence for health problems, or

(2) Failure to complete term assignments or final examinations because of ill health or family emergencies. A statement from the doctor should be presented to the instructor at the time the student returns to class and before the incomplete is recorded. An incomplete must be cleared during the next quarter of attendance unless specially deferred by the instructor and approved by the head of the division offering the course. Incomplete courses automatically revert to grades of "F" if not completed within the next three quarters of attendance.

Withdrawals

The withdrawal mark (W) is intended for students who find it impossible to complete all, or a part, of their program of courses; who are passing the course(s); and who file an approved withdrawal slip in the registrar's office.

* The academic information and regulations in this catalog have been developed by the college under the legal authority set forth in the Education Code, Division 10, Chapter 1.5, and in the California Administrative Code, Title 5, Education.

The withdrawal slip must be secured from the registrar's office, approved by the student's adviser, the head of his division, and the Dean of Students.

Students below a minimum acceptable standard of work for a course will receive the mark "WF" when withdrawing from the course. Students who withdraw from courses without filing withdrawal forms in the registrar's office will be assigned a grade of F in the course(s).

Repeated Courses

A student may repeat a course in which he has received a grade of D or F, but may not receive credit for the course more than once. A repeated course is counted as units attempted and is credited with the grade points earned, the effect being an averaging of the grades. If a student repeats a course in which he has received a grade higher than D, the repeated course will not be counted as units attempted nor will grade points be counted in the student's record.

Auditing Courses

A student who wishes to "audit" a class instead of enrolling for credit must meet all admission requirements and secure the permission of the instructor and the head of the division in which the course is offered. An auditor pays the same fees and has the same privileges as do students who take equivalent work for credit, but is not held for final examinations and does not receive final grades or credit. Auditors may not apply for credit in the course after the last day to register for courses.

Students enrolled in classes for credit may not change to audit status after the last day to drop classes.

Attendance

Students are expected to attend all meetings of their classes. Excessive unexcused absence is a sufficient reason for lowering a grade or refusing to allow a student to take the final examination. The Dean of Students will issue excuses for college-authorized absences.

Disqualification

Students are subject to disqualification at the end of any quarter if their total college scholarship average falls below C. At the end of the spring quarter, students are subject to disqualification if their academic average at this college falls below C.

Readmission

Immediate reinstatement of disqualified students is not considered. If the student spends his period of disqualification in study or profitable use of his time, he may petition for reinstatement after an absence of one year.

Petition for Leniency

A student who because of low grades due to illness or other extenuating circumstances believes that he may be disqualified should consult the Associate Dean of the Faculty concerning the procedure for presenting his petition. This petition must be presented during the last two weeks of the quarter. If a petition for leniency is filed as a result of this conference, it may be possible for the student to be continued in school. In case a student is disqualified, no immediate reinstatement is granted.

Scholarship for Graduation

For graduation, a student must have an average of C or better on all work completed at the college level.

REQUIREMENTS FOR GRADUATION

For graduation with the bachelor of arts or science degree, a student must:

- Complete a major as described in this catalog.
- Complete a minimum of 186-quarter units of acceptable college credit, at least 60-quarter units of which must be in courses numbered 3,000 or above and taken after attaining upper-division standing.
- Complete a minimum of 36-quarter units in residence at this college in order to be eligible for a baccalaureate degree. At least 18 of these units must be completed among the last 30-quarter units counted toward the degree.
- Satisfy the college general education requirements as described below:

General Education

The general education program is a planned sequence of courses outside the student's field of specialization. These experiences are designed to assure that each student who graduates with a baccalaureate degree possesses, in the major fields of human knowledge, the understandings, skills, and appreciations necessary for informed citizenship and continued growth and effectiveness as an educated person.

Each student, for graduation with a baccalaureate degree, must complete a minimum of 68-quarter units of general education work satisfying the following pattern and specific requirements. At least 36 units should be completed before attaining upper-division standing. A minimum of 15 units must be completed in the junior and senior years.

Courses that are normally applied in meeting general education requirements are those that are broad in scope. Courses designed specifically to meet the needs of particular majors may not be appropriate. The total program, however, in completing a major in any of the fields listed under general education requirements below will be interpreted as satisfying the general education requirements in that field provided (1) the major includes sufficient units in excess of 54 units and (2) all specific course requirements are met.

The minimum of 15 units of upper-division courses in general education include approved¹ courses in two of the three fields of humanities, social and behavioral science, and science (students majoring in one of these fields take courses in the other two). As a part of the 15 units each student must complete the course, Directed Senior Reading, which includes selected readings from the three fields listed above.

¹ A current list of these courses is obtained from academic advisers.

*Minimum number of units
for satisfying general educa-
tion requirements of 68 units*

Creative Arts

Performance and/or appreciation courses in art, music, drama,
homemaking, industrial arts..... 3

Communications

English composition—must include at least 5 quarter (3 semes-
ter) units of lower-division work and 3 quarter units of
upper-division work in conjunction with a major course
(Engl. 3000) 8

Humanities

Includes courses in history, philosophy, literature and history
of the arts.
A course in History of American Ideals must be included
(or satisfied by examination). Must include 5 quarter (3
semester) units in literature, philosophy, or humanities
courses. May include courses in history of arts. May include
courses in foreign languages. May include a course in satis-
faction of upper-division general education requirement.*
Up to 9 units of language can be applied to meeting general
education requirements in the humanities..... 16

Social and Behavioral Science

Includes courses in psychology, political science, anthropology,
sociology, geography, economics.
Must include a course in national, state and local government
(or be satisfied by examination). Must include a course in
psychology. Must include courses in at least two of the four
fields—anthropology, sociology, geography, economics. May
include a course in satisfaction of upper division general edu-
cation requirement.* 16

Natural Science and Mathematics

Must include 15 quarter units in life and physical science with
one basic ** course in each. In addition to these 15 units, must
include a college course in mathematics. May include a course
in satisfaction of upper-division general education require-
ment * 18

Health and Physical Education

Health and P. E. (3 units required) 3

Directed Senior Reading

Required course with readings in humanities, social, behavioral,
and natural sciences 4
Required total 68

Residence Requirements

A total of 186 units of credit must be earned for graduation with a
bachelor of arts or bachelor of science degree. Of this amount, 45 units
must be earned at the Alameda County State College in residence (not
extension) courses.

The bachelor of education degree requirements call for 45 units of
credit earned from Alameda County State College. Of that amount,
at least 18 units must be earned in courses given on the Alameda County
State College campus, after the completion of 135 of the 186 quarter
units.

* See paragraph 3, preceding page.

** A basic course in biological science: botany, biology or zoology; physical science: chemistry,
physics, or physical science.

STUDENT LIFE

The student personnel office provides special services to individual
students and groups of students, and serves in a consultant capacity to
academic advisers and academic departments of the college.

Counseling

Alameda County State College provides a counseling service to assist
students with academic and personal adjustment and to offer professional
advice on questions of a non-academic nature.

Counselors work with department heads in the administration of the
advising program. Information concerning incoming students is com-
piled and distributed to academic advisers for their guidance in plan-
ning student programs. The adviser who assists in the initial planning
usually coordinates the educational program throughout the student's
stay at the college.

The counseling service also assists students with career planning
through a testing program using interest inventories and other instru-
ments to determine special aptitudes. The results of these and other
college-wide tests are interpreted upon request and provide valuable
data concerning areas of vocational and professional competence.

This office also maintains a placement service for students desiring
part-time employment.

Scholarships and Loans

Alameda County State College offers scholarships and loans to stu-
dents enrolled at the college.

The major source of student aid at this time is the National Defense
Student Loan Fund. National Defense Student Loan aid for eligible
students may range up to \$1,000 a year and is repayable over a 10-year
period. Recipients of National Defense Student Loans who enter the
teaching profession will have one half the loan cancelled according to a
national schedule which in effect makes half the loan a scholarship.

Through the generosity of interested groups certain other loan funds
also are available to students. These funds include the Sertoma Club
of Hayward, Dorothy Donahoe and Laura E. Settle Loan Funds.

A student may secure an application for a loan or scholarship from
the Student Personnel Office and complete it in cooperation with his
academic adviser. For additional information regarding loans and schol-
arships students may contact the office of the Associate Dean of
Students (counseling).

Placement

The college maintains a full-time placement service which is closely integrated with the total educational process of the college and is a part of the student personnel program. Notices of employment opportunities are posted in the student lounge, academic departments and the student personnel office. Students apply for pre-placement interviews after having completed the Kuder Occupational Preference Test. At the time of the interview, test results are discussed with the student and a placement packet is given to the student to fill out with necessary instructions. Upon completion and approval of the placement file, the folder is activated and circulated among prospective employers.

The placement service matches qualifications of candidates to specifications of available positions. The office also provides counseling service for candidates.

Health

The college student health service is maintained by the college and is an integral part thereof. Services of a nurse and physician are available in the event of minor illnesses or injuries, required physical examinations for entrance, graduation or credentials. Consultation or referral is available for any health or related problem.

Student Organizations

The Associated Students of Alameda County State College, as well as divisional councils with representation on the Student Council, are an integral part of college life. Interest groups such as the Education Club, Interfaith Council, the Honor Society and others actively contribute to a well-balanced student life and supplement the academic program of the college. Membership in student organizations depends solely upon the individual qualifications without regard for race, color, religion or national ancestry.

The Associated Students publish a student newspaper, handbook and yearbook, and are planning a full schedule of social events for the coming year.

DIVISION OF BUSINESS AND ECONOMICS

Professors Salera (head), Force, Mayer, Wren; Associate Professor Buttimer;
Assistant Professors Morehouse, Ozaki.

CURRICULA OFFERED**Baccalaureate Degree Majors**

Business Administration
Business Education
Economics

Minors

Business Administration
Business Education
Economics

PURPOSES

This division offers courses designed (1) to equip individuals with the educational background and analytical tools for careers in business, (2) to provide for the development of teachers of business subjects in the secondary schools, and (3) to train students in the skills of the professional economist. Analytical emphasis is a dominant characteristic of work in the division.

BUSINESS ADMINISTRATION MAJOR**Lower Division Requirements**

Principles of accounting and principles of economics (both 8 or more units).
Recommended: a year of college-level mathematics.

Core Requirements

To be completed in the junior year:
Bus. 3111, 3200, 3400, 3600, 4700, Econ. 4000.
To be completed in the senior year:
Bus. 3310, 3660, 4300, 4500.

Fields of Concentration**Accounting**

Core requirements (all except Bus. 3200 above) 36 units
The concentration:
Bus. 3211, 3212, 3213, 4231, 4232, 4240.

Management

Core requirements (see above) 40 units
The concentration:
Bus. 3610, 3620, 4630, 4640, 5650.

Marketing

Core requirements (see above) 40 units
The concentration:
Bus. 3410, 3420, 4430, 5440.

BUSINESS EDUCATION MAJOR**Lower Division Requirements**

Principles of accounting and principles of economics (both 8 or more units), typewriting (3 units or the successful completion of a proficiency examination with an approved course substitution), and business machines (4 units or the successful completion of a proficiency examination with an approved course substitution).

Core Requirements

To be completed in the junior and senior years:

Bus. 3111, 3400, 3600, 3660, 4300, 4700, and Geog. 3500 or 3510.

Sub-Fields:

A total of 16-quarter units must be completed in two of the following sub-fields: accounting, secretarial training, or merchandising.

The accounting sub-field: Two upper-division accounting courses (8 units).

The secretarial training sub-field: Bus. 3810 and 3820 or 3840.

The merchandising sub-field: Two upper-division courses in marketing (8 units).

Professional Business Education:

This comprises Bus. 4800, 5801, 5802, 5803. (The student is to complete two of the last three which correspond to his sub-fields.)

Business Experience:

This is to consist of six months or 1,000 clock hours in one or more approved business occupations.

Credential Requirements

Students majoring in business education who wish a teaching credential must complete the specialized subjects in secondary education which are offered by the division of education. Satisfactory completion of the courses outlined above, including student teaching and a bachelor's degree, will meet the requirements for a special secondary credential. A general secondary credential, preferred by administrators, requires a minimum of 45 quarter units during the graduate year. This graduate year will include at least 8 quarter units of 5,000 or 6,000 numbered work in business and economics, and necessary course work in an appropriate minor field with a minimum of 30 quarter units.

ECONOMICS MAJOR**Lower Division**

Identical with those for the business administration major.

See business administration major.

Core Requirements

A minimum of 40-quarter units of upper-division economics is required for the major, of which the following are core requirements:

Bus. 3111, 3310, 4520, Econ. 4000, 5120, 5140.

Other Requirements in Economics

The student may complete his major by including business administration courses selected in consultation with his adviser from the following:

Bus. 3420, 3660, 4300, and 4310.

DESCRIPTION OF COURSES**BUSINESS****Accounting****3151, 3152. Principles of Accounting**

An introduction to accounting analysis and practice. Four units each.

3200. Managerial Accounting

Applied course with emphasis on the use of accounting information in business decisions. Not accepted as a course in the accounting field of concentration. Prerequisite: One year of accounting. Four units.

3211, 3212, 3213. Intermediate Accounting

Accounting theory, practice, and problems. Balance sheets, income and other financial statements, working papers, valuation of assets, reserves, correction of statements, and application of funds. Prerequisite: One year of accounting. Four units each.

3220. Federal Income Tax Accounting

Statutes, regulations, administrative rulings, and court decisions relative to the income taxes of individuals. Prerequisite: One year of accounting. Four units.

4231, 4232. Cost Accounting

Manufacturing accounting theory and problems, records, and financial statements; elements of cost; elements of process, specific job-order, and standard cost accounting. Emphasis on managerial use of cost data. Prerequisites: One year of accounting. Four units each.

4240. Advanced Accounting

Advanced accounting problems and theory. Ventures, insurance, statements of affairs, receivership, branch accounts, banks and stock brokerage accounting, foreign exchange, estate accounting, budgets and public accounts, and parent and subsidiary accounting. Prerequisite: Bus. 3213. Four units.

4250. Auditing

Principles, techniques and procedures in auditing. Prerequisite: Bus. 3213. Four units.

5260. Problems of Financial Reporting

Advanced treatment of the analysis of financial statements. Prerequisite: Bus. 3213. Four units.

Business Education**4800. Principles of High School Business and Distributive Education**

Introductory course for those planning to teach business at the junior or senior high school level. The historical development, present status, course content and future problems from viewpoint of the prospective teacher. Prerequisite: Upper-division standing. Four units.

5801. Secondary School Business Teaching I

Methods and materials for teaching bookkeeping, general business, and other basic business subjects. Prerequisite: Approval of instructor. Three units.

5802. Secondary School Business Teaching II

Methods and materials for teaching typewriting, shorthand, business machines and clerical practice. Prerequisite: Approval of instructor. Three units.

5803. Secondary School Business Teaching III

Methods and materials for teaching salesmanship, retailing, and the coordination of cooperative work experience programs. Prerequisite: Approval of instructor. Three units.

3810. Advanced Dictation and Transcription

Improvement of dictation and transcription skills and related secretarial procedures. Prerequisite: One year of shorthand theory or by proficiency examination. Four units.

3820. Office Management

Study of office procedures with major attention to job analysis, equipment, and management problems. Four units.

3840. Business Communications and Report Writing

Study of different types of business communications and practice in specialized business reports. Four units.

3851. Advanced Typewriting

Techniques and procedures for skill improvement in typewriting with readings from modern business office applications. 1 hr. lect., 4 hrs. Act. Three units.

3852. Business Office Machines

Techniques and procedures for operation of business machines with readings from modern business office applications. 1 hr. lect., 4 hrs. Act. Three units.

Management**3600. Principles of Management**

Introduction to business organization and management practices; interrelationships of complex human, technical, and economic factors in administration of business. Four units.

3610. Personnel Management

Principles and methods of organized personnel work; developing optimum utilization of human resources within the organization; recruitment, selection, training, promotion, transfer, motivation and compensation. Prerequisite: Bus. 3600. Four units.

3620. Industrial Administration

Essentials of production management and control; organization of the production function, plant location and layout, production planning and control, quality control, production standards; the relationship between production and other business operations. Prerequisite: Bus. 3600. Four units.

4630. Organization Theory

A study of human behavior in organizations, with emphasis upon an analysis of the need for organization, the kinds of organizational mechanisms, and theories and findings relevant to individual behavior in formal organizations. Prerequisites: Bus. 3600. Four units.

4640. Supervision: Principles and Problems

Supervisory methods and techniques of management; employer-employee relationships; adjustment of the worker to the job; problems of upgrading and supervisory training; supervisory aspects of grievance procedure. Prerequisites: Bus. 3600 and 3610. Four units.

5650. Executive Control and Administration

Application of management principles to top management problems; the responsibilities of an organization's major executive, such as setting company objectives, organizing and coordinating business activities, and controlling performance. Prerequisites: Bus. 3600 and 4630. Four units.

Marketing**3400. Principles of Marketing**

Organization and principal operating aspects of the system of distributing goods and services. Four units.

3410. Advertising

Marketing and economic functions of advertising, with emphasis on psychological and statistical aspects; includes media, copy, layout, and research. Prerequisite: Bus. 3400. Four units.

3420. Sales Analysis and Sales Management

Intermediate level course dealing mainly with the analytical problems of selling goods and services and the management of the sales function. Prerequisite: Bus. 3400. Four units.

4430. Private and Social Efficiency in Distribution

Application to marketing of economic analysis of private and social cost; consumer and industrial products distinguished; cost-reducing and cost-increasing marketing tendencies contrasted; basic issues in marketing legislation. Prerequisites: Bus. 3400 and 3420. Four units.

5440. Marketing Policies and Problems

Advanced course concerned with major problems in marketing and policy alternatives relating thereto, with emphasis on problem-solving exercises. Four units.

Other Business Courses**3310. Money, Banking and Business Fluctuations**

A study of the essentials of commercial and central banking and the nature and significance of business fluctuations. Four units.

3111. Business and Economic Statistics

Statistical methods used in business and economic analysis. Four units.

3660. Industrial Relations

A systematic study of labor-management relations. Four units. (Students will not receive credit for both course 3660 and Econ. 4610.)

4300. Business Finance

Financial principles and practices relating to alternative forms of business organization. Sources and uses of financial data. Four units.

4310. Investment Management

Angell's theory of investment decision-making, followed by a standard treatment of securities, security markets, and investment management. Four units.

4500. Business and Public Policy

An integrating treatment of leading subject matter areas with special reference to the manager's efforts to deal with changes both in business itself and in public policy. Recommended for last quarter. Four units.

4520. Government and Business

The competitive economy and the government's regulation and control activities; dynamic relations between business and government. Four units.

4700. Legal Environment of Business

A study of the legal setting in which business operates, with emphasis upon legal reasoning and the processes of the law. Four units.

ECONOMICS**3301, 3302. Principles of Economics**

Introduction to economic analysis and operation of the American economy. Four units each.

3303. Controversial Economic Issues

Study of major contemporary economic issues, such as Soviet and American systems for organizing economic resources, monopoly and competition, economic growth rate and inflation, public versus private sector problems, farm policy. (Not open to majors in accounting, management, marketing or economics.) Four units.

4000. Economics of the Business Firm

The operation of the price system in a free enterprise economy; prices and decision-making. Four units.

4100. International Economics

The basis of trade, foreign exchange, and foreign investment and world economic growth. Four units.

4110. Economic Development

The economics of underdeveloped countries. Prerequisite: Econ. 4100. Four units.

4510. Comparative Economic Systems

A comparative study of different systems which man has proposed or used to deal with the economic organization of society. Four units.

4610. Labor Economics

Study of labor markets and wages; development of unions and collective bargaining; labor legislation. Four units. (Students will not receive credit for both course 4610 and Bus. 3660.)

5120. Current Economic Policies

A study of national issues related to economic stabilization and growth. Prerequisite: Econ. 4000. Four units.

5130. Inter-American Economic Relations

Major economic problems, issues and policies in economic relations between the United States and Latin America. Four units.

5140. Development of Economic Thought

The history of economic analysis. Prerequisite: Econ. 4000. Four units.

5312. Federal Reserve Policies and Money Markets

Advanced study of monetary policy, debt management and the money system. Prerequisite: Bus. 3310. Four units.

DIVISION OF CREATIVE ARTS**Art, Music, Speech and Drama**

Professors Ernst (head), Randall (Chairman, Department of Art); Associate Professors Kjelson, Slatoff; Assistant Professors J. Hall, Muir.

CURRICULA OFFERED**Baccalaureate Degree Majors**

Art (B.A.)

Music (B.A.)

Language Arts (interdivisional major: See Humanities Division for details)

Minors

(See adviser for requirements)

Art

Music

Speech-Drama

PURPOSES

This division currently offers instruction in art, music, and speech-drama in order to provide (1) baccalaureate majors for persons with general vocational and avocational interests in the arts, (2) training for the teaching credentials in art and music, (3) methods and basic skill courses which meet the requirements of the various general teaching credentials, and (4) courses designed to broaden the general education pattern through increased knowledge and understanding of the arts.

ART MAJOR**Requirements are as follows:**

- I. Complete the 68-unit requirement in general education. Study of one or more modern foreign languages is highly recommended.
- II. Complete the following requirements in the major:

	<i>Units</i>
Lower Division	
Total of 18 units (at least 3 units in 3 of the 4 areas): (a) Survey of Art or History of Art, (b) Basic Design, (c) Drawing, (d) Composition	18
Upper Division	
Minimum of 3 units in 4 of the following areas must be included to complete major (portfolio of work completed in other institutions may be submitted for possible upper-division placement by transfer students): (a) Painting, (b) Graphics, (c) Sculpture, (d) Crafts, (e) Art Education, (f) Advertising Arts	12
Art electives with adviser's approval	32
Elect 3 units in each of Speech-Drama and Music	6
Total	68

- III. Teaching candidates must complete (a) the requirements for admission to teacher education; (b) the upper-division professional courses in teacher education which are required; (c) the requirements for a minor, 6 units of which may be taken in the graduate year; (d) secondary art methods and approval of adviser.

Requirements are as follows:

MUSIC MAJOR

- I. Complete the 68-unit requirement in general education. It is recommended that all music majors meet the creative arts requirement in the general education program by electing courses in art and/or speech-drama. Study of a foreign language is recommended for non-credential candidates.

- II. Complete the following requirements in the major:

Lower Division

	Units
Music theory (including fundamentals and sight singing; diatonic and chromatic harmony through dictation, keyboard, and written experiences)	18
Applied music	18
Basic string, brass, woodwind, or percussion (required only of credential candidates; others may substitute electives)	6
Basic piano (for non-piano majors)	6
Basic voice (for non-vocal majors)	6
In addition, students are expected to study continuously upon their major instrument and to participate regularly in at least one major ensemble. Proficiency examinations will be given in applied music before students are approved for upper-division standing.	

Upper Division

A minimum of 53-quarter units including the following courses:

Mus. 3141, 3142, 3143, Music History and Literature	9
Mus. 4001, 4002, Instrumental and/or Vocal Arranging	4
Mus. 3001, 3002, 3003, Analysis and Composition	9
Mus. 3391, 3392, Conducting	6
Mus. 3230, 3240, 3250, 3260, Basic Orchestral Instruments (1) string, woodwind, brass, and percussion	6
Applied Music (major instrument)	6
Music Activities	6
Mus. 3330, Music in the Elementary School	3
Mus. 4330, Music in the Secondary School	4

Total (including lower division) 89

Proficiency examination will be given in the basic applied music courses (piano, voice, string, brass, woodwind, percussion). Those students who have had broad secondary school performance background will be able to meet basic requirements without taking all of the basic courses. Majors in a given performance field will not need to take the basic course in their major field (e.g., piano major will not need basic piano course).

In addition to the subject and scholarship requirements listed above, the State Department of Education has prescribed standards of performance in piano, voice, and conducting which must be met by candidates for the general and the special secondary credentials.

- III. Pre-secondary teaching candidates are encouraged to complete as much of the following as possible prior to the A.B.: (a) the requirements for admission to teacher education; (b) the upper division professional courses in teacher education which are required.

DESCRIPTION OF COURSES

CREATIVE ARTS

4800. The Arts in Contemporary Society

A survey of the arts as they function in contemporary life with special emphasis on the fine arts and music. May be elected to partially fulfill creative arts requirement in general education. Four units.

ART

3040. Art in the Ancient World

The history of western art from prehistoric cultures through ancient and contemporary primitive arts. Preclassical civilizations and their contributions to the arts of Greece and Rome. Evolution of classical forms to the end of the Roman Empire. Three units.

3050. Medieval Art

The influence of Christian art upon the arts of Rome through the Byzantine, Romanesque and Gothic periods. The Renaissance in art in northern and southern Europe. Three units.

3060. Renaissance and Baroque Art

Evolution of the arts reflecting tastes from the late Renaissance and Baroque eras through the 19th centuries to the innovations of the French impressionists. Three units.

3070. Development of Modern Art

A survey of the evolution of contemporary art; philosophies of the "isms"; development of American art. Three units.

3110. Survey of Design

Survey of forms and techniques of the arts aimed at a broad understanding of the visual arts and professional opportunities in the field. Approval of staff required. 2 hrs. lect., 2 hrs. act. Three units.

3120. Drawing

Graphic representation through a variety of techniques and media. Emphasis on form, structure, perspective, values, line, proportions, etc. Approval of staff required. 1 hr. lect., 2 hrs. act. Two units.

3130. Intermediate Design

Advanced problems with emphasis upon application of design elements to practical problems in applied design. Prerequisite: Art 3120. 1 hr. lect., 4 hrs. act. Three units.

3140. Three-Dimensional Design

Emphasis on manipulation of three-dimensional media in order to discover their creative potential. Prerequisite: Art 3130. 1 hr. lect., 4 hrs. act. Three units.

3160. Life Drawing

A development of graphic representation through the study of the human form. Problems dealing with anatomy, form, and structure. Prerequisite: Art 3120. 1 hr. lect., 2 hrs. act. Two units.

3170. Intermediate Drawing

Study of the human figure with a creative interpretation of structure and form in relation to line and value. Prerequisite: Art 3160. 1 hr. lect., 2 hrs. act. Two units.

3210. Painting

Emphasis on pictorial composition. Experimentation with varied media such as tempera, casein, inks, collage, chalk, etc. Prerequisite: Art 3120. 1 hr. lect., 4 hrs. act. Three units.

3220. Intermediate Painting

Emphasis on individuality of expression and experimentation through new problems and methods of pictorial organization. Prerequisite: Art. 3210. 1 hr. lec., 2 hrs. act. Two units.

3310. Elementary School Art

Developing an understanding of elementary school art as applied to various age levels and classroom situations and providing the teacher with the personal skills necessary in utilizing arts and crafts materials. 3 hrs. lect., 4 hrs. act. Five units.

3320. Arts and Crafts in the Elementary School

Aims, methods, and materials for children's arts and crafts, and application to elementary school art experiences. Prerequisite: Basic skills in use of arts and crafts materials. 1 hr. lect., 4 hrs. act. Three units.

3510. Ceramics

Emphasis on designing, decorating, glazing and firing procedures of ceramics. May be repeated once for credit. Approval of staff. 2 hrs. lect., 6 hrs. act. Five units.

3520. General Crafts

Experiences in the processes of the crafts, utilizing wood, clay, metal, leather, and fabric. 9 hrs. lab. Three units.

4190. Advanced Drawing

Advanced problems in draftsmanship, with special emphasis on freedom of expression and experimentation. Prerequisite: Art 3170 or approval of staff. 1 hr. lect., 4 hrs. act. Three units.

4230. Painting: Water Media

Transparent and opaque watercolor techniques; creative interpretation of structure and form in relation to line and value. Prerequisite: Art 3210. 1 hr. lect., 4 hrs. act. Three units.

4240. Advanced Painting

Emphasizes individual growth, planning, and fine craftsmanship. Prerequisite: Approval of staff. 1 hr. lect., 4 hrs. act. Three units.

4310. Workshop in Elementary School Art

Experience in making materials used in education that meet the needs and interests of children to enrich the classroom activities. Approval of instructor. Two to five units.

4320. Crafts in the Secondary School

Development of basic skills and understandings of craft experiences in keeping with the growth and development characteristics of the junior-senior high school student. Approval of staff. 3 hrs. lect., 2 hrs. act. Four units.

4350. Secondary Art Methods

Fundamentals of teaching art in the junior and senior high school. Study of approved practices of art education at this level. Required of all art education option students. Prerequisite: Approval of staff. Four units.

4390. Art Internship

Practical experience in industry, business, agency or studio of professional artist. Approval of staff and cooperating organization. Five units.

4520. Jewelry

A basic course in the design and execution of simple jewelry, flatware, and hollow-ware, involving the use of silver, gold, copper, and brass. May be repeated for credit. Approval of staff. 2 hrs. lect., 6 hrs. act. Five units.

4530. Sculpture

Basic techniques and processes involving clay, wood, stone, plaster, and metal. Prerequisite: Art 3140. May be repeated for credit. Approval of staff. 1 hr. lect., 4 hrs. act. Three units.

4540. Weaving

Design and execution of the woven fabric. Basic skills in loom and frame weaving with the emphasis on beginning methods and processes. Approval of staff. 1 hr. lect., 6 hrs. act. Four units.

4610. Printmaking

Introduction to the field of printmaking, lithography, etching, engraving, woodcuts, and other graphic media. Prerequisite: Art 4190. 1 hr. lect., 4 hrs. act. Three units.

4620. Textile Design and Printing Process

Textile design processes involving silk screen, stencil, linoleum, and woodblock techniques. The production and exploration of hand-printed fabrics. May be repeated once for credit. Prerequisite: Approval of staff. 2 hrs. lect., 6 hrs. act. Three units.

4630. Lettering

A study of basic lettering forms with emphasis on styles of the alphabet, their proportion and spacing. The adaptation of lettering to layout and poster design. Approval of staff. 1 hr. lect., 2 hrs. act. Two units.

4640. Display and Exhibition Techniques

Practical problems of developing displays, student shows, exhibitions, and related brochures. Prerequisite: Art 3140. 1 hr. lect., 4 hrs. act. Three units.

4650. Advertising Art

The elements of visual expression and design related to the technical, psychological and social aspects of advertising. Prerequisite: Art 4630. 1 hr. lect., 4 hrs. act. Three units.

4670. Fashion Design and Illustration

Apparel design for contemporary dress and the development of apparel from earliest times to present day in relation to the function, technology and social aspects of each period. Prerequisite: Art 4650. 1 hr. lect., 4 hrs. act. Three units.

4680. Senior Studio Workshop

Preparation and organization of the student's art work for presentation to prospective employer. Approval of staff. Two to five units.

4710. Interior Design

The elements of visual expression and design related to contemporary concepts of interior work and living space needs. Prerequisite: Art 4640. 1 hr. lect., 4 hrs. act. Three units.

4800. The Arts in Contemporary Society

Four units.
(See description under Creative Arts section.)

4900. Individual Study

Two-four units.

5370. Art Experiences for Exceptional Children

Art experiences in various media for the exceptional child. Special emphasis on those experiences which meet the needs of the atypical child. Laboratory, lectures and practicum. 3 hrs. lect., 4 hrs. act. Five units.

5900. Individual Study

Two-four units.

MUSIC**3001, 3002, 3003. Analysis and Composition I, II, III**

Analysis of musical structure in representative compositions from the short song form through large cyclic works and contrapuntal forms; creative development of musical ideas into suitable homophonic and contrapuntal compositions. Three units each. 3 quarters.

3110. Listening to Music

A basic course in music understanding designed to develop techniques for listening. Examples will illustrate music periods, styles, forms. May partially fulfill creative arts requirement in general education. Not open to music majors. Three units.

3141, 3142, 3143. Music History and Literature

A chronological history of music in western civilization from its origins to contemporary times. 2 hrs. lect., 2 hrs. listening activity. Three units each.

3210. Elementary Class Piano

Basic keyboard techniques with special application to song materials and simple accompaniments used in the elementary school. Recommended for teachers in the primary grades. 2 hrs. act. One unit.

3230. Basic Orchestral Instruments (string)**3240. Basic Orchestral Instruments (woodwind)****3250. Basic Orchestral Instruments (brass)****3260. Basic Orchestral Instruments (percussion)**

Instruction in the fundamentals of playing orchestral instruments with attention to methods and materials used in teaching instrument classes in the elementary and secondary schools. 2 class hrs. per week. May be repeated for credit. One unit in each instrument group.

3310. Elementary School Music

Designed to develop skills of the classroom teacher in singing and playing music used in the basic elementary textbooks, and to develop understanding of the aims, methods and organization of materials and activities in elementary school music. No prerequisite. 3 hrs. lect., 4 hrs. act. Five units.

3330. Music in the Elementary School

Aims, methods, and organization of materials for elementary classroom music with application to the adopted state music texts. Prerequisite: Music fundamentals or equivalent competency as determined by Music Department. 2 hrs. lect., 2 hrs. act. Three units.

3391, 3392. Conducting

Study, observation and analysis of conducting and rehearsal techniques with particular attention to interpretative aspects of various musical scores. First quarter will emphasize vocal conducting and second quarter instrumental conducting with the class used as the laboratory group. 1 hr. lect., 4 hrs. act. Three units each.

3510. College Chorus

Performance of materials representing varied styles and periods of choral literature. May be repeated for credit. One unit.

3520. Orchestra

Open to college students and to qualified adults in the community. May be repeated for credit. One unit.

3530. Band

Open to college students and to qualified adults in the community. May be repeated for credit. One unit.

3540. Ensembles

Open to college students and to qualified adults in the community. May be repeated for credit. One unit.

4001, 4002. Instrumental and/or Vocal Arranging

Characteristics of orchestra and band instruments and the singing voice along with practical experience in arranging music for varied instrumental and vocal ensembles. Two units each. 2 quarters.

4110. Music Literature for Children

A survey of music literature especially suited for use in teaching school music, combined with methods of presentation. Emphasis on music available on recordings and supplementary song material not found in state music texts. Three units.

4210. Applied Music (piano)**4220. Applied Music (voice)****4230. Applied Music (string)****4240. Applied Music (woodwind)****4250. Applied Music (brass)****4260. Applied Music (percussion)**

Class instruction for advanced students in piano, voice, and on each specific orchestral instrument. May be repeated for credit. One unit.

4330. Music in the Secondary School

Place and function of music in grades 7 through 12 with emphasis on general music, choral and instrumental classes; aims, methods and materials. 3 hrs. lect., 2 hrs. act. Four units.

4360. General Music Methods and Materials

Exploring methods and planning activities and projects for the general music curriculum in the junior and senior high schools. Three units.

4800. The Arts in Contemporary Society

Four units.
(See description under Creative Arts section.)

4900. Individual Study

Two-four units.

5210. Applied Music (piano)**5220. Applied Music (voice)****5230. Applied Music (string)****5240. Applied Music (woodwind)****5250. Applied Music (brass)****5260. Applied Music (percussion)**

Private instruction, though not required, will be given in voice, piano and on all orchestral instruments on a fee basis. May be repeated for credit. One unit.

5370. Choral Techniques and Materials

Technique involved in directing and rehearsing choral ensembles and participation in study and performance of new choral materials. 3 hrs. lect. Three units.

5900. Individual Study

Two-four units.

SPEECH-DRAMA**3210. Mass Media of Communication**

Importance of periodicals and newspapers, motion pictures, radio, and television. Comparative analysis and evaluation. Development of criteria for responsible judgments. Three units.

3310. Oral Interpretation

A fundamental course devoted to theory, methods, and practice in the performance of oral communication of different types of literature. Four units.

3410. Voice and Speech Improvement

Improvement in voice and articulation through lecture, discussion, and drill. Designed for students who have minor speech and voice problems. May fulfill teaching credential speech requirement. Zero-three units.

3510. Public and Group Discussion

Principles and methods of public and group discussion in problem solving and learning situations. Development of individual skills in discussion preparation, participation, and leadership through practical application. Five units.

4050. Trends in Modern Theater

Lecture and discussion of contemporary drama on the stage, in motion pictures, and television. Study and analysis of current dramatic activity in the Bay Area. Field trips to current dramatic events and production centers. May fulfill creative arts requirement in general education. Three units.

4110. Fundamentals of Play Production

Analysis of dramatic productions. Attention to the physical theater and its equipment, stage scenery; properties; stage lighting and sound; organization and design of stage productions. 3 hrs. lect., 6 hrs. lab. Five units.

4180. Rehearsal and Performance

Activity course for students participating in acting, staging, and other phases of production of college-theater performances. Admission by consent of instructor. Zero-three units.

4350. Advanced Platform Speaking

Principles of public speaking and the development and presentation of talks designed to achieve specific purposes. May fulfill teaching credential speech requirement. Three units.

4610. Speech and Dramatic Activity in Schools

To develop skills in the use of choral reading, story telling, creative and formal dramatics, puppetry, and informal speech activities as tools for the teacher. Three units.

4650. Children's Theater

Materials, problems, techniques of dramatic activities and programs with and for elementary age children in the school and the community. Formal and informal drama. 3 hrs. lect., 4 hrs. act. Five units.

4660. Teaching Speech and Drama in the Secondary School

Study of the content, bibliography, materials, and methods in speech and drama education. Prerequisite: Admission to teacher education. Four units.

4900. Individual Study

Two-four units.

5900. Individual Study

Designed for students pursuing individual study on the graduate level. Two-four units.

DIVISION OF EDUCATION**Education, Physical Education, Health Education, Recreation**

Professors Lepore (head), Carroll, Fry, Gilbert, R. Hall, Lane, Lawrence, Shriner, Vandenburg (Chairman, Department of Health and Physical Education); Associate Professor Pederson; Assistant Professors Carlson, Davies, Fink, Forbes, Hendrickson, Jackson, Loonie, McHugh, Martin, Niepoth, Roossinck, Sabath, Worland, Yeager, Zeitlin.

CURRICULA OFFERED**Baccalaureate Degree**

Elementary Education (B.S. with general elementary credential)

Nondegree Credential Programs

General elementary credential program for holders of baccalaureate degree.

Courses leading to the general secondary credential with B.A. or B.S. degree and with fields of concentration in:

Art	Mathematics
Biological science	Music
Business education	Physical science
English	Social science
Language arts	

Graduate courses applicable to the following credentials:

Administration
General Pupil Personnel Services
Supervision

Physical and Health Education Courses**PURPOSES**

The Division of Education is primarily concerned with the professional education of teachers and recreation leaders at the undergraduate and graduate levels. Programs prepare for elementary school teaching, for secondary school teaching, and for recreation leadership. Courses are offered that are applicable to administration and supervision credentials. Also offered are courses for in-service school personnel and other qualified individuals.

Preparatory programs aim at specific, practical competence in the field, firmly rooted in fundamental understanding of children, youth, and school communities, and of education in the American democratic society. The professional programs are interdivisional in nature and are based on general education in the arts, sciences, humanities, and mathematics. Credential programs provide public school laboratory experiences within each major phase of professional education.

GENERAL ELEMENTARY MAJOR

Students planning to obtain the bachelor of science degree and a general elementary credential will be granted the bachelor's degree with a major in education at the same time they complete the requirements for the credential. No degree with a major in elementary education may be granted unless the candidate completes at the same time requirements for the elementary teaching credential.

Students who plan to enroll in teacher-education programs are encouraged to take introduction to education and acquire experience with children and youth by participating in community agencies, in youth-serving organizations, or in camp counseling during lower division.

Lower Division Requirements

In addition to the general education requirement (see requirements for graduation section) the general elementary education candidate should complete the following lower-division courses:

	Units
Fundamentals of Music.....	3-6
Art (color, design, appreciation) ¹	3-6
Physical Education Fundamentals.....	1-3
Geography (world) ¹	3-6
Speech.....	3
Nature Study ¹	3-5
Introduction to Education (recommended).....	3

Total 19-32

Upper Division Requirements

	Units
Ed. 3000. Child, Youth, and School ⁴	7
Math. 3000. Concepts of Mathematics ^{1, 2}	3-5
or	
Math. 5020. Math Concepts for Elementary Schools ³	
Ed. 3100. Psychology in Education ⁵ (must be taken with Eng. 3000).....	5
Upper-division general education science course ¹	4
Sci. Ed. 4020. Science in the Elementary School.....	3
H. & P.E. 3200. Health and Physical Education.....	4
Mus. 3330. Elementary School Music Methods.....	3
Ed. 3200. Series Elementary Curriculum and Methods ⁵	10
Art 3320. Arts and Crafts in the Elementary School.....	3
Ed. 4100. Evaluation in Education.....	4
Ed. 4250, 4264. Participation and Audio-Visual Education ⁵	5
Ed. 4600. Student Teaching in Elem. Schools.....	15

Total 66-68

GENERAL ELEMENTARY CREDENTIAL PROGRAM FOR HOLDERS OF A BACCALAUREATE DEGREE

Students who possess a baccalaureate degree from an accredited college and who are seeking an elementary credential on the recommendation of Alameda County State College, and who intend to do their student teaching under the supervision of the college, must complete a minimum of 27 units at this college. Since by proper planning a graduate student with no work in professional education may complete all requirements in four quarters, he should plan carefully his program with his adviser. It is recommended that the program be started in summer session and completed the following spring quarter. Work may be started in the fall quarter and completed the following summer. In either case, the candidate is eligible to begin teaching on a regular credential in the fall of the year in which he completes credential requirements.

Before students are admitted to the four-quarter general elementary credential program they must complete an application form and be interviewed by a member of the education faculty. Contact the division of education for application forms, appointments, and closing dates for submitting applications.

¹ May be used to satisfy general education requirement.

² For students who have not taken a college mathematics course in satisfaction of general education requirement.

³ For students who satisfy the mathematics general education requirement with a lower division college mathematics course, e.g., college algebra.

⁴ Courses accompanied by school and youth-group experiences.

⁵ Courses accompanied by public-school experience.

Professional Education Program Requirements

	Units
Ed. 3000 Series. Child, Youth and School.....	7
Ed. 3100, 3161 Psychology in Education.....	5
Ed. 3200 Series. Elementary School Curriculum and Methods.....	10
Ed. 4250, 4264. Participation and Audio-Visual Education.....	5
Ed. 4600. Student Teaching in the Elementary School.....	15
Art 3320. Arts and Crafts in the Elementary School.....	3
Mus. Ed. 3310. Elementary School Music.....	3
H. & P. E. 3200. Health and Physical Education.....	4
Math. Ed. 4020. Mathematics in Elementary Schools.....	3
Sci. Ed. 4020. Science in the Elementary School.....	3
Courses selected with adviser to fill in areas of subject-matter deficiencies.....	10

PRE-GENERAL SECONDARY CREDENTIAL PROGRAM

Students who plan to seek the general secondary credential may take course work at Alameda County State College to be applied toward fulfillment of state requirements for the credential. The secondary program is a five-year course of study requiring 45-quarter units after the granting of the baccalaureate degree. Of these 45 post-graduate units, nine must be taken in subjects commonly taught in California secondary schools, and nine must be taken in professional education.

All secondary programs are offered jointly by the division of education and the other divisions of the College. For any general secondary credential the student must complete a teaching major and teaching minor. The College offers teaching majors and minors in nine fields: Social studies; life sciences and general science; physical science and general science; English; language arts; mathematics; art; music; and business education. In addition, the College offers teaching minors in speech and in physical education. (See subject departments for specific course requirements for each teaching major and minor offered.) Students must consult major and minor department advisers for the planning of major and minor programs.

Lower Division Requirements

Students who seek a secondary credential in addition to the baccalaureate degree should complete as many of the major and minor subject-matter requirements as possible over and above the general education requirements prescribed for the degree.

Upper Division Requirements

Undergraduate students seeking a general secondary credential are encouraged to take Ed. 3000 series and Ed. 3100 as juniors or seniors, and to reserve for graduate study the completion of the balance of the professional education requirements. With the exception of the nine units in teaching subject matter required to be taken in graduate standing, students are advised to complete as undergraduates their teaching major and minor requirements.

Professional Education Requirements

	Units
Ed. 3000 Series. Child, Youth, and School ¹	7
Ed. 3100, 3161. Psychology in Education ¹	5
Ed. 4100. Evaluation in Education.....	4
Ed. 4500. Secondary Education: Curriculum, Counseling & Guidance ¹	6
Curriculum and Special Methods (Offered by subject-matter major and minor departments; includes audio-visual instruction and materials preparation appropriate to the fields).....	6-8
Ed. 4650. Student Teaching.....	15
Total.....	43-45

¹ Courses accompanied by public-school and youth-group experiences.

ADMISSION TO TEACHER EDUCATION

The selection and admission of students to candidacy in teacher education conforms to requirements established by the State Board of Education (Title V, California Administrative Code) and is a function of the Education Division. The standards to be met by candidates are as follows:

(1) Demonstrate adequate intellectual ability; (2) perform scholastically at a level of "C" (2.0) or higher prior to candidacy and maintain a "C" average during each quarter of candidacy in both over-all college and professional work. (3) complete prerequisites to professional preparation; (4) pass all competency tests required by the college, or complete competency courses with a "C" grade or better; (5) evidence of breadth of aptitudes and personal characteristics appropriate to teaching as a profession; (6) rate satisfactorily on a health examination; (7) demonstrate satisfactory performance in field laboratory work; and (8) complete all general education requirements prior to or concurrent with enrollment in Ed. 4250 (elementary candidates). In addition, to be recommended for a credential, the candidate must satisfy the following statutory requirements: United States Constitution (when not part of a degree program), audio-visual education, and naturalized or native-born citizenship or declaration of intention to become a citizen of the United States. Individuals who plan to take courses leading to the general secondary credential must complete a total of 45 quarter units (nine in major or minor subjects, and nine in professional education) of post-graduate work.

Appraisal of candidates is college-wide; the principal settings are in the college classroom and in the field laboratory experience. Although education advisers recommend individuals to candidacy, approval is made only by the Credentials Board. Preliminary approval normally is made prior to enrollment in Ed. 3200 series for elementary credential candidates and prior to Ed. 4500 for secondary candidates. Full candidacy is gained when candidate is approved for student teaching.

For detailed information about steps in candidacy, consult an education adviser.

GRADUATE COURSES

The college offers selected graduate courses that may be applied upon direct application to the State Credentials Office to meet certain requirements of administration, supervision, and general secondary and general pupil personnel credentials.

DESCRIPTION OF COURSES

EDUCATION

The general prerequisite for all professional courses is upper-division or graduate standing.

3000 Series—Child, Youth, School ***3010. Principles, Scope, and Function of Education**

The modern public elementary and secondary school as a community agency; history and development; objectives, operation, scope, and functions. Two units.

3020. Growth and Development of Child and Youth

Human growth and development; psychology of child and youth with emphasis on school-related problems. Three units.

3060. Public School Laboratory I

Supervised public school laboratory experience, 3 hours. One unit.

3061. Youth Agency Laboratory

Supervised youth agency experience, 3 hours. One unit.

3100. Educational Psychology

Research and theory in the teaching-learning process; application to school practices; mental hygiene; individual differences in school behavior. Teacher-pupil relationships. Prerequisite: Basic psychology, Ed. 3000 series, concurrent registration in Ed. 3161. Three units.

* Concurrent registration in an entire series required unless special permission is granted.

3161. Public School Laboratory II

Supervised public school laboratory experience, 6 hours.

3200 Series—Elementary School Curriculum and Methods *

Prerequisites: Ed. 3000 series, Ed. 3100 series, or equivalent.

3210. Language Arts in the Elementary School

Curriculum, methods, and resource materials in speaking, listening, spelling, writing, and children's literature. Lect. 2 hours, act. 2 hours. Three units.

3220. Social Studies in the Elementary School

Curriculum, resource materials, and methods in scope and sequence of social studies in the elementary school. Lect. 2 hours; act. 2 hours. Three units.

3230. Reading in the Elementary School

Materials and methods of reading development; emphasis on group and individual techniques. Lect. 2 hours; act. 2 hours. Three units.

3263. Public School Laboratory III

Three hours of supervised participation laboratory in public schools. One unit.

4100. Evaluation in Education

Principles, techniques, and current practices of evaluation in school; relationships to curriculum; current practices in tests and measurements. Lect. 3 hrs.; lab. 3 hrs. Prerequisite: Ed. 3100 or equivalent. Four units.

4250. Participation and Audio-Visual Education

Selection, evaluation, preparation, and use of audio-visual materials. Lect. 1 hour; act. 4 hours. Prerequisites: Ed. 3200 series or equivalent. (Concurrent registration in Ed. 4264.) Two units.

4251. Audio-Visual Methods and Materials

Selection, utilization and evaluation of audio-visual methods and materials in the teaching-learning process; operation of audio-visual equipment. (Fulfills credential requirement. No credit for students with prior audio-visual course.) Lect. 1 hr., act., 4 hrs. Three units.

4252. Preparation of Instructional Materials

Laboratory experience in the preparation of a variety of visual materials. Techniques of illustration, lettering, mounting, coloring, and duplication of graphic materials used to produce pictures, maps, charts, posters, slides, and displays. Prerequisite: Ed. 4251 or equivalent and teaching experience. Lect. 2 hrs., act. 2 hrs. Three units.

4264. Public School Laboratory IV

Public school participation preceding student teaching and weekly on-campus group conference. Lab. 8 hrs. Three units.

4500. Secondary Education: Curriculum, Counseling, and Guidance

Scope and sequence of secondary school curriculum; audio-visual equipment operation and material preparation; counseling and guidance; use of cumulative folder; roles of the teacher, student, parent, administrator, supervisor, and counselor. Prerequisite: Ed. 3000 series and Ed. 3100, or equivalent and preliminary candidacy. 5 hrs. lect., 3 hrs. supervised public-school laboratory. Six units.

4600. Student Teaching in the Elementary Schools

Full-time student teaching under the supervision of a public-school teacher and a member of the college faculty in conjunction with a student-teaching seminar. Prerequisites: Full candidacy in elementary-education program and approval of Committee on Credentials. Fifteen units.

4650. Student Teaching in the Secondary Schools

Full-time student teaching under the supervision of a public-school teacher and a member of the college faculty in conjunction with a student-teaching seminar. Prerequisite: Full candidacy in secondary-education program and approval of Committee on Credentials. Fifteen units.

4900. Individual Study

Two-four units.

* Concurrent registration in an entire series required unless special permission is granted.

5000. Philosophy of Education

Foundational course in philosophy of education. An examination of philosophical issues in contemporary education, aimed at encouraging individual development of a coherent, consistent philosophy by which educational practice may be guided. Four units.

5010. Contemporary American Education

A critical analysis of relationships between major social and historical developments and American education, emphasizing goals, purposes, scope and functioning of elementary and secondary education. (Meets credential requirements in principles of education.) Prerequisites: Ed. 3020 and Ed. 3060, or permission of instructor. Four units.

5040. Teaching the Adolescent

Characteristics of adolescents; influences affecting adolescent behavior; analysis of current forces upon junior and senior high school students; application to school procedures. (Meets secondary-credential requirements for growth and development.) Prerequisite: Basic psychology course. Three units.

5060. Human Relations in Teaching

Teaching procedures and content emphasizing human relations in school setting. Analysis of effects of roles, statuses, and purposes upon the individual. Understanding of group processes. Prerequisite: Consent of instructor. Four units.

5200. Curriculum Development

Study of principles, procedures, and issues in public elementary and secondary school curriculum development and improvement. (Meets credential requirements for supervision and administration.) Prerequisite: Teaching experience, regular credential, consent of instructor. Four units.

5210. Improving Language Arts in the Elementary Schools

Research in psychology and methods of the teaching-learning process in speaking, listening, spelling, and writing; relation to school curriculum materials and resources. Prerequisite: Teaching experience, Ed. 3200 series or equivalent, or permission of instructor. Three units.

5220. Improving Social Studies in Elementary Schools

Study of problems in teaching social studies in elementary schools. Development of plans and materials. Review of state framework for social studies. Prerequisite: Teaching experience, Ed. 3200 series, or equivalent, or permission of instructor. Three units.

5230. Improving Reading in the Elementary Schools

Research in psychology and methods of the teaching-learning process in reading; diagnosis and evaluation; relation to school curriculum materials and resources. Prerequisite: Teaching experience, Ed. 3200 series or equivalent, or permission of the instructor. Three units.

5240. Children's Literature

Examination of values in folk tales, classical myths, and legends. Major attention to body of contemporary writing especially created to satisfy interests and needs of children. Criteria for continuing selection and appreciation of children's literature emphasized. Prerequisite: Consent of instructor. Three units.

5241. Literature for Youth

Examination of the values to be found in folk tales, classical myths and legends, as well as the body of contemporary writing, especially created to satisfy interests and needs of youth. Three units.

5600. Federal, State, County, and Local School Administration

Relationship of local school district to county, state, and federal agencies. Legal, fiscal, organizational, and administrative bases. Leadership and the several publics. Personnel dynamics. Phenomenon of growth. (Meets credential requirements in administration.) Prerequisite: Teaching experience, regular credential, consent of instructor. Four units.

5640. Legal Aspects of Education

Consideration of the legal bases of federal, state, county and local administrative levels. Major legal provisions of the California Education Code and related sources respecting the administration of public schools. (Meets credential requirements for administration and supervision.) Prerequisites: Teaching experience, regular credential, consent of instructor. Four units.

5670. Organization and Administration of Pupil Personnel Services

A comprehensive study of pupil personnel services including community resources. Emphasis on the organization, administration, and evaluation of school services that further personal, educational and vocational goals of pupils. Prerequisites: Ed. 3000, 3100, 4100. Four units.

5700. Teaching the Gifted

Problems of curriculum, teaching-learning, and patterns of administration and organization of school programs for the gifted. Emphasis on methods, materials, and resources. Prerequisites: Teaching experience, or regular credential, or consent of instructor. Three units.

6020. Research in Education

Methods and procedures of research tools in education; sources and uses of data. Critical analysis of published research. Preparation of a research project to include references, rationale, and outline. Ed. 4100 and course in statistics recommended. Four units.

6100. Advanced School Curriculum

Organization of curriculum development programs; technical aspects of preparing curricula; review of pertinent research; evaluation of curriculum programs. Public relations aspects. (Meets credential requirements for supervision and administration.) For school curriculum personnel. Prerequisites: Teaching experience, regular credential. Ed. 5200 or consent of instructor. Four units.

6210. Counseling and Guidance in Public School

Counseling procedures and techniques, including interviewing, child study, parent education. Emphasis given to functional use of cumulative folder data and forms. Roles of the teacher, parent, administrator, supervisor, counselor. Prerequisite: Teaching experience or consent of instructor. Four units.

6500. Organization and Administration of Elementary Schools

Administration, organization, and duties; includes teaching-learning process and related curriculum development. (Meets elementary school administration credential requirement.) Prerequisite: Teaching experience, regular credential, consent of instructor. Four units.

6510. Advanced Curriculum Development, Materials

Development of curriculum resources, school and commercial sources, curriculum laboratory planning and utilization, relation to library service, duplication processes, editing procedures. District, county, state and college services. Prerequisites: Teaching experience, regular credential, Ed. 5200 or consent of instructor. Four units.

6520. Public School Supervision

Basic principles and techniques of public elementary and secondary school supervision and coordination; related aspects of curriculum development and teaching-learning process. (Meets credential requirements for supervision and administration.) Prerequisites: Teaching experience, regular credential, consent of instructor. Four units.

6600. Aspects of School Finance and Business Administration

Principles, problems, and practices of educational finance and business management; state and local support; legal aspects of finance. Aspects of planning, financing, and constructing school buildings. (Meets credential requirements for administration and supervision.) Prerequisites: Teaching experience, regular credential, consent of instructor. Four units.

6700. Advanced Education Psychology

(See psychology for description.) Four units.

DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION

The Department of Health and Physical Education offers course work enabling a student to obtain a general secondary credential minor in physical education. For details consult an adviser in physical education.

In addition, the department offers a selection of physical education activity courses open to all interested students and sponsors programs in intramural and intercollegiate athletics.

PHYSICAL EDUCATION

3000. Activity

Instruction in designated physical education activities. May be repeated for credit. One unit.

3200. Health and Physical Education

Physical education programs, health services and environment, and methods and materials of instruction in the elementary school. Special emphasis on interpretation of California state program. Prerequisite: General education requirements in health and physical education. 2 hrs. lect., 4 hrs. act. Four units.

4200. Methods and Materials in Health and Physical Education

Methods of teaching physical education and health education on the secondary level. Instructional materials, audio-visual resources, classroom organization, management and evaluative techniques. Prerequisite: Senior standing, physical education or health education major or minor. 3 hrs. lect., 2 hrs. act. Four units.

4900. Individual Study

Two-four units.

5200. Elementary School Physical Education

The elementary school physical education program including games, sports, fundamental rhythms and dances, and other activities commonly taught on the elementary level. Prerequisite: Teaching experience or consent of instructor. Three units.

5220. Physical Education Programs in Secondary Schools

Development of total program of instruction in secondary school physical education. Methods of instruction; intramural, extramural, and interscholastic athletics; recreation, rehabilitation, and preparation of courses of study. Prerequisite: Physical education major or consent of instructor. Three units.

5500. Evaluation of Health and Physical Education

Principles and techniques in evaluation of instruction in health and physical education. Emphasis is given to test administration and construction, application of statistical procedures, and development and interpretation of research data. Prerequisite: Education 4020 or equivalent. Three units.

5610. Physical Education Facilities and Equipment

Functional planning of indoor and outdoor physical education facilities and equipment for schools and recreation centers; design and construction of facilities for a complete physical education and recreation program; survey of school plants and recreation facilities in California. Three units.

5800. Problems in Health and Physical Education

Research techniques applied to selected problems in health and physical education. Prerequisite: Teaching experience or consent of instructor. Three units.

HEALTH EDUCATION

4200. Methods and Materials in Health and Physical Education

Four units. (For description see Phys. Ed. 4200.)

4900. Individual Study

Two-four units.

RECREATION MAJOR

The Bachelor of Science degree in recreation is intended for those individuals who are preparing for full-time positions in public, private, and voluntary agencies which offer recreation services and in specialized programs such as hospital recreation, employee recreation, and armed-forces recreation.

Students majoring in recreation are required to plan their program with a recreation adviser to assure proper selection of courses.

Requirements for the degree are as follows:

I. *General Education*: Complete the 68-unit requirement in general education.

II. *Major*: Complete the following requirements in the major:

	<i>Units</i>
A. <i>Lower Division</i>	
Rec. 3000	4
Electives to be chosen from the following areas (at least three areas to be represented): Art, camping, drama, music, nature study, physical education, social recreation	12
B. <i>Upper Division</i> (foundation courses):	
10-12 units to be selected in consultation with the major adviser from the following: Ed. 3020, 3100, 5040, Psy. 3000, 3500, Anat. and Phys. 3300	10-12
Eight units to be selected in consultation with the major adviser from the following:	
Anthro. 3010, Soc. 3000, 4100	8
C. <i>Upper Division</i> (professional courses):	
Rec. 3500, 3750, 4000, 5000, 5900	36
At least one course in each of the following areas to be selected in consultation with the major adviser:	
Music, drama, arts, crafts, physical education, camping, nature study, social recreation	15-20
Total	85-92
D. <i>Additional requirements</i> : Students must demonstrate competency in speech or must have completed satisfactorily a basic course in speech. A valid American Red Cross Standard First Aid Certificate is required of all recreation majors.	

RECREATION

3000. Nature and Scope of Recreation

The nature, scope and significance of recreation, including historical developments, values and organizational patterns; the role of recreation in contemporary society; introduction to community recreation. Lect. 3 hours, act. 2 hours. Four units.

3050. Camp Counseling

A study of organized camping, with emphasis on the role of camp counselor and content of camp program. Development of campcraft skills. (One planned weekend camping trip.) Lect. 2 hrs., act. 2 hrs. Three units.

3200. Social Recreation

The planning, organization, and leadership of recreation in the group setting. Emphasis on the techniques of leading selected social recreation activities. Lect. 2 hrs., act. 2 hrs. Three units.

3500. The Recreation Program

Principles of program planning, development and evaluation; principles of learning and group dynamics as applied to the recreation process; relationship of the recreation program to community structure. Lect. 4 hrs., supervised field experience 6 hrs. Six units.

3750. The Recreation Setting

Analysis of recreation areas and facilities and their influence upon program; management and operation of playgrounds, centers, special activity areas, etc.; principles of scheduling, reporting, training and supervision of part-time and volunteer workers. Lect. 4 hrs., supervised field experience 6 hrs. Six units.

4000. The Structure of Recreation

General principles related to the structure of recreation, including organization, administration, personnel, budget and finance, public relations, legal aspects and liability. Lect. 4 hrs., act. 2 hrs. Five units.

5000. Internship

Full-time assignment to a public, private or specialized agency (hospital, industry, etc.), under supervision of agency representative and major adviser. Weekly conferences with major adviser. Sixteen units.

5900. Seminar in Recreation

A study of selected problems and trends in recreation, including an analysis of philosophies of recreation and an orientation to professional responsibilities. Three units.

DIVISION OF HUMANITIES**English, Foreign Languages, History, Philosophy**

Professor Biella (head); Associate Professor Rosenbaum; Assistant Professors Blawie, Peterson, Rice, Van Aken.

CURRICULA OFFERED**Baccalaureate Degree**

English (B.A.)

History (B.A.)

Language Arts (B.A.) (An interdivisional major)

Social Science (B.A.) (An interdivisional major; see Social and Behavioral Science for details.)

Minors

(See adviser for requirements)

History

English

Language Arts

PURPOSES

This division offers instruction in English, history, foreign languages and philosophy, for purposes of general education and to meet the requirements of the liberal arts and pre-general secondary credential majors in English, language arts and social science.

HONORS IN ENGLISH AND HISTORY

The Division of Humanities offers upper-division English and history honors on the tutorial plan to students who can qualify for admission to honors. The purpose of the program is to offer mature students the opportunity for intensive special projects in reading, research and writing in areas not ordinarily covered in the curriculum. The course includes the two years prior to graduation. Candidates will normally take two or three credits each quarter for five of the six quarters. Applicants for the program will be selected by an honors board, and the actual determination of the honors award will be made by the board in the final quarter of the program. Students who complete the course successfully will receive the citation *Honors in English* or *Honors in History* upon graduation.

ENGLISH MAJOR**I. General education**

Complete 68 units in general education. English 3000, Advanced Composition, is not open to English majors or minors. An appropriate upper-division course in writing must be substituted for it.

Demonstrate a reading knowledge of a modern foreign language.

II. Complete the following requirements in the major:

Lower division: A course designed to introduce the student to literature.

Upper division: 48 quarter units including the following courses: Eng. 3020, 3250. Either of the following courses: Eng. 4040, 4060. Either of the following courses: Eng. 3251, 3252. Any three of the following courses: Eng. 3100, 3200, 3300, 3400. Any two of the following courses: Eng. 3500, 3600, 3601, 3650.

III. General secondary teaching candidates must also complete (a) the requirements for admission to teacher education; (b) the upper-division professional courses in teacher education which are required; (c) a course in the teaching of English in the secondary school; (d) an upper-division course in speech; (e) an upper-division course in play production.

HISTORY MAJOR**I. General education**

Complete the 68-unit requirement in general education.

Demonstrate a reading knowledge of one foreign language.

Proficiency may be demonstrated either by course work or by examination.

Complete a minimum of 4 quarter units in economics and 4 quarter units in political science. Pol. Sci. 3100 may not be counted toward the completion of this requirement.

II. Complete the following requirements in the major:

Lower division: A minimum of 9-quarter units in either world history, western civilization, or history of the Americas.

Upper division: A minimum of 40 quarter units in history to include Hist. 4030 and a minimum of 8 units in sequence in *each of three* of the following fields: (a) ancient and medieval; (b) modern Europe; (c) Asia; (d) United States; (e) Latin America. Hist. 3400 may not be counted toward completion of this requirement.

LANGUAGE ARTS MAJOR

I. Complete the 68-unit requirement in general education. As a part of this requirement demonstrate a reading knowledge of a modern foreign language.

II. Complete the following requirements in the major:

Courses totaling 29 units in English beyond the general education requirements to include: Eng. 3020 or Eng. 4070; Eng. 4040 and 4060.

At least 12 units of upper-division literature courses.

A minimum of 6 units in journalism courses (to include Jour. 4200 for prospective secondary-school teachers).

Speech and drama courses totaling 22 units to include Sp. & Dra. 3210, 3310, 3510, 4110.

III. Secondary teaching candidates also complete (a) the requirements for admission to teacher education; (b) the upper-division professional courses in teacher education which are required; (c) the requirements for a teaching minor, 6 units of which may be taken in the graduate year; (d) the courses Jour. 4200 and Eng. 5950.

DESCRIPTION OF COURSES**ENGLISH****3000. Advanced Composition**

Improvement in expository writing. Enrollment and writings in conjunction with a course in each major field. Required in the general-education program. Not open to English majors or minors. Three units.

3020. Advanced Expository Writing

Expository writing and analysis in relation to traditional and contemporary theories of composition. Four units.

3100. Beowulf to Marlowe

Epic and Romance, Chaucer, drama, other poetry and prose. Four units.

3200. Spenser to Milton

Elizabethan, Jacobean, and Puritan; drama, poetry, and prose exclusive of Shakespeare; Milton. Four units.

3250. Introduction to Shakespeare

Techniques and conventions of the Elizabethan theater; Shakespeare's comedies, histories and tragedies. Four units.

3251. Shakespeare's Comedies and History Plays

Analysis of selected comedies and history plays. Prerequisite: Eng. 3250. Four units.

3252. Shakespeare's Tragedies

Analysis of selected tragedies. Prerequisite: Introduction to Shakespeare. Four units.

3300. Dryden to Burns

Restoration and 18th century poetry and prose; the novel; the drama. Four units.

3400. Wordsworth to Shaw

Romantic, Victorian, and *fin de siècle* poetry and prose; the novel; the drama. Four units.

3500. Contemporary English Literature

Major trends in British literature from World War I to the present. Four units.

3600. American Literature to 1865

Writings of the colonial and revolutionary periods; transcendentalism; major poets and novelists. Four units.

3601. American Literature from the Gilded Age to 1918

Realism and naturalism, major poets and novelists. Four units.

3650. Contemporary American Literature

Major trends in American literature from World War I to the present. Four units.

3700. World Literature I

Selected writings from the great cultures of the world from ancient times through the Middle Ages. Four units.

3701. World Literature II

Selected writings from the great cultures of the world from the Renaissance through the Enlightenment. Four units.

3702. World Literature III

Selected writings from the great cultures of the modern world. Four units.

3800. History of the Drama I

Medieval and Elizabethan drama exclusive of Shakespeare. Four units.

3801. History of the Drama II

Jacobean, Restoration, and 18th century drama. Four units.

3802. History of the Drama III

19th and 20th century British and American drama. Four units.

4040. Modern English Grammar

Review of traditional grammar; introduction to structural linguistics. Four units.

4060. Introduction to Linguistics

Origin, nature and philosophy of language; history and comparison of language systems and structures. Four units.

4070. Creative Writing

Writing descriptive sketches, short character studies, brief narrations, short stories and simple poems; reading various types of imaginative writing. Four units.

4100. Studies in Medieval Literature

Intensive study of an important literary topic in the period. Maximum total credit 8 units. Prerequisite: Eng. 3100 or equivalent. Four units.

4200. Studies in Renaissance Literature

Intensive study of an important literary topic in the period. Maximum total credit 8 units. Prerequisite: Eng. 3200 or equivalent. Four units.

4300. Studies in Restoration and Eighteenth Century Literature

Intensive study of an important literary topic in the period. Maximum total credit 8 units. Prerequisite: Eng. 3300 or equivalent. Four units.

4400. Studies in Nineteenth Century Literature

Intensive study of an important literary topic in the period. Maximum total credit 8 units. Prerequisite: Eng. 3400 or equivalent. Four units.

4500. Studies in Contemporary English Literature

Intensive study of an important literary topic in the period. Maximum total credit 8 units. Prerequisite: Either Eng. 3500 or Eng. 3650 or equivalent. Four units.

4650. Studies in Contemporary American Literature

Intensive study of an important literary topic in the period. Maximum total credit 8 units. Prerequisite: Either Eng. 3600 or Eng. 3601 or equivalent. Four units.

4850. Studies in the Novel

Intensive study of selected novels. Maximum total credit six units. Three units.

4900. Individual Study

One-four units.

4990. Honors in English

Intensive research and reading open to selected students only. A tutorial program to be taken for five of the six quarters prior to the student's graduation. Two to three units per quarter.

5670. Literature of California

Literature of California from the earliest times to the present. Three units.

5950. Teaching English in the Secondary School

Methods and curricula for the teaching of English in the junior high school, the high school, and the junior college. Four units.

FOREIGN LANGUAGES**Spanish****4100. Spanish for Elementary Schools**

Improvement of conversational Spanish and methods for its teaching. Prerequisite: Study of Spanish, elementary school experience in teaching Spanish or consent of instructor. Four units.

4101. Spanish for Elementary Schools

Continuation of 4100. Prerequisite: Spanish 4100 or consent of instructor. Four units.

4102. Spanish for Elementary Schools

Continuation of 4100, and 4101. Prerequisite: Spanish 4101 or consent of instructor. Four units.

4900. Individual Study

One-four units.

French**4900. Individual Study**

One-four units.

HISTORY**A. Ancient and Medieval****3100. Ancient History**

Greece and Rome from the ancient city-states and monarchies to the decline of the Roman Empire. Five units.

3110. Europe in the Middle Ages

Political, social, and economic evolution of Europe from the decline of the Roman Empire to about 1350. Five units.

B. Modern Europe**4120. Renaissance and Reformation**

Europe from 1350 to 1610, emphasizing the classical revival and Protestant revolt. Four units.

4140. Early Modern Europe

Europe from 1600 to 1789. Post-Renaissance western Europe political and cultural development, including the Age of Enlightenment. Four units.

4160. Europe in the 19th Century

Europe from the Napoleonic era to 1914. Emphasis on international relations and the rise of nationalism and liberalism. Four units.

4180. Europe Since 1914

Political, economic, and military developments since the outbreak of World War I. Emphasis on the relations of nations in an age of conflict. Four units.

5200. England and the British Empire

Study of the political and economic development of England and the British Empire since 1500. Emphasis on the rise of England as a world power and developments since the Industrial Revolution. Five units.

5210. History of Russia

Russia from the 16th century to the present. The internal problems and international relations emphasizing the importance of Russian history for an understanding of modern Soviet Russia. Five units.

C. Asia**3300. History of Asia to 1850**

A survey of Asiatic history from the earliest times to the mid-nineteenth century. Five units.

3301. History of Asia Since 1850

A survey of Asiatic history in the 19th and 20th centuries; with special attention given to colonialism, nationalism, and communism. Five units.

4310. History of China

China from early times to the present, with emphasis on the modern period. Four units.

4320. History of Japan

Japan from early times to the present, with emphasis on the modern period. Four units.

4330. History of India and Southeast Asia

India and the lands of southeast Asia from early times to the present; European dominion; achievement of independence; problems of national development. Four units.

4340. The Moslem World

History of the Islamic world from the seventh century to the present. Four units.

D. United States**3400. American History**

Political and social history of the United States from colonial times to the present. A survey of the transformation of an agrarian society into a complex industrial-urban order. Satisfies general education requirement. Five units.

3410. The United States: Colonial Period

The thirteen colonies: European background, settlement and expansion, and development to the close of the Revolution. Five units.

3420. The United States: The New Nation

History of the United States from 1783 to 1845. The Confederation and the Constitution. Domestic and foreign problems of the new nation to 1845. Five units.

3430. Civil War and Reconstruction

The United States from 1845-1877. The sectional conflict; westward expansion, economics of sectionalism, crisis and compromise. The Civil War and social and political reconstruction. Five units.

3510. History of California

California history from early Spanish occupation to the present; emphasizing the influence of geography, natural resources, and a growing population. Four units.

4440. Emergence of the United States as a World Power

The United States from 1877-1920. Political and social development in the age of "rugged individualism." The Spanish-American War, the Progressive Movement, World War I, and retreat to isolation. Five units.

4450. The United States Since 1920

Study of the complexity of national life in the 20th century. The 1920's, the Depression, New Deal, World War II, and post-war affairs. Five units.

4500. The Westward Movement

Westward expansion of the United States from 1763 to 1900; development of western states and effect on the history of the nation. Four units.

5520. Social and Intellectual History of the United States

The growth of American thought and social patterns from colonial times to the present. Four units.

5530. Diplomatic History of the United States

Analysis of the foreign relations and policies of the United States with emphasis on the 20th century. Four units.

E. Latin America**3600. Latin America: Colonial Period**

Discovery, conquest, and settlement of Spanish and Portuguese America; independence; evolution of society and institutions to 1825. Five units.

3601. Latin America: Since 1825

Political, economic, and social development of the Latin American nations in the 19th and 20th centuries. Five units.

4610. Mexico Since 1821

The development of Mexico since independence; evolution of political, economic, and social institutions. Five units.

4620. The A B C Powers

History of Argentina, Brazil, and Chile since independence. Five units.

F. General**4000. Contemporary World Problems**

World affairs from 1914 to the present; present foreign policies of the major powers in their historical, political, and economic setting; events leading to World War II; the United Nations; current major issues. Four units.

4011. History of Political and Social Thought I

Development of political and social thought from Plato to Machiavelli. Five units.

4012. History of Political and Social Thought II

Development of political and social thought from Machiavelli to the present. Five units.

4020. International Relations

Analytical introduction to international relations; nationalism; imperialism; racial, population, and economic factors; war; settlement of international disputes by methods other than war; foreign policies of the major powers. Four units.

4030. Introduction to Historiography

A critical study of the writings of the great historians. Four units.

4900. Individual Study

One to four units.

4990. Honors in History

Intensive research and reading open to selected students only. A tutorial program to be taken for five of the six quarters before the student's graduation. Two to three units per quarter.

PHILOSOPHY**3000, 3001, 3002. History of Western Philosophy**

Great philosophical systems and persistent problems in the history of ideas. Each course may be taken independently, but the full sequence is strongly recommended.

3000. Pre-Socratics to St. Thomas Aquinas. Four units.

3001. William of Occam to Kant. Four units.

3002. Fichte to contemporary philosophers. Four units.

DIVISION OF SCIENCE AND MATHEMATICS

Professors Peterson (head), Guthrie, Groody, Lutt, Purdy, Purvis, Sawrey, Smith, Southard (chairman, Department of Mathematics), Woods; Associate Professor Heath; Assistant Professors Coburn, Colburn, Fleming, Hancock, Lund.

CURRICULA OFFERED**Baccalaureate Degree**

Biological Science (B.S.)

Mathematics (B.S.)

Physical Science (B.S.)

Minors

(See adviser for requirements)

Biological Science

Mathematics

Physical Science

PURPOSES

To offer liberal arts programs, to prepare teachers for secondary schools, and to offer general education and elementary education service courses.

BIOLOGICAL SCIENCE MAJOR

I. Complete the 68-unit requirement in general education which is required for all majors. Students completing this major will have satisfied the 18-unit general education requirement in natural science. Study of one or more modern foreign languages is highly recommended.

II. Complete the following requirements in the major:

<i>Lower Division</i>	<i>Units</i>
Preparation for the major: college mathematics.....	5-10
Basic courses in botany and zoology.....	15-30
Basic courses in chemistry and physics.....	17-22
<i>Upper Division</i>	
Courses to be selected with approval of biological science adviser:	
Botany, biology, zoology	25-47
Physical sciences	9-18
Total	87

III. Pre-secondary teaching candidates must complete (a) the requirements for admission to teacher education; (b) the upper-division professional courses in teacher education which are required; (c) the requirements for a minor, 6 units of which may be taken in the graduate year; (d) Sci. Ed. 5100, 4 units.

MATHEMATICS MAJOR

I. Complete the 68-unit requirement in general education which is required for all majors. Students completing this major will have satisfied the general education requirement in mathematics. Chemistry and physics taken as preparation for the major will apply toward the general education requirement in natural science. Study of one or more modern foreign languages is highly recommended.

II. Complete the following requirements in the major:

<i>Lower Division:</i>		<i>Units</i>
Recommended preparation for the major: college chemistry and physics		15-25
Basic courses in mathematics including integral calculus		16
<i>Upper Division Core:</i>		
Math. 3101, 3102 (4-4)		8
Math. 3310		5
Math. 3201		4
		33
<i>Liberal Arts Option:</i>		
Math. 3320		5
Math. 4331, 4332		10
Electives selected with aid of adviser		16
		31
<i>Secondary Teaching Option:</i>		
Math. 3060		4
Math. 4040		4
A second course in geometry		4
Math. 3600		4
Electives selected with aid of adviser		15
		31
Total mathematics		64

- III. Pre-secondary teaching candidates must also complete (a) the requirements for admission to teacher education; (b) the upper-division professional courses in teacher education which are required; (c) the requirements for a teaching minor, 6 units of which may be taken in the graduate year; (d) Math. Ed. 5040, 4 units.

PHYSICAL SCIENCE MAJOR

- I. Complete the 68-unit requirement in general education which is required for all majors. Students completing this major will have satisfied the 18-unit general education requirement in natural science. Study of one or more modern foreign languages is highly recommended.

II. Complete the following requirements in the major:

<i>Lower Division</i>		<i>Units</i>
Preparation for major: college mathematics		10-15
Major courses: basic courses in physics and chemistry		27-42
<i>Upper Division</i>		
Courses to be selected with approval of the physical science adviser:		
Astronomy, chemistry, conservation, geology and physics		25-47
Biological sciences		9-18
Total		83

- III. Secondary teaching candidates must complete (a) the requirements for admission to teacher education; (b) the upper-division professional courses in teacher education which are required; (c) the requirements for a minor, 6 units of which may be taken in the graduate year; (d) the course Sci. Ed. 5100, 3 units.

DESCRIPTION OF COURSES

ANATOMY AND PHYSIOLOGY**3300. Anatomy and Physiology**

Introduction to structure and function of human systems. Appropriate for all students desiring understanding of the human body. Prerequisite: Biology or zoology recommended. 3 hrs. lect., 3 hrs. lab. Four units.

5100. General Physiology

Living activities of cells and tissues including nutrition, response, growth and reproduction; unique problems in different groups of organisms. Prerequisites: General biology or zoology and botany; general chemistry; organic chemistry is recommended. 2 hrs. lect., 6 hrs. lab. Four units.

ASTRONOMY**4400. Descriptive Astronomy**

A nonmathematical course, with emphasis on aspects of interest to the prospective or in-service teacher. 4 hrs. lect., 2 hrs. act. Five units.

BIOLOGY**3350. Principles of Biology**

Fundamentals of plant and animal processes emphasizing the basic and unifying principles. Not open to students having credit for lower-division courses in botany, biology, or zoology. 4 hrs. lect., 2 hrs. act. Five units.

4221. Marine Biology

The sea as life environment. Study of local marine animals, emphasis on identification, anatomy, and habitats of invertebrate forms. Prerequisites: Biol. 3350 or consent of instructor. 2 hrs. lect., 3 hrs. lab., field trips. Three units.

4410. Microbiology

The biology of representative types of microscopic plants and animals including their culture, morphology, general physiology, and ecology. Prerequisite: General chemistry and biology or equivalent. 4 hrs. lect., 6 hrs. lab. Six units.

4440. Genetics

An introductory study in the principles of heredity. Prerequisite: General botany and zoology or equivalent. 4 hrs. lect., 2 hrs. act. Five units.

4450. Evolution

Organic evolution stressing possible mechanisms. Prerequisite: Botany and zoology. 4 hrs. lect. Four units.

4461, 4462. General Ecology

Study of the relationship of plants and animals to each other and their environment. Prerequisite: General botany and zoology or equivalent; chemistry and physics recommended; 4461 prerequisite to 4462. 3 hrs. lect.; 4462, 1 hr. lect., 6 hrs. lab. and/or field trips. Three units each.

4900. Individual Study

Two-four units.

5000. Development of Biological Concepts

The development of biological science using original writings of key figures from the Greeks to contemporary biologists. Prerequisite: General biology, or botany and zoology. 3 hrs. lect. Three units.

BOTANY**4300. Higher Plants of California**

Classification of the native and introduced ferns and seed plants of California, life histories and ecology. Prerequisite: General biology or botany, or consent of instructor. 2 hrs. lect., 6 hrs. lab. Four units.

4350. Survey of the Plant Kingdom

General biology of the major plant groups other than the bacteria, including the fundamentals of classification, morphology, physiology and reproduction. Prerequisite: General biology or consent of instructor. 2 hrs. lect., 3 hrs. lab. Three units.

4420. Economic Plants

A study of the significance of plants in the development of human cultures. Prerequisite: General botany, 4 hrs. lect., 2 hrs. act. Five units.

CHEMISTRY**3301. Organic Chemistry**

An introduction to carbon compounds. Prerequisite: General chemistry. 4 hrs. lect., 2 hrs. act. Five units.

3302, 3303. Organic Chemistry

A continuation of Chemistry 3301 with emphasis on basic principles and beginning laboratory experience in basic techniques and syntheses. Prerequisite: Chem. 3301. (Chem. 3302 is prerequisite to Chem. 3303.) 3 hrs. lect., 6 hrs. lab. Five units.

4150. Advanced Inorganic Chemistry

A study of atomic structure, valence, bonding, periodic system, and electron configurations. Prerequisite: General inorganic chemistry. 4 hrs. lect., 2 hrs. act. Five units.

4240. Instrumental Methods of Analysis

Theory and application of instrumental methods in chemical problems. Laboratory experiments in physical and instrumental methods of analysis of inorganic and organic substances. Prerequisites: Quantitative analysis, organic chemistry. 3 hrs. lect., 6 hrs. lab. Five units.

4401. Biochemistry

Basic consideration of the chemical and physical factors in life processes. Chemistry and metabolism of carbohydrates, proteins and enzymes, lipids, vitamins, hormones. Prerequisite: Chem. 3301. 4 hrs. lect., 2 hrs. act. Five units.

4402, 4403. Biochemistry

Continuation of Chemistry 4401. Beginning laboratory experience in basic techniques of importance to both chemists and biologists. Prerequisite: Chem. 4401. (Chem. 4402 is prerequisite of Chem. 4403.) 3 hrs. lect., 6 hrs. lab. Five units.

4500. Introductory Physical Chemistry

An introductory study of the principles of physical chemistry. The fundamental physical laws, theoretical principles and mathematical relations in chemistry. Prerequisites: Quantitative analysis, Chem. 3301, general physics, college algebra, or consent of instructor. 4 hrs. lect., 2 hrs. act. Five units.

4610. Industrial Chemistry

Fundamental principles and applications of important chemical processes. Prerequisite: Chem. 3301. 4 hrs. lect., 2 hrs. act. Five units.

4900. Individual Study

Two-five units.

CONSERVATION**4380. Conservation of Natural Resources**

Interrelationships of soils, water, minerals, forests, grasslands, and wildlife; applied ecology in the wise use of natural resources. Prerequisite: A basic course in biology and in physical science. 4 hrs. lect., 2 hrs. act. Five units.

ENTOMOLOGY**4100. Insects and Man**

Beneficial and harmful insects and related arthropods as important factors in human welfare. Field trips to selected entomological activities and industries in the Bay Area. 2 hrs. lect., 2 hrs. act. Three units.

4210. General Entomology

Introduction to the anatomy, biology, ecology and identification of western insects; emphasis on local forms. Techniques of collecting, rearing and preserving insects. Prerequisite: A course in the biological sciences. 2 hrs. lect., 6 hrs. lab., field trips. Four units.

4230. Insect Identification

Collection and preparation of specimens, classification of insects, principles of taxonomy, and entomological literature. Prerequisite: A course in the biological sciences. 2 hrs. lect., 6 hrs. lab. Four units.

4310. Medical Entomology

Insects and related arthropods as transmitters of disease, public health problems arising from insects not transmitting disease. Prerequisites: A course in entomology or permission of the instructor. 2 hrs. lect., 6 hrs. lab., field trips. Four units.

4410. Agricultural Entomology

The biology, ecology, identification, distribution and control of insects attacking agricultural crops and stored products. Prerequisites: A course in entomology or permission of the instructor. 2 hrs. lect., 6 hrs. lab., field trips. Four units.

GEOLOGY**4101. Physical Geology**

An elementary study of the earth, including materials, structure, internal conditions and physical and chemical processes. 3 hrs. lect. Three units.

4102. Physical Geology Laboratory

The study of rocks and minerals, topographic and geologic maps. Field trips. Prerequisite: Geol. 4101 (can be taken concurrently). 3 hrs. lab. One unit.

4201. Historical Geology

Evolution of continents, oceans, mountain systems, and other features of the earth; development of animals and plants. 3 hrs. lect. Three units.

4202. Historical Geology Laboratory

Collecting, identifying and categorizing fossils; use of fossils. Prerequisite: Geol. 4201 (can be taken concurrently). 3 hrs. lab. One unit.

4300. Land Forms in Western U.S.

The geologic processes which formed the surface features of western U.S. with emphasis on the San Francisco Bay Area. 3 hrs. lect. Three units.

4310. Geology of California

An overview of the geologic history and development of the physical features of California. Prerequisite: Geol. 4101 or equivalent. 2 hrs. lect., 3 hrs. lab. Three units.

4320. Rocks and Minerals of California

An elementary study of the common rocks and minerals, their occurrence, origin and uses. 2 hrs. lect., 4 hrs. act. Four units.

4410. Economic Geology

A study of the mineral resources of economic importance. Prerequisite: Geol. 4101 or equivalent. 4 hrs. lect., 2 hrs. act. Five units.

4510. Invertebrate Paleontology

History and classification of invertebrates. Methods of interpretation of the fossil record. Prerequisite: Permission of instructor. 2 hrs. lect., 6 hrs. lab. Four units.

4610. Mineralogy and Crystallography

Recognition of minerals by their physical properties and crystal form; morphology and classification of crystal structure. Prerequisite: Permission of instructor. 2 hrs. lect., 6 hrs. lab. Four units.

4710. Petrology

Origin, occurrence and classification of common rocks; emphasis on hand lens identification. Prerequisite: Permission of instructor. 2 hrs. lect., 6 hrs. lab. Four units.

4810. Structural Geology

Structural features of sedimentary, metamorphic rocks; deformation of the earth's crust; applied practice in laboratory methods. Prerequisite: Permission of instructor. 2 hrs. lect., 3 hrs. lab. Three units.

4810. Field Geology

Introduction to geologic field methods and instruments. Preparation of geologic maps of local area, writing of geologic reports. Prerequisite: Permission of instructor. 1 hr. lect., 6 hrs. lab. Three units.

4900. Individual Study

One-five units.

MATHEMATICS**3000. Concepts of Mathematics**

Course for students planning not to specialize in mathematics or the related sciences. Consideration of the postulates for number systems, arithmetic and algebra, with applications. Designed to satisfy the general education requirement in mathematics for non-majors. Five units.

3060. Mathematics of Finance

Simple and compound interest; discount, depreciation and amortization; study of annuities and other mathematical aspects of financial transactions. Prerequisite: Intermediate algebra or equivalent. Four units.

3101, 3102. Foundations of Mathematics I, II

The nature of mathematics; mathematical logic; axiomatic bases for numbers and number systems; bases of geometries. Prerequisite: Calculus. Four units each.

3110. Theory of Polynomial Equations

Nature, limits, location, and approximation of roots. Theorem of Sturm, elements and applications of determinants and matrices, symmetric functions, transformations of equations. Prerequisite: Calculus. Three units.

3120. Linear Algebra and Matrices

Linear transformations and matrices. Algebra of matrices and vectors. Determinants and systems of linear algebraic equations. Applications to geometry, physics, etc. Prerequisites: Two courses in calculus or consent of instructor. Five units.

3201. Higher Geometry I

College geometry with emphasis on foundations of plane and solid Euclidean geometry. Prerequisite: Calculus. Four units.

3202, 3203. Higher Geometry II, III

Non-Euclidean geometries, synthetic and analytic projective geometry. Prerequisite: Math. 3201. Four units each.

3300. Review of Calculus

Comprehensive review of calculus for students who need a refresher course before proceeding to more advanced courses in mathematics. Prerequisite: Intermediate calculus, or equivalent. Three units. (Credit cannot be granted toward a mathematics major or a bachelor's degree.)

3310. Intermediate Calculus

Solid analytic geometry, functions of several variables, partial derivatives, multiple integration, infinite series. Prerequisite: Calculus. Five units.

3320. Differential Equations

A beginning course in ordinary differential equations. Prerequisite: Math. 3310 or equivalent. Five units.

3331. Differential Equations I

First order differential equations and a beginning study of linear differential equations with applications. Prerequisite: Math. 3310. (Not open for credit to students having credit for Math. 3320 or equivalent.) Three units.

3332. Differential Equations II

Solutions of n th order linear differential equations with variable coefficients, series solutions, classification and treatment of singular points, systems of linear differential equations in two or more dependent variables, special topics. Prerequisite: Math. 3331. (Not open for credit to students having credit for 3320 or equivalent.) Three units.

3400. Selected Topics From Applied Mathematics for Engineers

Some aspects of hyperbolic functions, elliptic integrals, infinite series, Fourier series, Gamma and Bessel functions with applications to engineering and physical problems. Attention given to formulation of such problems in mathematical language. Prerequisite: Math. 3320 or consent of instructor. Three units.

3450. Linear Programming

Elementary principles and mathematical structure of linear programming. Simplex and alternative methods for solving systems of linear inequalities. Applications to problems in business, industry, transportation, military logistics and other fields. Prerequisite: Calculus within the past three years or consent of instructor. Three units.

3500. Probability and Statistics

Basic laws of probability. Distributions, moments, sampling and central limit theorem. Prerequisite: Math. 3310 or equivalent. Five units.

3600. Number Theory

Euclid's algorithm, prime numbers, congruences, theorems of Fermat and Euler, quadratic residues. Prerequisite: Calculus. Four units.

3700. Introduction to Digital Computer Programming

Study of the process of coding of problems for an automatic digital computer with some emphasis on the logical aspects. Prerequisite: One year of college mathematics. Four units.

3750. Basic Numerical Analysis

Computation with approximate numbers; accuracy, checking and error considerations; choice and use of tables; applications involving polynomial approximations; interpolation, finite differences, numerical differentiation and integration; numerical solution of algebraic, transcendental equations and systems of equations. Prerequisite: Math. 3320 or consent of instructor. Five units.

3900. Individual Study

One-five units.

3910. Directed Group Studies

One-six units.

4040. History of Mathematics

The historical development of mathematical ideas and techniques. Prerequisite: Calculus. Four units.

4120. Introduction to Modern Higher Algebra

An introduction to abstract algebraic structures, including number systems, groups, rings, fields, integral domains and the algebra of classes. Prerequisite: Math. 3120. Five units.

4331. Advanced Calculus I

Advanced study of functions of several variables, partial differentiation, multiple integrals, line and surface integrals. Prerequisite: Math. 3310 or equivalent. Five units.

4332. Advanced Calculus II

Several types of infinite series, uniform convergence, improper integrals, special functions. Prerequisite: Math. 4331. Five units.

4340. Introduction to Complex Variables

Introduction to theory of functions of complex variables. Prerequisite: Math. 3320. Five units.

4730. Numerical Methods in Ordinary Differential Equations

Selected numerical methods of solution of one-point and two-point boundary value problems involving linear and nonlinear ordinary differential equations and systems. Prerequisite: Math. 3332, 3700, and 3750 or consent of instructor. Five units.

4750. Numerical Methods of Approximation

Study of polynomial and rational methods of approximation of functions of one or more variables in senses such as least squares and least maximum deviation. Prerequisite: Math. 3700 and 3750 or consent of instructor. Four units.

4760. Numerical Matrix Inversion and Decomposition

Numerical methods for inverting and decomposing matrices and solving systems of linear algebraic equations and inequalities. Methods for obtaining eigenvalues and eigenvectors of matrices. Prerequisite: Math. 3120 and 3700 or consent of instructor. Five units.

4900. Individual Study

One-five units.

4910. Directed Group Studies

One-six units.

5020. Content of Elementary School Mathematics

Mathematical background to arithmetic; meanings, history, applications. Designed to help potential elementary school teachers understand mathematics. Three units.

5031, 5032, 5033. Concepts for Elementary School Mathematics/Junior High School Mathematics/High School Mathematics

Study of selected mathematics concepts in traditional and emerging mathematics curricula. Development of these concepts at levels appropriate to the years immediately preceding and following those at which teachers expect to teach. Careful attention to concepts in materials and proposals prepared by such national bodies as the Commission on Mathematics and the School Mathematics Study Group. Prerequisite: 5031, 5032, baccalaureate degree or consent of department; 5033, mathematics teaching experience or consent of department. Three units each.

5340. Vector Analysis

Vector algebra, differentiation, and integration; gradient, divergence, curl; curvilinear coordinates. Prerequisite: Math. 3320. Five units.

5350. Introductory Topology

Beginning course in topological methods in analysis, standard theorems in topology, bicontinuous transformations, topological spaces, metric spaces. Prerequisite: Math. 4332 or consent of instructor. Four units.

5900. Individual Study

One-five units.

5910. Directed Group Studies for Advanced Students

One-six units.

6331. Theory of Ordinary Differential Equations

Introductory course limited to real domain. General theory of linear differential equations, algebraic theory of linear differential systems, existence theorems, nature of solutions of ordinary differential equations, solutions by definite integrals and in infinite form. Prerequisite: Math. 3332 and Math. 4332. Five units.

6340. Introduction to Advanced Complex Analysis

Theory of analytic functions of one complex variable, Cauchy's integral formula, analytic continuation, calculus of residues, multiple-valued functions. Prerequisite: Math. 4340. Five units.

6350. Introduction to Advanced Real Analysis

The real number system; point sets; fundamentals of limits, continuous functions and derivatives; Riemann integration; elements of the theory of sets and transfinite numbers. Prerequisite: Math. 4332. Five units.

6900. Individual Study

One-five units.

6910. Directed Group Studies for Graduate Students

One-six units.

MATHEMATICS EDUCATION**4020. Teaching Mathematics in Elementary Schools**

A study of the curriculum, teaching methods and content in elementary school mathematics. Three units.

5040. Teaching Mathematics in Secondary Schools

Study of the curriculum, teaching methods and content in school mathematics from the junior high school through the junior college. Open to seniors and graduate students with mathematics major or minor. Four units.

NATURE STUDY**3391, 3392, 3393. Nature Study**

A year sequence in environment study including topics from field biology and physical science. Prerequisite: Basic courses in biology and physical science. 2 hrs. lect., 6 hrs. lab. and/or field trips. Four units each.

PHOTOGRAPHY**4500. Introductory Photography**

Elementary course in fundamentals of photography, basic theory and practice of photography through picture taking, development and print making; emphasis on use of photography as an adjunct to teaching and other professions. 2 hrs. lect., 2 hrs. act. Three units.

PHYSICAL SCIENCE**3340. Principles of Physical Science**

Fundamental principles of physics and chemistry with applications to astronomy, meteorology, and geology. Not open to students having credit for lower division courses in chemistry or physics. 4 hrs. lect., 2 hrs. act. Five units.

4400. Weather and Climate

Introduction to the atmosphere, physics of the atmosphere, physical causes of climate; structure and circulation, weather and weather forecasting; emphasis on aspects of interest to the prospective or in-service teacher. Prerequisite: Recommended Math. 3000 or equivalent, high school physics. 4 hrs. lect. Four units.

4900. Individual Study

Two-four units.

PHYSICS**4150. Radioactivity and Nuclear Structure**

Discovery of radioactivity, nature of radioactivity, alpha, beta, and gamma rays, theory of transformations, artificial transmutations, nuclear structure, nuclear reactors. Prerequisites: General college physics and mathematics. 3 hrs. lect. Three units.

4160. Basic Electronics

An introduction to the design, use, and analysis of electronic instruments such as circuit analysis, electron tubes, amplifiers, power supplies. 4 hrs. lect. Four units.

4171. Modern Physics

A descriptive course in atomic and nuclear physics. Prerequisite: General physics. 4 hrs. lect., 2 hrs. act. Five units.

4172. Modern Physics Laboratory

The experimental foundation for the theory of atomic structure. Photoelectric effect, X-rays, cathode rays, optical spectra. Prerequisite: General physics. 3 hrs. lab. One unit.

4311, 4312. Analytic Mechanics

Fundamentals of statics, kinematics, dynamics of rigid bodies, introduction to Lagrange's and Hamilton's equations. Prerequisites: General physics; Math. 3320 (can be taken concurrently). Phys. 4311 is prerequisite to Phys. 4312. 3 hrs. lect. Three units each.

4320. Thermodynamics and Kinetic Theory

The equations of state and thermodynamic functions, including the first and second laws. Basic laws governing the behavior of gas molecules, including the Maxwell-Boltzmann distribution. Prerequisites: General physics, calculus. 3 hrs. lect. Three units.

4331, 4332. Electricity and Magnetism

Theory of electrostatics, magnetostatics, magnetism, steady and varying currents, electron theory and electromagnetic waves. Prerequisites: General physics, Math. 3320 (can be taken concurrently). Phys. 4331 is prerequisite to Phys. 4332. 3 hrs. lect. Three units each.

4333. Advanced Electrical Laboratory

The use and calibration of precision electrical instruments and electronic devices. To be taken concurrently with Phys. 4332. Prerequisites: General physics, Math. 3320 (can be taken concurrently). 3 hrs. lab. One unit.

SCIENCE EDUCATION**4020. Science in the Elementary School**

Discussions, techniques, projects appropriate to the teaching of science in the elementary schools. Prerequisite: Completion of general education requirement in science. 2 hrs. lect., 2 hrs. act. Three units.

5050. Advanced Science Education

Practice in preparing and presenting science lessons. Prerequisite: Previous instruction in science education or consent of the instructor. Three units.

5100. Science in the Secondary School

Curriculum, materials, content, and methods for secondary school physical science. Prerequisite: Consent of instructor. 2 hrs. lect., 2 hrs. act. Three units.

STATISTICS**4001. Statistical Analysis I**

Descriptive statistics and probability. Prerequisite: College algebra or equivalent. Four units.

4002. Statistical Analysis II

Sampling, distributions, test of significance and correlational methods. Prerequisite: Stat. 4001 or equivalent. Four units.

4003. Statistical Analysis III

Introduction to analysis of variance. Prerequisite: Stat. 4002 or equivalent. Four units.

4900. Individual Study

Two-four units.

ZOOLOGY**4141. Reptiles and Amphibians**

Biology, ecology, distribution and identification of reptiles and amphibians; emphasis on western forms. 2 hrs. lect., 3 hrs. lab., field trips. Three units.

4142. Mammals

The anatomy, natural history and classification of mammals. Laboratory work with mammal collection of western forms with emphasis on identification. Prerequisite: Biol. 3350 or consent of instructor. 2 hrs. lect., 3 hrs. lab., field trips. Three units.

4143. Birds

Biology, ecology, distribution and identification of birds; emphasis on local forms. 2 hrs. lect., 3 hrs. lab., field trips. Three units.

4144. Fishes

Biology, ecology, distribution and identification of fishes; emphasis on western forms. Prerequisite: A course in biological sciences. 2 hrs. lect., 3 hrs. lab., field trips. Three units.

4240. General Embryology

Anatomy and physiology of development, principally as exemplified by the vertebrates, including fertilization, morphogenetic movements, differentiation and organogenesis. Prerequisite: General biology, general zoology or consent of instructor. 3 hrs. lect., 6 hrs. lab. Five units.

4250. Vertebrate Anatomy

Gross and microscopic structure of representative vertebrates, emphasizing the evolutionary history of the major organ systems. Prerequisite: Zool. 4240. 3 hrs. lect., 6 hrs. lab. Five units.

4350. Survey of the Animal Kingdom

Introduction to relationships within and between major groups of animal life. 2 hrs. lect., 2 hrs. act. Three units.

5050. General Parasitology

An introduction to parasitism; emphasis on the structure, physiology, life histories, and pathology of parasitic animals other than arthropods. Prerequisites: General zoology or general biology. 2 hrs. lect., 3 hrs. lab. Three units.

DIVISION OF SOCIAL AND BEHAVIORAL SCIENCE**Anthropology, Geography, Journalism, Political Science, Psychology, Sociology**

Professors Merrifield (head), Edmison, Freitag, Grace, Sawrey; Assistant Professors Blawie, Forbes, Gothberg; Instructor Winslow.

CURRICULA OFFERED**Baccalaureate Degree**

Social Science (B.A.) (An interdivisional major; see also Humanities and Business and Economics Divisions.)

Language Arts (B.A.) (An interdivisional major; see Humanities for details.)

Minors (See advisers for requirements)

Anthropology

Economics (See Business and Economics Division for details.)

Geography

History (See Humanities for details.)

Journalism

Language Arts (See Humanities for details.)

Political Science

Psychology

Social Science (pre-secondary)

Sociology

PURPOSES

The division offers instruction in anthropology, geography, journalism, political science, psychology and sociology, leading to the baccalaureate degree in social science and for purposes of general education. The social science major provides a flexible pattern of study, of a liberal arts character, for such professionally-oriented fields as: teaching, pre-law, government service, pre-business, journalism, foreign service, social work, as well as for graduate work in selected fields.

SOCIAL SCIENCE AREA MAJOR**Requirements:**

I. Complete the 68-unit requirement in general education which is required for all degrees.

II. Complete the following:

A concentration of 28-quarter hours of upper-division work in *one* of the following eight fields: anthropology, economics,* geography, history,** journalism, political science, psychology and sociology.

Three other supporting fields of 7-9 quarter hours each in the social sciences, history, or economics.

The remaining courses (normally 4-8 quarter hours) to be distributed among one or two of the above named fields.

It is recommended that a course in statistics be included in the program.

It is recommended that a senior seminar (Social Science 4000) be included in the program.

It is recommended that appropriate course work leading to a functional reading knowledge of a modern foreign language be a part of this requirement.

* See adviser for applicable courses in Division of Business and Economics.

** See adviser for applicable courses in Division of Humanities.

III. The total program of not less than 60 upper-division quarter hours should display careful planning, scholarly balance among related fields, and internal coherence leading toward the student's educational purposes. The pattern of studies may be formalized only with the advice and consent of the designated academic adviser.

IV. For the baccalaureate *major* in preparation for the general secondary teaching credential program (taken during the fifth year) candidates select either history or political science as the area of concentration. In addition, before graduation the student must complete a minor of 24 units in a teaching field. Pre-secondary credential candidates are encouraged to complete as many of the following as possible prior to receiving the B.A. degree:

Requirements for admission to teacher education; the upper-division professional courses in teacher education (see Division of Education, secondary credential program, for details);
Soc. Sci. 5000 (four units).

SOCIAL SCIENCE MINOR

Students with teaching majors in fields other than social science should consult a designated adviser for a program of studies leading to a teaching minor in social science.

ANTHROPOLOGY *

3010. Social Anthropology

The place of anthropology in the social sciences; theories and schools in social anthropology; community studies, integration, functionalism, psychological aspects. Four units.

3500. Archaeology of North America

Prehistory of the Indians of North America together with some basic principles and methods of archaeology. Prerequisite: Course in anthropology or consent of instructor. Four units.

3510. Ethnohistory of Western North America

The material and social characteristics of Indian tribes west of the Rocky Mountains. The impact of the European upon these tribes. Prerequisite: Course in anthropology or consent of instructor. Four units.

3520. Ethnohistory of Eastern North America

The material and social characteristics of Indian tribes east of the Rocky Mountains. The impact of the European upon these tribes. Prerequisite: Course in anthropology or consent of instructor. Four units.

4100. Peoples of Africa

A cultural survey of the peoples of Africa south of the Sahara. Tribal divisions and relationship, customs, arts, industry, beliefs, and contemporary problems. Four units.

4700. Problems of Culture Change

Problems arising from the contact of industrial societies with nonindustrial societies. Prerequisite: Course in anthropology or consent of instructor. Four units.

CULTURAL ECOLOGY

4600. Case Studies of Underdeveloped Areas

Character and influence of international technical assistance in promoting land and social reform. Prerequisite: Courses in geography and anthropology or consent of instructor. Four units.

4700. Technological Inventions

Origin, development, spread, and influence of basic technological inventions. Prerequisite: Courses in anthropology and geography or consent of instructor. Four units.

4900. Directed Reading

Two-four units.

* See also Cultural Ecology.

GEOGRAPHY *

3000. Contemporary World Land Problems

Effect of the intentional and unintentional modifications of the physical environment by man. Four units.

3020. World Environments

Major physical regions of the world and their occupation and development by man. Not open to a student who has taken a lower-division course in geography. Four units.

3500. Western North America

An historical study of factors that have helped to change the landscape of the West. Exploration, settlement, and the contributions of various national and ethnic groups to the culture history of the West. Prerequisite: Course in geography or consent of instructor. Four units.

3510. Eastern North America

An historical study of factors that have helped to change the landscape of the East. Exploration, settlement, and the contributions of various national and ethnic groups to the culture history of the East. Prerequisite: Course in geography or consent of instructor. Four units.

3520. Greater California

An historical study of factors that have helped to change the landscape of greater California. Exploration, settlement, and the contribution of various national and ethnic groups to the culture history of California and Northwestern Mexico. Prerequisite: Course in geography or consent of instructor. Four units.

3800. Field Geography

The historical, economic, industrial, and physical geography of the San Francisco Bay region. Prerequisite: Course in geography or consent of instructor. Four units.

4900. Directed Reading

Two-four units.

JOURNALISM

4200. School Publications

Instruction for prospective elementary and secondary school teachers in theory and technique of advising school newspaper and yearbook staffs. Study of problems of organization, finance, personnel, instruction, and promotion of school publications. Lect. 3 hrs., lab. 2 hrs. Four units.

4211. College Newspaper Lab

A laboratory experience with instruction. Class members constitute the staff of the college newspaper. Prerequisite: A college journalistic writing course or consent of instructor. Lab. 6 hrs. Three units. May be repeated for total of nine units.

4220. Newspaper and Advertising Layout

Instruction and practice in preparing pictures, copy, and layouts for newspapers and newspaper advertising; use of mat service. Prerequisite: Consent of instructor. Five units.

4400. Advanced Journalistic Writing

Coverage of various news beats, feature, news and editorial writing; staff work on the college newspaper. Prerequisite: A lower-division course in news writing. Four units.

4600. Press Management

Analysis of newspaper organization, economics, and business operation. Circulation, advertising, promotion, and production problems. Field trips to observe community newspaper operations. Prerequisite: Journalism 4220. Three units.

4700. Public Opinion and the Mass Media

Examination of editorial policies of representative publications; critical study of news coverage and influence on public opinion and taste. Bases for judgment of reliability, responsibility, bias. Four units.

* See also Cultural Ecology.

POLITICAL SCIENCE**3100. American National, State and Local Government**

Studies of relationships of various governments in the United States; the organization, processes and problems of national, state and local government. Meets requirement in the U.S., California State and Local Government. Four units.

3111. The American Executive

An analysis of the position of the executive in national, state and local governments: The powers and duties of the executive; leadership role of the executive in government, political parties and public opinion. Four units.

3112. American Legislatures and Legislation

Organization and functioning of Congress, state legislatures, local councils and boards with particular attention to California; pressure groups; committee systems; executive-legislative-judicial relations; selected reform proposals. Four units.

3210. Comparative Government

Analysis of comparative political systems: Dictatorships and democracies; presidential and parliamentary systems; federal and unitary: multi-party, two-party and single-party systems; individual rights and duties in varying systems. Four units.

3410. Law and Society

Organization, jurisdiction and functions of national, state and inferior courts with particular attention to California: Judicial decision making and group dynamics; place of law in the American society; analysis of selected reform proposals. Four units.

4000. Contemporary World Problems

(See History for description.) Four units.

4120. State and Local Government and Politics

State constitutions; legislative, judicial, administrative and electoral systems; contemporary problems and issues, with special reference to California and San Francisco Bay area government organization and problems. This course satisfies the California State and Local Government requirement. Four units.

4220. Government and Politics of Western Europe

An analysis of the political ideas and institutions of the major Western European nations: England, France, Germany, Italy. Four units.

4222. Government and Politics of the USSR

An analysis of the political ideas and institutions of the USSR: Philosophical foundations; role of Communist Party; organization and functions of government; place of the individual in Soviet society. Four units.

4310. Political Parties and Pressure Groups

An analysis of political parties and pressure groups: History; organization and operation; influence in nominations and elections and upon executive legislative branches of national, California state and local governments. Four units.

4440. American Constitutional Law

The United States Constitution as interpreted by the courts; civil rights, taxation, commerce, citizenship, intergovernmental relations, executive and legislative powers and other social, economic and political factors. Four units.

4500. Diplomatic History of the United States

History of American diplomatic relations from the American Revolution to the present; the role of public opinion and other social, economic and political factors. Four units.

4505. American Foreign Policy

An analysis of current American foreign policies toward other nations as related to the Good Neighbor Policy, security, containment, and liberation; the problem of foreign policy in American democracy. Four units.

4520. International Relations

Analytical introduction to international relations; nationalism; imperialism; racial, population, and economic factors; war; settlement of international disputes by methods other than war; foreign policies of the major powers. Four units.

4611. History of Political and Social Thought I

Development of political and social ideas in western thought from the Greek City State to the 19th Century, with emphasis upon the development of democratic thought. Five units.

4612. History of Political and Social Thought II

Analysis of the political and social ideas in western thought with emphasis upon contemporary democratic philosophy. Five units.

4620. Communist and Fascist Ideologies

Analysis of communist doctrine as developed from Marx through the Lenin, Stalin and Khrushchev eras; the current communist thought in China and Yugoslavia. The fascist ideologies as developed in Germany, Italy and America. Four units.

4630. American Political Thought

An analysis of the dominant political theories in development of American thought as viewed within the framework of American history and social institutions and the impact of these ideas upon contemporary America. Four units.

4800. Public Administration

Role of public administration in modern society; development of public service in national, state and local government; principles of administrative organization; functions and services; politics and personnel of administration. Four units.

5130. Metropolitan Government

Organizations and functions of metropolitan areas; the web of governments and growth of authorities and boards; problems of finance, crime, planning, welfare and others; emphasis upon Bay Area planning and problems. Four units.

5450. Administrative Law

An analysis of administrative function in the American national and state systems: Foundation of administrative power; judicial supervision of administration; status of regulatory and quasi-judicial agencies; delegation of legislative and executive powers. Four units.

5520. Principles of International Law

An analysis of the sources, function, evolution and principles of international law; the law-making and adjudicatory agencies; jurisdiction over places and persons. Four units.

5900. Independent Study

Two-four units.

5910. Political Science Seminar

Contributions of natural and social science theories, methods and results to political science; scope and method of political science; individual research on selected topics. Two-four units.

PSYCHOLOGY**3000. Advanced General Psychology**

Principles of behavior and scientific method in the fields of learning, motivation, and special topics in applied fields. Prerequisite: General psychology or consent of the instructor. Four units.

3100. Experimental Psychology I

Modern methodology in psychology. Scientific method and an introduction to experimentation. Four units.

4800. Industrial Psychology

Psychology applied to personnel in the industrial setting; methods of selection, training and evaluation of personnel; motivation, leadership training and the dynamics of labor management groups. Prerequisite: General psychology. Four units.

4900. Individual Study in Psychology (Honors)

Work by arrangement for honors students in psychology. Four units.

5200. Conditioning and Learning

Basic principles and results of conditioning and learning experimentation. Prerequisite: Psy. 3100. Four units.

5210. Theories of Learning

Major theories of learning; history of learning theory; experimental design in learning. Prerequisite: Psy. 3000 or consent of instructor. Four units.

5300. Motivation

The nature of primary and secondary drives; the theories concerning drives found in animal, child, experimental, social, and abnormal psychology. Prerequisite: Psy. 3100 or consent of instructor. Four units.

5410. The Abnormal Personality

A first course in the field of abnormal psychology with emphasis upon forms of abnormal behavior and etiology, considering biological, psychological, and sociological stress. Four units.

5500. Social Psychology

Study of the process of individual socialization, involving experimental investigation of social behavior, group dynamics and intergroup relations; social change; social attitudes. Attention is given to appropriate methods of social research in psychology. Four units.

5510. Attitude and Opinion Surveys

Results of attitude studies, opinion surveys, and content analyses as related to differences between individuals, groups, roles, and statuses; methods in the study of social attitudes and opinions; design of research and critical analysis of data. Prerequisite: Psy. 5500. Four units.

5520. Group Dynamics

Group development; leadership roles; interpersonal interaction in a group setting; types of group atmosphere; research designs and critiques of small group behavior; sociodrama. Prerequisite: Psy. 5500. Four units.

5530. The Psychology of Social Conflict

Types of social interaction; social conflict within and between groups; processes of violent and non-violent social change; conflict resolution and aftermath; effects of social tension upon individual behavior. Prerequisite: Psy. 5500. Four units.

5610. Psychology of Personality

Methods and results of the scientific study of personality. Attention is given to the basic concepts of personality traits and their measurement, the developmental influences, and the problems of integration. Theories of organization, types, and methods of analysis are critically evaluated. Four units.

5700. Test Development

Emphasis on the theory underlying the development, analysis and evaluation of standardized and non-standardized tests. Prerequisite: College algebra or consent of instructor. Four units.

5710. Personnel Selection

Techniques, tests, administration and evaluation of programs for the selection and placement of personnel. Four units.

5720. Individual Mental Tests

Analyzes the concept of intelligence for use in mental testing. Presents major types of tests, their uses and interpretation. Four units.

5850. Psychology of the Gifted Child

Identification, motivation, personality characteristics, and evaluation of the gifted child. Prerequisite: Psy. 3000 or Ed. 3100, or equivalent. Four units.

6700. Educational Psychology, Advanced Course

Current research and theory in psychology of education; principles of motivation, learning, and personality in the educational setting; experimental design in educational psychology. Prerequisite: Ed. 3100; graduate standing. Four units.

SOCIOLOGY**3000. Social Problems**

Study of social problems in such areas as family life, intergroup and intercultural relations, mental and physical health, crime, economy, government, conservation of natural resources, and education. Four units.

3410. Marriage and the Family

Study of the family as a social institution with emphasis on marriage and family problems peculiar to modern American urban society. Four units.

3420. Religion and Social Conduct

The organizational structure of religion with special emphasis on the study of religious authority and leadership. Relationships between religion and other social institutions. Four units.

3430. Urban Problems

Nature, causes, and results of urbanization in American culture. Emphasis on social problems arising from the growth and structure of metropolitan areas. Four units.

4100. Minority Groups

Racial and cultural minority groups in the United States; problems of education, social adjustment, family life, relations in industry, race consciousness, race and cultural prejudice, tension areas, assimilation; race problems in international relations. Four units.

4120. Population Movements and Issues

Social causes of population trends, changing population structures, and geographical distribution of population. National population policies affecting relationships of population to resources and levels of living. Four units.

4130. Contemporary Youth Problems

An analysis of current social factors, including economic and psychological factors, contributing to the difficulties of adolescence. Effects of youth problems on other areas of society. Four units.

4200. Sociology of Occupations

Social factors entering into occupational choice. Certain occupational groups will be studied as illustration. Patterns of group behavior affecting occupational performance. Four units.

4900. Special Study in Sociology (Honors)

Work by arrangement for honors students in sociology and social science area majors. Two-four units.

SOCIAL SCIENCE**3001. Social Science I**

Introduction to the broad field of social and behavioral science: The subject fields; their common concerns and relationships; problems of method involved; culture, and change; basic sources in social analysis. Four units.

3002. Social Science II

Selected case studies in social analysis; the character of social problems, relevance, nature of proof, the meaning of causality; ways in which social theory and practice develop and extend each other. Prerequisite: Soc. Sci. 3001. Four units.

4000. Social Science Seminar

Review of major concepts in social science as tools in developing alternative social policies; directed research in current issues employing relevant data and methods of the several social science fields. Prerequisite: Approval of instructor. Four units.

5000. Teaching Social Sciences in the Secondary School

Curriculum, methods, and content in social sciences, grades 7 through junior college. Four units.

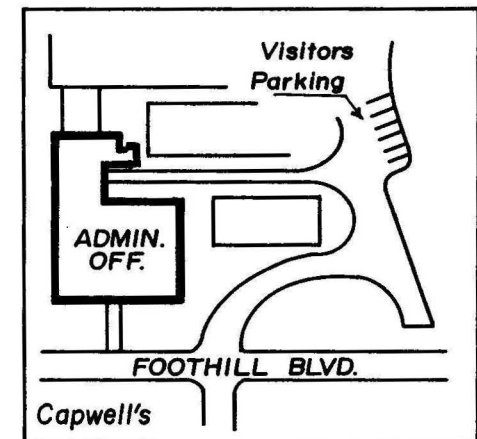
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ALAMEDA COUNTY STATE COLLEGE

22300 Foothill Boulevard
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- E-2 Executive Dean
- E-1 President
- I-11 Division of Humanities
- I-10 Dean, Financial Affairs
- I-9 Dean of the Faculty
- I-1 Faculty Offices
- I-1a Division of Education
- I-3 Division of Creative Arts
- I-4 Division of Business and Economics
- I-5 Division of Science and Mathematics
- I-7 Division of Social and Behavioral Science



**COLLEGE
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(FLOOR PLAN)
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